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**THE WATER OR THE WAVE?
TOWARD A CROSS-CULTURAL ECOLOGY
OF UNDERSTANDING
FOR ENVIRONMENTAL PRACTICE**

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ABSTRACT

One of the critical challenges of our times is how different cultures can communicate with each other on issues to do with the environment. At the root of this is how those cultures understand not just each other, but their own cultural relationships with Nature. The thesis examines this issue using an approach that is cross-cultural and interdisciplinary. It does so by assessing philosophical foundations within worldviews, ranging from an emphasis on the deterministic whole over the parts (monism) to one of reduction of the whole to the parts (dualism). In contrast, a nondual attitude supports a holistic basis for approaching wholes as dynamic patterns of interconnections. In this thesis, a nondual approach is offered as a way that enables and encourages open and dialogical understanding across cultural worldviews on environmental issues.

The thesis also explores cultural aspects of this challenge as it is expressed in the meeting of indigenous peoples and moderns. The ‘ritual’ cooperative basis of societies that seek cohesion among their members can be compared with the overtly competitive ‘game’-like modern society based on a pathology of continuous economic growth and rights-based individualism. It is increasingly obvious that the accelerated pace of change and scale of economic development is outstripping Nature’s capacity for renewal. Underpinning moderns’ drive for ‘development’ is a mechanistic attitude to the environment which is expressed through reductionist methodology. In contrast, the emerging awareness within Western science of ecosystems as complex, adaptive, self-organising systems suggests a more respectful attitude toward Nature. This awareness is also apparent among many indigenous cultures, although their understanding extends beyond secular relations to assert a strong spiritual interdependency of humans and the Earth.

The damming of the Whanganui River, New Zealand, for hydroelectric power development provides a case study for illustrating the key themes explored throughout the thesis. This development has had profound effects on the indigenous Whanganui Maori, whose existence is inextricably interwoven with the river’s life. The environmental planning system in New Zealand now requires developers to consider not only ecological consequences, but to consult with Maori. However, such consultation often falls short of realising an openness to dialogue aimed at a cross-cultural ecology of understanding. Essential to that understanding is a deeper awareness of one’s own worldview.

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CHAPTER ONE – INTRODUCTION: ENTERING THE STREAM

In 1997, I was employed as researcher and co-author of a report investigating options for improving relationships between Whanganui Iwi (the indigenous Maori people of the Whanganui region) and the Department of Conservation (a government agency with a mandated conservation role). I welcomed this research opportunity, having only recently returned to New Zealand from overseas travel. My brother and I had spent thirteen weeks in Nepal and India. The most memorable experiences included crossing a Himalayan mountain pass with our Sherpa friend, hiking in the jungle with local Chitwan guides, a boat ride in Varanasi at sunrise on the holy Ganges river amidst the morning ritual and prayer of Hindu worshippers, and an overnight camel safari with Rajasthani tribesmen of the Thar desert. Besides the vastly populated and polluted aspects of Nepalese and Indian cities, the indelible impression is that of overwhelming vibrancy and a cacophony of colour, movement, noise, smell and tastes wholly ‘other’ to any that I had ever experienced before. Yet, it wasn’t until we returned home (to New Zealand) that I realised the fullness of those experiences as a ‘shock of otherness’. It was my *own* society that suddenly appeared to me as ‘alien’.

Those overseas experiences also instilled in me a growing appreciation for the diversity of cultures and richness of cross-cultural interactions that had shaped my childhood and adult experiences in New Zealand. Many of those experiences had been with Maori culture. They privileged me with opportunities to gain an awareness beyond that of my own European cultural background. However, it also became increasingly apparent to me that my outlook was not necessarily supported by other *Pakeha* (New Zealanders of European descent). Rather, many *Pakeha* asserted a fierce pride in their belief that all New Zealand residents share a common ‘Kiwi’ identity and equality supported by socialist egalitarianism. Dissent from this national stereotype was shunned as divisive or racist. Yet, there *was* major divergence from this view. It came forcefully from within Maori communities themselves in what is now referred to as the ‘Maori renaissance’.

There is a pressing need for those working with resource management issues in New Zealand to appreciate that Maori have relationships with the natural environment that differ greatly from those of mainstream European society. At the very least, an awareness of Maori perceptions of the environment is now a requirement of resource management

legislation. Today, discussion of key Maori environmental concepts and guardianship practices no longer take place only within Maori communities and schools of learning. These concepts are also debated in environmental court rooms, local government council chambers, and university planning lecture theatres. Furthermore, there is an encouraging trend toward exploring participatory, community-based approaches as alternative forms of ‘conflict resolution’ to litigation. These ‘new’ approaches include ‘co-management’ arrangements between indigenous peoples and Western-trained resource managers.¹

Part of my research role in the report (referred to earlier) was to examine international experiences of co-management. Following that, to explore the potential application for collaborative management of conservation lands in New Zealand and, in particular, the Whanganui region.² However, during the course of that exploration, I began to realise that there existed much deeper, fundamental questions underlying many of the problematic issues facing attempts at co-management. While co-management agreements brought people of different cultures together to engage in discussions on environmental phenomena of common interest and concern, those discussions often fell short of the real challenges of cross-cultural dialogue. Instead, discussion tended to be restricted to daily management and operational matters or, at most, extended to strategic planning issues such as the allocation of annual budgets for outcome-oriented projects.

I started to grow increasingly uncomfortable with the implicit assumption that Western management frameworks define the very basis for cross-cultural relationships. It was my observation that those attempts to ‘manage’ conflict between cultures actually avoid the type of fundamental questioning that is necessary for cross-cultural understanding. That questioning requires an awareness and explicit acknowledgement of different worldviews. This thesis approaches interactions between indigenous peoples and moderns³ at the fundamental level of worldview conceptualisation. A number of key questions have driven

¹ I was first involved in researching ‘co-management’ ideas during 1996 when I interviewed members of Te Arawa iwi and local government resource managers to explore the potential for co-management of the Rotorua Lakes in Aotearoa, New Zealand. Šunde, C. *Co-management options for the Rotorua Lakes*. [Honours Dissertation.] Massey University, Palmerston North, New Zealand. 1996.

² Šunde, C.; Taiepa, T. and Horsley, P. *Exploring Collaborative Management Initiatives between Whanganui Iwi and the Department of Conservation*. Occasional Paper Number 3. Palmerston North, New Zealand: Massey University, School of Resource and Environmental Planning. 1999.

³ ‘Moderns’ refers to individuals who take on the values, attitudes and social behaviour of ‘modernity’; emanating from Western European culture but no longer restricted to that geographic region (see Chapter Three). The term does *not* imply that indigenous peoples are pre-modern, pre-historic or technologically backward (those European biases and misrepresentations of the ‘other’ are discussed in Chapter Five).

this enquiry, including: what are the concepts and cultural constructs that underpin the worldviews of indigenous peoples and moderns? Furthermore, how can these cultures be made aware of, and accept, each others' worldviews? As a prerequisite to those questions is the urgent question of how moderns can be made aware of their *own* worldview as only one among many other cultures' ways of approaching reality.

In addressing those questions, this thesis has delved deeply into philosophical concepts and theoretical perspectives. The scope of the thesis is wide, encompassing concerns that are relevant throughout the world. Although the case of Whanganui is returned to later in the thesis, the cross-cultural enquiry at the level of worldviews demands a much broader examination than the bi-cultural models and approaches favoured in New Zealand. Because the case study chapter serves as an illustration of the wider themes examined throughout the thesis, it is not to be regarded as an anthropological study in itself. To avoid this, it was not considered necessary – nor, for that matter, appropriate – to undertake personal interviews with Whanganui River Maori or Western scientists and resource managers. Although I have maintained connections and am familiar with critical issues and concerns, the Whanganui case study does not pretend to speak from a Maori perspective. Rather, the exercise is one of *self*-questioning: unravelling and examining layers of cultural construction that form the worldview of modernity in which I have been raised.

In critiques of modernity, there is a tendency to assume a stance directly opposing the Western worldview. For example, previous studies by Fikret Berkes and others of co-management arrangements in northern Canada have stressed the differences between Western scientific knowledge and traditional ecological knowledge.⁴ Differences have been framed into opposing categories, such that Western science is deemed reductionist and abstract whilst traditional knowledge is holistic and local.⁵ Those studies have made a

⁴ For example: Berkes, F.; George, P. and Preston, R. "Co-Management: The Evolution in Theory and Practice of the Joint Administration of Living Resources," *Alternatives*. Vol.18, No.2. 1991, pp.12-18. Kuhn, R.G. and Duerden, F. "A Review of Traditional Environmental Knowledge: An Interdisciplinary Canadian Perspective," *Culture*. Vol.16, No.1. 1996, pp.71-84. Arun Agrawal is critical of approaches that draw a sharp dichotomy between indigenous versus western knowledge, but do not make explicit the links between power and knowledge. Agrawal, A. "Dismantling the Divide Between Indigenous and Scientific Knowledge," *Development and Change*. Vol.26. 1995, p.431. [italics in original.]

⁵ More recently, Berkes and others have begun to research apparent similarities between indigenous ecological knowledge and the ecosystem concept in Western ecology. See: Berkes, F. and Folke, C. (eds.) *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. New York: Cambridge University Press. 1998. Berkes, F.; Kislalioglu, K.; Folke, C. and Gadgil, M. "Exploring the basic ecological unit: Ecosystem-like concepts in traditional societies," *Ecosystems*. Vol.1. 1998, pp.409-415.

valuable contribution in terms of illustrating different cultures' methodologies for 'resource management', however, they did so by focusing on the *products* (knowledge) of a culture and less on understanding the cultural *context* (worldview) in which that knowledge is generated and makes sense. In other cases, Edward Goldsmith and other critics of globalisation and development have a tendency to romanticise tribal society and deny any value to Western, modern society.⁶ While there is great value in approaches that compare and contrast cultural worldviews, there is a danger in holding them as direct opposites. Such a dialectical approach leaves little hope for a cross-cultural dialogue that would allow for mutual growth and possibilities for pluralism.

Cultural pluralism has been a central focus in the lifework of Raimon Panikkar; a theologian, philosopher, and academic (with three doctorate degrees; in philosophy, chemistry and theology), born of Catalan/Spanish and Indian heritage. Panikkar's extensive publications (over four hundred articles and forty books) cover issues central to the most pressing issues facing humanity.⁷ These include the challenge of 'intrareligious' dialogue which he personally embraces through the acceptance of both his Roman Catholic and Hindu religions. A recurring theme in Panikkar's work is the trinitarian (or, what he refers to as 'cosmotheandric') interrelationship of Humans with the Earth and the Divine. Yet, he avoids approaching cross-cultural issues from the restricted and fixed positions of either a humanist, naturalist, or missionary. The challenge is not only cross-cultural but also deeply personal: To express a truly open attitude, free from absolutism, is to speak from wisdom born of profound humility.

Panikkar asserts that at the root of many present day problems of the world is the fundamentalist imposition of one cultural set of values and beliefs over all others (also referred to as monoculturalism and universalism). He further argues that these critical problems (of social and environmental injustice) cannot now be solved by one group; be they political, economic, social or religious. Instead, the critical and urgent task facing humankind today is to address our present situation through open and dialogical communication across worldviews. This present thesis is a response to that calling. However, it has not been a lone venture: a wealth of published material exists from

⁶ Edward Goldsmith's critiques of modern, industrial society and studies of the 'ecological way' have been commented on throughout chapters two to five. So as not to pre-empt those discussions, references to Goldsmith will not be included at this point.

contributors whose knowledge stems from rich and diverse cultural backgrounds. Much of this work has been assembled by the Intercultural Institute of Montréal through colloquiums, teaching programmes and a bi-annual journal that promotes cross-cultural research and action necessary for cultural pluralism.

Research conducted by Peter Raine expounds on aspects of Panikkar's work; particularly the development of a three-step interpretative method to interreligious dialogue.⁸ This model highlights the inadequacy of 'dialectical dialogue' as leading to further and unresolved argumentation, whereas 'dialogical dialogue' encourages symbolic discourse and an exchange of wisdom across worldview boundaries. A central claim of Raine's thesis is that complex environmental issues may be approached from differing traditions, and not restricted to the secular, rational approach espoused by the Western worldview. This present thesis is sympathetic with that claim. While complementary to Raine's research, this thesis differs in that it approaches understanding of worldview construction through the methods of monism, dualism, and the nondual approach (as explained below). Elucidation of these 'methods' enables explanation of why and how the dialectical approach presently dominates the Western worldview. In contrast, the central claim of this thesis is that the nondual approach fosters a dialogical and open attitude to cross-cultural understanding, which is crucial to addressing complex environmental issues.

As mentioned, one of this study's primary influences is the philosophical works of Raimon Panikkar. Not least, the very form in which the thesis is presented mirrors the pattern of *epektasis* or spiral unfolding as the concept of 'organic growth' that Panikkar advocates.⁹ This thesis is not linear; rather than starting at the 'beginning' and proceeding through a conventional scientific methodology of hypothesis-experiment-results-analysis, the entrance to this thesis is through the centre. The opening chapter is about method – the *ways* of approaching reality. This chapter forms the central core that then radiates out through all the other chapters, allowing common threads to be examined across disciplinary studies. Similar to the premise that no single culture holds a monopoly on

⁷ References to Panikkar's publications will be introduced as appropriate throughout the course of this thesis.

⁸ Raine, P.A. *Who Guards The Guardians? The Practical and Theoretical Criteria for Environmental Guardianship*. [Doctoral Dissertation.] Massey University, Palmerston North, New Zealand. 1998. An abridged version of his thesis is published in: Raine, P. "Beyond Universalism. The Shaman and the Ecologist. An Ever Open Horizon." *INTERculture*. Issue No.140. April 2001, pp.1-60.

⁹ See explanation of *epektasis* in Chapter Two.

truth, this thesis exemplifies the merit of an interdisciplinary and trans-disciplinary approach. This enables a critique of philosophical anthropology, sociology, theoretical ecology, and development theory that is less easily undertaken from positions entrenched within any one of these disciplinary perspectives. The intercultural and interdisciplinary nature of this present research provides new opportunities of valuing cross-cultural relationships for the case of Whanganui, New Zealand. This is presented through the following interrelated chapters:

Chapter Two outlines the philosophical basis for the thesis as a whole. It is the entrée that provides context and structure to all the succeeding chapters. It also introduces the ‘conceptual language’ for linking key themes in the thesis. Chapter Two addresses epistemological approaches as *ways* of knowing reality. It is, therefore, a questioning of ‘method’ as the journey or way of the truth-seeker. These ways of approaching reality are referred to in this chapter as monism, dualism and nondualism. Monism is ‘the One’ and dualism is ‘the Many’ (i.e., two or more; a numerical plurality). Monism and dualism are apparent in the age-old philosophical conflict between the One and the Many: for example, the Absolutists and the Atomists; the whole versus the parts, etc. The nature of the conflict between the two methods (monism and dualism) is referred to in this chapter as the ‘dialectical dilemma’. This dilemma is characterised by opposing wills: each method competing for supremacy by attempting to exclude and negate the basis of the other.

Nondualism strikes a very different chord. Nondualism is ‘neither the one nor the many’. Yet, the nondual attitude is not arrived at through conflict or a striving to eliminate the other methods; nor as a facile compromise between monism and dualism. Rather, the nondual ‘way’ might best be approached through an acceptance that reality is characterised by interdependency and interrelationships that extend ‘radically’ to embrace a manifold diversity. Thus, the relationship of the whole to the part is not oppositional (as in the conflict between monism and dualism) but complementary. The part constitutes and *participates* in forming wholes. Nondualism may be further expressed through the notion of ‘holism’ as the *process* of whole-making and the ‘synergy’ (‘working together’) of the parts.

In a further layer of interpretation, a connection may be made with the ‘non-duality’ of the supreme spiritual experience (where the ‘seer’ and ‘seen’ merge). In contrast, the ‘duality’ of

the Cartesian dichotomy between the 'subject' and 'object' is characteristic of the secular attitude which underpins Western science. In such definitions the distinction extends beyond epistemological methods of approaching reality, to differences in worldview and between that of the sacred and the secular. An exploration of worldviews and the cultural expressions and significance of social activities (i.e., rituals and games) forms the focus of the next chapter.

The description of specific instances of 'ritual' and 'game' forms the entry point to Chapter Three. According to a (simplistic) binary schematic, ritual is cooperative, tends toward an equilibrium or synthesis between participants, and thus aims to conjoin through ceremonial celebration. Conversely, a game is competitive, leads to a disjunctive dissidence (or disequilibrium), and expands seemingly without any limit. Superficially, the introductory example appears dialectical: an expression of monism (as ritual) contrasted with dualism (as game). However, closer exploration of ritual and game reveals their more essential meanings and dependency on cultural context. Each finds appropriate expression within the cultures specifically considered in this thesis: indigenous peoples and modernity. The latter has foundations originating in Western Europe, yet today displays a tendency to universalism in the form of the global technocratic System.

Chapter Three contributes to the thesis by providing a means for considering ritual and game as an analogy for worldviews. Worldviews (indigenous peoples and modernity) may then be approached with an aim of gaining a greater appreciation of each through their elaboration of conceptual themes. An easily recognisable example are the contrasting emphases given to social forms of organisation: the cohesive and communitarian focus of indigenous peoples (as 'ritual-based') versus the rights-bearing individualism sanctioned by modernity (displaying overtly 'game-like' behaviour). The key concepts explored in this chapter include: order; hierarchy; cooperation and competition; the role of the individual in society; limits; closed and open systems; the nature and significance of relationships.

An appreciation of these concepts and their differing nuances and cultural expressions is essential for understanding one of the central arguments of the thesis, which is that misunderstandings at the level of worldview conception are a major contributing factor to conflict between indigenous peoples and moderns. These misunderstandings continue to misinform and misdirect cross-cultural attempts that genuinely seek an expression of

cultural pluralism. Furthermore, rather than facilitate positive cultural interactions, the increasingly 'game-like' and overtly competitive nature of globalisation succeeds instead in blocking other ways of knowing and eliminating the qualitative basis of diversity.

Chapter Four outlines and examines theories within the science of ecology. Although seemingly a radical departure from the epistemological and cross-cultural content of the previous chapters, its relevance consists in its focus on ecological perspectives and environmental approaches. These are of critical concern to all cultures, for the situation humanity faces today is an unprecedented one: that of the 'global environmental crisis' and the 'resource wars' (over oil, fresh water, etc.). As indicated by the title, Chapter Four also alludes to the mutual interactions between culture and ecology: "The Culture of Ecology and the Ecology of Culture." Thus, on the one hand, ecological theories might be recognised as forming so-called 'cultures' grouped by similar theoretical approach: reductionist theories as distinct from 'generalist' theories; molecular ecology versus systems sciences; equilibrium theories as opposed to non-equilibrium; and so on. On the other hand, the paradigmatic shifts in science may be affirmed (and informed) by wider social movements and key historic events in culture, as indicated by the second part of the dual title: the 'ecology of culture'.

Chapter Four comprises two parts. The first introduces the seminal papers in community ecology and the founding definition of the 'ecosystem' concept. This section follows a historical narration of leading intellectual influences throughout the twentieth century that have enriched ecologists' understanding of ecosystem concepts. The second part introduces systems theory and philosophy, briefly contrasted with the dominant reductionist approach. The central focus is 'complex systems thinking'. As complex systems, ecosystems are described as self-organising, open, holarchic, dynamic, unpredictable, and adaptive. The implications of this approach for resource managers are radical, for it questions the assumption that humans can 'manage' and attempt to predict ecosystem processes. Furthermore, this approach embraces the view shared by many indigenous peoples: that humans are an interconnected *part of* ecosystems, not neutral 'observers' or external 'managers'. From this realisation may emerge an 'opening' within the scientific worldview to the possibilities for pluralism.

Pluralism, according to Raimon Panikkar, is: "...grounded in the belief that no single group embraces the totality of human experience."¹⁰ Yet, the basis for pluralism – diversity – is today at grave risk of being eliminated, or, at the very least, marginalised as a mere 'plurality'. Chapter Five investigates the ideological and physical force that has become a stifling global intrusion of more insidious character than any historic conqueror: 'development'. The central focus of the chapter (social and economic 'development') is first approached through anecdotal and literary narrative. These are supported by events in (biblical) history that led to the emergence of the 'processive worldview': the birth of a new sense of time as linear and sequential, and the possibility of 'advancing', 'progressing', or 'developing' *through time*. This unidirectional temporality underpins many assumptions moderns continue to take for granted, such as the notion of 'history' as the only valid and reasonable way of expressing time.

Chapter Five questions the assumption that notions of social and economic 'development', originating in the Western worldview, are now universally accepted and sought after by a majority (if not all) of world cultures. Rather than adopt a solely dialectical critique of 'development' ideology and applications, the intent of Chapter Five is to support a nondual approach. This means that other cultures' ways of living are taken to be legitimate and valid expressions in their own right. Even the acknowledgment of an 'endogenous development' is significant in that it defies the possibility and permanence of claims to universalism. The appeal of 'development' in Western countries is already seriously questioned by many and rejected outright by others who refer to the present era as 'post-development'. These criticisms have been prompted by the overwhelming evidence of a global environmental crisis, largely driven by the desire to 'develop' in the absence of any real limits.

Chapters Six and Seven together form the case study for the thesis – the Whanganui River in New Zealand. Chapter Six sets the scene by outlining the main 'developments' on the river that detrimentally affect the indigenous Maori people of the Whanganui River and impact upon riverine ecology. Chapter Seven then interprets the case study by relating and integrating the material presented in Chapter Six to the wider philosophical and theoretical themes discussed throughout the preceding chapters.

¹⁰ Panikkar, R. *Myth, Faith and Hermeneutics. Cross-Cultural Studies*. New York: Paulist Press. 1979, p.102.

Chapter Six documents historical events and outlines current resource management issues affecting the Whanganui River. The chapter begins by introducing the two main cultures resident in the Whanganui region (Maori and European; mostly of British ancestry) and discusses cross-cultural misunderstandings resulting from different interpretations of the Treaty of Waitangi 1840. The case study focuses on a major hydroelectric power scheme that includes the damming and diversion of headwaters from the mountain tributary streams of the Whanganui River. In addition to the substantial effects on the river ecosystem, Whanganui River Maori claim that the diversion of headwaters is destroying the *mauri* ('life force' or spiritual essence) of the *awa* (river). Other members of the community also express concern about the adverse effects of the power scheme on conservation, recreation, commercial (local tourism), aesthetic, and intrinsic values. Those diverse concerns were argued in the Whanganui River Minimum Flows Appeals planning hearings, which resulted in the 1990 decision that a minimum flow of the headwaters be returned to the Whanganui River.

Chapter Six then focuses on current resource management issues and discusses Maori environmental guardianship (*kaitiakitanga*). The unique relationship of Te Atihaunui-A-Paparangi (Whanganui River tribal collective) with their ancestral river has recently been recognised and affirmed in official processes. In 1999, *The Whanganui River Report* was released by the Waitangi Tribunal. That report concludes with recommendations to the Crown for the negotiation of the Treaty of Waitangi claim lodged by Atihaunui with respect to injustices inflicted upon them and the river. At the very least, the implications of the Treaty of Waitangi claim settlement (currently in negotiation) will ensure that Whanganui River Maori have a much stronger influence in planning processes and a decision-making role in resource management issues that affect the Whanganui River. Concurrently outstanding is an appeal against the 2001 planning committee decision to allow the continued diversion of the Whanganui River headwaters to the power scheme for a further thirty five years.

In Chapter Seven, the philosophical and theoretical content in Chapters Two to Five is drawn together, with the Whanganui River used as a 'living illustration'. The intention of this integrative chapter is to encourage a greater awareness of and commitment to understanding one's *own* worldview before and whilst attempting dialogue with other cultures. Given the combination of significant resource management decisions on matters

that affect the Whanganui River and a political determination to address longstanding cultural grievances, this is a critical time for cross-cultural dialogue. While Maori may be prepared for that, present attempts at 'dialogue' between Maori and *Pakeha* are (with a few exceptions) restricted to formalised judicial and political procedures. Those procedures tend to be dialectical and avoid the deeper type of questioning necessary for initiating a nondual approach to the Whanganui River. The urgent challenge of addressing complex environmental issues calls for cultural pluralism to be genuinely embraced. In a nondual sense, a deeper humility is needed if we are to draw wisdom from an approach that denies neither the water nor the wave.

CHAPTER TWO – MONISM, DUALISM AND NONDUALISM

INTRODUCTION

A major challenge for natural resource management is in improving relations with indigenous peoples.¹ This necessitates greater understanding of cultural perspectives with respect to the natural environment. Such a challenge requires much more than simply fulfilling statutory duties. Nor is it simply a matter of inserting ecological knowledge held by indigenous peoples into scientific studies.² Such actions can be seen in the long run as merely placation, for they avoid real understanding of another culture that is necessary if diversity is to be positively and genuinely accepted.

Despite improvements on past resource management legislation,³ the underlying conflicts and tensions between Western resource management systems and indigenous knowledge systems remain. The conflicts are evident at a number of levels, including personal relationships between resource managers and indigenous peoples, between the ‘authority’ they each represent, and between modes of thinking about and relating to Nature. The latter alludes to conflicts of an epistemological nature, that is, of worldview status. A worldview⁴ refers to the basic method of perception in which a people or culture express their experiences and accumulated knowledge of reality. Where worldviews differ markedly and cross-cultural understanding is not attempted, there is the potential for

¹ It is important at the outset to define the word ‘indigenous’, meaning: “born or produced naturally in a region; belonging naturally.” Sykes, J.B. (ed.). *The Concise Oxford Dictionary of Current English*. [Seventh Edition.] Oxford: Oxford University Press. 1982 [First Edition, 1911]. (Hereafter referred to as: Concise Oxford Dictionary.) It could be argued therefore, that all peoples are indigenous to the place where they are born. However, the use of ‘indigenous’ in this thesis will refer to *autochthonous peoples*, the “original or earliest known inhabitants,” from the Greek words *auto*, *khthon*; “sprung from that land (earth) itself.” This definition distinguishes, for example, Australian Aborigines from third generation farmers’ knowledge of the land.

² Objections to the exploitation of cultural knowledge have been expressed by indigenous peoples all over the world, especially where corporations have patented indigenous peoples’ traditional foods for their own commercial gain. The Mātaatua Declaration was presented at the first International Conference on the Cultural and Intellectual Property Rights of Indigenous Peoples held in Whakatane, in the Bay of Plenty region of Aotearoa New Zealand, 12-18 June 1993. See: Mātaatua Tribes. *The Mātaatua Declaration on Cultural Property Rights of Indigenous Peoples*. 1993.

³ For example, in New Zealand the Resource Management Act 1991 contains a number of clauses that allow for greater participation by Maori in the resource management planning process and requires councils (or ‘statutory agencies’) to consult with Maori tribal groups on a number of issues set out in the legislation.

⁴ Geertz defines ‘worldview’ as: “[A people’s] world view is their picture of the way things in sheer actuality are, their concept of nature, of self, of society.” Geertz, C. *The Interpretation of Culture*:

misinterpretations to result in polarisation between Western resource management systems and indigenous peoples' perspectives.

METHODS

The approach taken in this study to addressing the cross-cultural encounter will not so much involve questioning by methodology, but the questioning of method. It is therefore important to outline the distinction between 'methodology' and 'method' from the outset. A formally accepted methodology is one that produces replicable results when one methodically repeats a prescribed procedure. Typically, methodology is what underpins experimental research within a scientific framework.⁵ Current attempts to address cross-cultural resource management conflicts by allowing for increased participation of indigenous peoples in Western-based decision-making processes only address the issue of methodology. That is not to say that these improvements are not worthwhile, but that they often serve to reinforce the dominance of processes that have originated from only the Western perspective. This is because they often presume that indigenous peoples must first subscribe to the Western system of 'managing resources'.

It is argued here that incremental improvements in planning structures, more equitable decision-making forums and refined arbitration techniques actually avoid the question of method. The word 'method'⁶ is not to be confused with the more narrow definition of methodology. In the context of this study, method denotes the *way* of approaching reality. Method is what underpins the organisation of a given society and guides the nature of the relationship between the individual and society and of humans to Nature. It also incorporates the relationships of the human being to the cosmos, thus linking the Earth with the realm of the divine. Before attempting this cross-cultural study, an understanding of the different methods, or the ways that embody approaches to reality, is imperative.

Selected Essays. United States of America: Basic Books. 1973, p.127. See his Chapter Five, "Ethos, World View, and the Analysis of Sacred Symbols," pp.126-141.

⁵ Note, however, that not all scientific methodology is empirical. Exceptions include Peter Checkland's learning cycle of soft systems methodology. Checkland, P. *Systems Thinking, Systems Practice*. New York: John Wiley. 1981.

⁶ Originally "method" meant "way". The word comes from the Greek *methodos* (*hodos* meaning 'way'), which means "a going after" or "pursuit" as, for example, of knowledge. Contemporary philosophy understands "method" to be a systematic procedure, technique, or mode of enquiry (this being 'methodology'). See Krieger, D.J. *The New Universalism: Foundations for a Global Theology*. New York: Orbis Books. 1991, pp.2-3.

Some have claimed, as did the Buddha, that reality is one but can be seen in three ways.⁷ These three methods, or modes of perception, can be summarised as the monistic One, the dualistic Many, and the nondual perception that is neither the one nor the many.⁸ While all three methods have found viable historical expressions, monism (the One) versus dualism (the Many) has come to dominate in our present era.⁹ The dominance of dualism in the modern culture has been promoted by Western science and its belief in secularism as *the* universal (hence, monistic) and only valid way of perceiving reality. As a result, other ways of knowing that stem from different epistemological bases have been marginalised. This can be clearly illustrated with indigenous peoples who rely upon knowledge generated from both spiritual and secular relationships with the supernatural and natural worlds. However, the spiritual experience, which finds expression through the nondual way, is ruled out of the dualistic method.

The philosophical quandary of the one and the many can be attributed to the dialectical¹⁰ framing that places monism and dualism as opposing poles in competition with one another. The dialectic reduces the meeting of the monistic and dualistic methods to the debating arena where arbitration is used as a methodology to ‘solve’ cross-cultural conflicts. However, mutual opportunities for learning and sharing knowledge across cultures are denied in the dialectical arena. This is because the dialectic forces the emergence of a winner by defeating (albeit temporarily) the other.

⁷ The three ways are dualism, monism, and nondualism. David Loy points out that three Eastern traditions – Buddhism, Vedanta and Taoism – claim that the nondual way of experiencing the world “is actually more veridical and superior to the dualistic mode we usually take for granted.” Loy, D. *Nonduality: A Study in Comparative Philosophy*. New Haven: Yale University Press. 1988, p.3. However, the position taken in this thesis recognises the positive contributions as well as the limitations of each philosophical mode of perception. It is also considered that no method is necessarily bad or wrong, but that each attempts to address the challenges of pluralism, albeit in quite different ways.

⁸ Monism, from the Greek *monos*, meaning ‘single’, is defined as the: “doctrine that only one ultimate principle or being exists...” Dualism, from the Latin *dualis*, *duo*, meaning ‘two’, is defined as a: “theory recognizing two independent principles (mind and matter...)” Concise Oxford Dictionary. Unless otherwise stated, dualism will be used in this thesis to mean *two or more*: the Many.

⁹ This is affirmed by Raimon Panikkar: “From a philosophical viewpoint, the conflict between the One and the Many, which has occupied Man at least since Plato in the West and the Upanishads in the East, is perhaps the central question of the human mind.” Panikkar, R. “The Myth of Pluralism: The Tower of Babel,” *Invisible Harmony: Essays on Contemplation and Responsibility*. [Edited by H.J. Cargas.] Minneapolis: Fortress Press. 1995, p.62.

¹⁰ From the Greek *dialektikos* (from *tekhne*, for ‘art’) of debate. Also, dialect, from the Greek, *dialektos*, meaning ‘discourse’. Dialectic is defined as: “criticism dealing with metaphysical contradictions and their solutions; existence or action of opposing social forces.” Concise Oxford Dictionary. Refer to discussion below: “The Dialectical Dilemma”.

One is led to question why the dialectical framing of the cross-cultural encounter has dominated over other approaches? That is, why is it that monism and dualism are viewed as competing opposites? This directs the enquiry into addressing the strengths and limitations of the monistic and dualistic methods from the relative perspectives of each other. The investigation may highlight biases in each method, such that definitions will need to be clearly elucidated to ensure that confusion as a consequence of misinterpretation is not perpetuated.

As shall become clear in succeeding chapters, the third, nondual method offers a unique way for engaging peoples of different cultures in a process of dialogue,¹¹ not simply debate.¹² Genuine dialogue opens opportunities for shared understanding of mutual benefit to all partners. The results of this dialogue can be seen as a positive contribution in steps that lead to pluralism. Of critical relevance in this regard is the understanding entailed by ‘pluralism’,¹³ recognising that each method attaches to pluralism very different meanings and implications. Following this analysis, one can ask: what does a nondual method for approaching pluralism in the context of cross-cultural communication entail? This latter question is of key pertinence to this present study.

MONISM – the One

The method that promotes the One is best known as monism. Monism can be distinguished from other methods as favouring the whole over and above the parts. Those who take a monistic stance regard reality to be principally made of wholes, which are

¹¹ Dialogue, from the Greek *dia-logos*, *dia* meaning ‘through’ and *legomai* meaning ‘conversation’. Concise Oxford Dictionary. Thus dialogue (*dia-logos*) is a “talking through” or a “thinking through” requiring reflective engagement. Panikkar makes a distinction between *dialectic* meaning “a technique which empowers one to pass judgments on other people’s opinions”, and *dia-logical* to “piercing, going through the logical and overcoming – not denying – it.” Panikkar, R. *The Intra-Religious Dialogue*. [Revised Edition.] New York: Paulist Press. 1999, p.28.

¹² Debate, from the Roman *desbattere*, De-Battle. Concise Oxford Dictionary. Debate as a ‘battle’ of words aims to result in the emergence of a winner and a loser.

¹³ David Krieger notes that ‘pluralism’ has itself a plurality of meaning. The definition of his term ‘radical pluralism’ is of interest: “a radical pluralism in the sense that it is a matter of different worldviews, that is, different ways of thinking and forms of life which are constituted by their own criteria of *meaning*, *truth* and *reality*, and which, therefore, claim absolute validity. Radical pluralism refers to the unique historical situation of the late 20th century wherein humanity finds itself on the threshold of a global culture.” Krieger, D.J. *The New Universalism: Foundations for a Global Theology*. *op. cit.* pp.15-16. [underline added, italics in original].

considered to be absolute and non-divisible entities. Plurality¹⁴ is not denied in this approach, but the many are always regarded as secondary to the whole. Monism lacks the capability to recognise real distinctions between entities because it regards them as only modes, or as abstractions, of the One Reality. Thus, monism shrinks everything into an indiscriminated oneness.¹⁵

The monistic method is encapsulated in the philosophical logic of the Absolutists who argue that whenever someone speaks of a part he or she implies that the part exists only *in respect of* something, such that a part is always ‘part-ial’ to the whole.¹⁶ However, here the catch-cry ‘the whole is more than the sum of its parts’ does not apply, simply because the whole is seen as the a priori governing body in total. Monism therefore presents reality as “one great all-inclusive fact outside of which is nothing.”¹⁷ To the philosophical Absolutists, all that is real appears as the ‘Absolute One’, while what is not real and must be avoided is the ‘Absolute Nothing’. While two ‘absolute’ possibilities are presented, “complete disunion of all things or their complete union in the absolute One,”¹⁸ it is clear that monism only regards the One as meaningful. The ‘Absolute Nothing’ is characterised as a chaotic turmoil or as a dismal void of nothingness, to be feared as a place only suited for the damned.

The primal whole is treated as a static entity with boundaries that establish and define it as a closed system. External changes and internal disruptions are avoided at all costs so to preserve the internal order of the whole. Although the monistic whole appears as a unified One, this is not achieved in a voluntarily cooperative manner but through a strict hierarchy

¹⁴ ‘Plurality’ is used here as the numerical ‘many’. ‘Pluralism’, however, goes beyond the mere awareness of plurality (and tolerance of those differences) to an acceptance of pluralism as grounded in the belief that no single group embraces the totality of human experience. Note that where William James uses ‘pluralism’ it is taken to mean the dualistic ‘plurality’.

¹⁵ See: Panikkar, R. *The Rhythm of Being: The Unbroken Trinity*. The Centennial Gifford Lectures. [In press with London: SCM Press.], p.150.

¹⁶ The logical proof of the absolute whole or the absolute nothing is that: “you can deny the whole only in words that implicitly assert it. If you say ‘parts,’ of *what* are they parts? If you call them a ‘many,’ that very word unifies them. If you suppose them unrelated in any particular respect, that ‘respect’ connects them; and so on. In short you fall into hopeless contradiction. You must stay either at one extreme or the other.” James, W. “Monistic Idealism,” *A Pluralistic Universe*. Cambridge: Harvard University Press. 1909, pp.35-36.

¹⁷ Koyre, A. *From the Closed World: To the Infinite Universe*. Baltimore: John Hopkins Press. 1957, p.21.

¹⁸ James, W. “Monistic Idealism,” *A Pluralistic Universe*. *op. cit.* p.33.

that imposes an order over its parts by heteronomous¹⁹ rule. This order is established to allow the stronger party, or the One authority, to retain its position in power. The ‘winner’ tolerates the other, but not as a genuine acceptance of diversity. Here, tolerance is employed as a tool by the ruling monistic elite to coerce, conquer, convert and indoctrinate the other as the weaker party. Even where inequalities are apparent, the ruling elite call upon traditional values to be upheld, such as discipline in the selfless submergence of personal desires that do not conform to role duties. These traditions ensure order and allow the rulers to retain their positions of power and status. Traditional patterns are thus repeated throughout history with little internal adaptation to external changes.

DUALISM – the Many

The dualistic method favours parts over any notion of a whole. The ‘whole’ is commonly disregarded as merely a theoretical construct of certain philosophers. The dualistic definition of the whole is simply the sum of its parts, such that the concept of a whole is really a collective of individuals. The basis of all reality is believed to be with parts or individuals which the dualistic method asserts to be autonomous.²⁰ Any attempt to direct an order over or among parts is vehemently opposed as an imposition on the ‘rights’²¹ and ‘freedom’ of the individual. This is expressed through the modern attitude of individualism.

The method is underpinned by dualistic thinking, which places the seer and the seen in two opposed categories. This creates an awareness of a separation between the ‘self’ and an ‘other’. This subject-object dichotomy divorces the subjective mind from the objective world, allowing all ‘others’ to be treated as mere objects. David Loy summarises dualistic thought as follows: “...our usual conceptual knowledge is dualistic in at least two senses: it

¹⁹ Heteronomous, from the Greek *hetero*, meaning ‘other’ and *nomos*, meaning ‘law’. Hence heteronomy is subjection to an external law. Concise Oxford Dictionary.

²⁰ Autonomous, from the Greek *autos*, meaning ‘self’ and *nomos*, meaning ‘law’. Hence, autonomy is acting independently or having the freedom to do so. Concise Oxford Dictionary. The modern, secular culture has origins in Western philosophy with René Descartes’ foundation of knowledge upon the self-certainty of the autonomous, rational subject. For Descartes, all knowledge which comes from outside a thinking individual (i.e., from tradition and other sources) is subject to distortion, so only knowledge that is attained within can be assured of certainty.

²¹ The Universal Declaration of Human Rights adopted by the General Assembly of the United Nations in 1948 is an attempt to universalise what may appear as a predominantly Western ideal; that of the rights of the individual over the societal whole (and non-human species). However, not all cultures and nations accept the individualistic/dualistic attitude the underpins the declaration. For an interesting critique see: Panikkar, R. “Is the Notion of Human Rights a Western Concept?” *Invisible Harmony. op. cit.* pp.109-133.

is knowledge *about* something, which a subject *has*, and such knowledge must discriminate one thing from another in order to assert some *attribute* about some *thing*.”²²

The second sense that Loy refers to above is expressed in the *principle of non-contradiction*,²³ where a thing is deemed to be unique because it is not like others. Whereas in the monistic method the part seeks identity through emulating the perfect One, in the dualistic method the part seeks individuality by defining itself to be different from others. What comes to individuate one part from another relies on its (external, measured) differences and not on its own inherent qualities per se. A part can only be known in relation to another part, and what reason finds to be contradictory cannot be the case. ‘Reason’ is reduced to what is ‘rational’²⁴ and, as the etymology of the words suggest, what is rational is that which is held in *ratio* to another thing (bringing self-awareness). Rationality for the modern mind has become the mark of the real, and truth has become the prisoner of human reason.²⁵

The dualistic method places an emphasis on distinction between parts tending always to the last essential detail. The dualistic method employs a reductionist methodology in that it seeks to reduce parts *ad infinitum* further into their component parts. Specialists are trained to discern the last practicable quantitative difference between entities, all the more seeking to disclose the ‘fundamental building block’ of reality.²⁶ This approach is known as ‘atomism’ after the Greek Atomists who believed that atoms are physically indivisible and

²² Loy, D. *Nonduality. op. cit.* p.4. [italics in original.]

²³ The *principle of non-contradiction* looks for the individuation of a thing by trying to detect it in its differences. In contrast, the *principle of identity* looks for the individuation of a thing by trying to find the identity of the thing with itself, in order to discover its uniqueness. Panikkar, R. “Singularity and Individuality, The Double Principle of Individuation,” *Revue Internationale de Philosophie*. 29e année. No.111-112, fasc.2. 1975, p.146.

²⁴ ‘Rational’: endowed with reason, from the Latin *ratio*. ‘Reason’ from the Latin *ratio* – quantitative relation between two similar magnitudes determined by the number of times one contains the other integrally or fractionally. Concise Oxford Dictionary.

²⁵ Panikkar, R. “The Three Kairological Moments of Consciousness,” *The Cosmotheandric Experience: Emerging Religious Consciousness*. [Edited with an Introduction by S.T. Eastham.] Maryknoll, New York: Orbis Books. 1993, p.34. Panikkar observes: “Modern western Man has epitomized his being in mere reason, and reason in mere rationality.” Panikkar, R. “Man as a Ritual Being,” *Chicago Studies*. Chicago. Vol.16, No.1. 1977, p.8.

²⁶ Quantum physics, which developed in the 1920s, reveals a very different understanding of elementary units. Paul Davies explains: “Quantum physics leads to the conclusion that the bottom level entities in the universe – the elementary particles out of which matter is composed – are not really elementary at all. ... Rather than providing the concrete ‘stuff’ from which the world is made, these ‘elementary’ particles are actually essentially *abstract* constructions based upon the solid ground of irreversible ‘observation events’ or measurement records.” Davies, P. *The Cosmic Blueprint: New Discoveries in Nature’s Creative Ability to Order the Universe*. New York: Touchstone. 1989, p.175. [emphasis in original.]

indestructible, always in motion and infinite in number.²⁷ When a part can no longer be measured with another, then it is considered unique because it is incommensurable.²⁸ In following this procedure, the specialist studies each part in detail and then, ideally, aims to reassemble all parts for a more complete knowledge of the functioning of the collective.²⁹ Thus reality is approached much as a technician might regard a machine.³⁰ Such a ‘nuts and bolts’ approach assumes outright that not only is Nature understandable through following this procedure, but that Nature itself is wholly knowable by humans.³¹

Both the methods of monism and dualism seek to explain the roles of the whole and of parts in relation to the other. Yet they approach their explanations from very different and in fact opposing positions, placing emphasis on either the whole or the part to the exclusion of the other. Monism does this by asserting that only the One truth underlies reality, so that the many are inferior to the absolute whole. Dualism undermines monism by declaring that the whole is merely a philosophical concept and therefore has no basis in reality. Rather, dualism declares that what really exists are the Many, or the parts. Monism

²⁷ The concept of the atom, the smallest indivisible unit of matter, found its clearest expression in the philosophy of Leucippus and Democritus, Greek Atomists. The Atomists contributed to the destruction of the holistic worldview of the early Greek philosophers. Peter Marshall explains: “They were led to atomism in an attempt to mediate between monism, the theory that all phenomena make up one substance, and pluralism, the theory that they form many different substances.” Marshall, P. *Nature’s Web: An Exploration of Ecological Thinking*. London: Simon & Schuster. 1992, p.70. [underline added]. Note that where Marshall uses the word ‘pluralism’ it is interpreted here to mean ‘plurality’ as the dualistic many.

²⁸ The dualistic method (which underpins science) holds that uniqueness implies *incommensurability*: we cannot measure one being with any other being. It is deemed unique because It is transcendent, beyond any possible measure, incommensurable. This stands in contrast to the monistic method that promotes uniqueness as *incomparability*: It is unique because It is the absolute identity, and thus indistinguishable, and abides with perfect immanence inside every being. See: Panikkar, R. *The Rhythm of Being*. *op. cit.* p.112.

²⁹ Practice shows otherwise however, where specialists may understand the analytical details of an individual unit, but have no conception of its relation to other such units or to the ‘whole’.

³⁰ Lewis Mumford explains: “What Descartes did by equating organisms with machines was to make it possible to apply to organic behavior the quantitative method that was to serve so efficiently in describing ‘physical’ events. To know more about the behavior of a physical system one must isolate it, disorganize it, and separate out its measurable elements, down to the minutest particle – a necessary feat for understanding its operation.” Mumford, L. *The Myth of the Machine: The Pentagon of Power*. Vol.2. London: Secker and Warburg. 1970, p.86.

³¹ In a critique of the Western philosophical paradigm, Panikkar states: “...my quarrel is with *metron*, with the drive to measure everything – and extrapolating, with the thrust to want to know everything, because it is assumed that everything is knowable. Ontologically said: thinking does not need to exhaust Being.” Panikkar, R. “The Invisible Harmony: A Universal Theory of Religion or a Cosmic Confidence in Reality?” *Invisible Harmony*. *op. cit.* p.151. [underline added.] Furthermore, ‘complexity theory’ and ‘uncertainty’ are part of an emerging understanding in science that reveals Nature as fundamentally incomprehensible to human methods of enquiry. Frank Egler summarises this aptly: “...nature is not only more complex than we think. It is more complex than we *can* think.” Egler, F. *The Way of Science: A Philosophy of Ecology for the Layman*. New York: Hafner Publishing Company. 1970, p.21. [emphasis in original].

claims the path to be an inward search to identify with the One, while dualism encourages each part to struggle down the path alone.

In presenting their own perspective these two methods react in part to the claims of the other, so that from the standpoint of one method the fallibilities of the other become apparent. This leads one to question: how does monism appear from the perspective of dualism, and vice versa? This enquiry requires discernment of the major differences delineating monism and dualism as ways of making sense of reality and of approaching the cross-cultural encounter. When these differences are highlighted, then misinterpretations in definitions and the certain 'hidden' biases that currently hinder cross-cultural communication can be worked through in a more appropriate and positive manner. Only then may the challenges presented by pluralism be met.

How does monism look from the perspective of dualism?

Those who take a dualistic stance abhor the concept of the 'perfect' whole that is promoted by the monistic method. The dualistic method argues that the claim of the whole to be absolute is merely a guise designed by some powerful elite to enable them to retain their privileged position at the top of the social hierarchy. The One authority maintains its position of power through coercive means, imposing an order over the subordinate parts that is justified as having a monopoly on truth. Examples include the cultural hegemony of the Catholic Church in Europe in the later medieval period, the totalitarian state, and the two major ideologies of the twentieth century; fascism and communism.

The monistic whole is presented as 'monocultural'³², being the *One Way* that all must follow. Those with a dualistic attitude find this unacceptable because they claim that each part is an autonomous individual and by right has its own 'way' that does not and should not necessarily conform with the monistic Way. The dualistic method takes exception in particular to the monistic suppression of the parts under the strict rule of the whole.³³ By

³² Vandana Shiva coined the term 'monocultures of the mind' to express the way of thinking that makes diversity disappear from perception, and consequently from the world. Shiva, V. *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*. London: Zed Books Ltd. 1993.

³³ Leading intellectuals associated with China's May Fourth Movement, and particularly Ch'en Tu-hsiu (1879-1942), accused their Confucian predecessors of oppressing the individual with a feudalistic ethic that confined each person to rigid family and clan social roles. See: Tse-tung, C. *The May Fourth Movement*. Cambridge: Harvard University Press. 1960, p.302.

denying change from both within and without, the functioning of the whole restricts behaviour to past patterns and traditions. Thus those who hold dualism to be the true method of perceiving reality argue that the law of the whole stifles the freedom of life itself. Without room for change, innovation or simply growth, the inner parts are forced into a homogeneous model that becomes bland and overbearing.

Jan Smuts critiques the monistic whole, that of the philosophical absolute as a simple and unique entity, in the following:

“Philosophy has elaborated the concept of a unique whole which is really an absolute, indestructible and unchangeable. ...the philosophical conception leaves no room for change, movement or development of a whole. The whole or absolute of philosophy is necessarily static. ...The parts indeed may move and change, their relations *inter se* may show a flux to which the name of development may be given. But it will not be real creative development. The absolute whole of philosophy is immutable, withdrawn in itself, and unlike anything of which we have experience in this world.”³⁴

When boundaries are established to protect the inner identity of the whole, the whole becomes exclusive as a closed system. However, the presence of closure, especially in the claim to a monopoly on truth, engenders warning signs. A closed system soon becomes intolerant of differences. A law to govern and control behaviour of the parts must be established by an external authority to retain order and restrain deviance. The whole soon becomes overbearing as rule by heteronomous methods is always an imposition on others. The One authority comes to regard its law as more important than the parts themselves and the powerful must uphold their law at all costs – even over life itself. A hierarchy is established that permanently separates the privileged authority and its rule-makers as the elite from the subordinate mass followers.

From the perspective of dualism it can be observed that when the order of the monistic whole is pushed to its extreme, an ‘over-order’ results which brings a growing agitation and brewing resentment among the many parts. As the whole begins to solidify, the parts become over-connected and lose their freedom to move. This rigidity brings with it a

³⁴ Smuts, J. *Holism and Evolution*. London: Macmillan and Co. 1926, p.102. Smuts originally coined the term ‘holism’ which has been misinterpreted by those who take a dualistic stance as advocating the monistic understanding of the whole as an absolute indestructible. Smuts was familiar with this debate and was careful to distinguish his notion of ‘holism’ from the monistic interpretation. Refer to discussion below.

certain vulnerability. Inevitably, only two options are made available: increasingly tougher and more intolerant laws that result in the complete loss of an individual's identity in submission to the One authority, or; revolution of such an explosive force that the parts shatter the hardening boundaries of the monistic whole, breaking through to new possibilities for growth and renewal.³⁵ The former exemplifies totalitarian states, while the latter is characteristic of the revolutionary who diverges from the standard. From the perspective of those on the inside, the revolutionary has chosen the devilish way of 'absolute nothingness' and thus must suffer as an outcast from the societal whole.

How does dualism look from the perspective of monism?

According to physicist David Bohm,³⁶ so-called isolated entities (the parts) only exist as a result of Western-derived habits of thinking in fragmentary ways. Bohm concedes that these habits are necessary for practical purposes where categories enable human societies to order thinking and direct appropriate action. However, in dualistic thinking, those categories have come to be seen not as theoretical human constructs but have been mistaken as *the way things really are* (i.e., this thinking treats things as inherently divided and disconnected). Loy affirms this observation, stating that dualistic categories form part of a "...conceptual grid which we normally but unconsciously superimpose upon our immediate experience and which deludes us by distorting that experience."³⁷ In his critique of dualistic thinking, however, Bohm argues that what underlies fragmentation is undivided wholeness. Bohm presents this wholeness as having its own 'implicate order', such that monism again appears on the horizon.³⁸

From the perspective of monism, the fallibilities in the dualistic method are made acutely obvious. Foremost is the lack of unity among the parts. In emphasising the independence of parts and deeming them to be isolated, the relationships between the parts and the links

³⁵ Here the dialectic is illustrated, as Panikkar comments: "Autonomy is in the last analysis always a reaction against heteronomy; it is almost invariably a rebellion against the abuses of the heteronomic structure." Panikkar, R. *Worship and Secular Man*. Maryknoll, New York: Orbis Books. 1973, p.35.

³⁶ Bohm, D. *Wholeness and the Implicate Order*. London: Routledge and Kegan Paul. 1980.

³⁷ Loy, D. *Nonduality*. *op. cit.* p.21.

³⁸ Bohm states: "...wholeness is what is real, and that fragmentation is the response of this whole to man's action, guided by illusionary perception, which is shaped by fragmentary thought. In other words, it is just because reality is whole that man, with his fragmentary approach, will inevitably be answered with a correspondingly fragmentary response. So what is needed is for man to give attention to his habit of fragmentary thought, to be aware of it, and thus bring it to an end. Man's approach to reality may then

that unite them to the whole are disregarded. Because each part claims autonomy, it automatically eliminates a common basis for unity. Furthermore, autonomy is reflected in the resistance of any influential teachings altogether, be they from the whole or from other parts. The dualistic stance argues that only the individual knows what is best. From a monistic perspective this is not favourable because the balance and stability of the whole that structures one's way according to traditional patterns, is replaced by an infinity of choices for each part. Because the part resists guidance from the whole, the infinite array of choices may lead to a state of paralysis for the individual.

An open future is offered to each part, but such 'freedom' is not *acceptance* of the given but is encouraged into behaviour that breaks down the traditional guidelines laid out by the whole and by Nature.³⁹ Freedom, as it appears in the dualistic definition, can only be achieved at the relative expense of others. Thus in the dualistic method, all parts are encouraged to move *A-Way* from each in search of new specialisations to make their mark in the modern world. But for those who seek a monistic way, the future as presented by the dualistic method is judged as one marred by risk and uncertainty, of endless change and self-centredness that is ultimately meaningless.⁴⁰ Yet for the dualistic thinker, the struggle to make it on one's own in the world has allowed explorers to uncover new frontiers and inventors to develop new technological innovations. The dualistic method argues that the suppression of the individual's creative instinct is ultimately disadvantageous for the common good (of the collective whole). The monistic counter-argument asserts that so-called 'creative' individuals are in fact disruptive troublemakers. The monistic elite in power

be whole, and so the response will be whole." Bohm, D. *Wholeness and the Implicate Order. op. cit.* p.7. In this statement, Bohm displays an obvious bias to the whole and renders the part as mere illusion.

³⁹ In his comparison of the Mohawk Nation and Western political cultures, Robert Vachon compares the Western notion of sovereignty to that of the Mohawk *Ia Kwa To We Ni Io* ("free as the wind and the animals"). The Western notion seeks to improve or transform the present, while the Mohawk accepts responsibility to maintain it the way it is by not interfering. Vachon, R. "The Mohawk Nation and its Communities. Chapter 2: Western and Mohawk Political Cultures: A Study in Contrast", *INTERculture*. Vol.25, No.1. Issue No.114. Winter 1992, pp.22-23.

⁴⁰ Edward Goldsmith criticises the worldview of modernism as being monopolised by change: "For them, the world is in perpetual flux, constantly changing in a direction seen as desirable and progressive." Instead, he argues that natural systems are geared toward the avoidance of change. This assertion obviously derives from a monistic stance, and one that the emerging non-equilibrium ecological theories strongly disagree with (see discussion in Chapter Four below). Goldsmith, E. *The Way: An Ecological World-view*. Boston: Shambhala. 1993, p.113.

set out to undermine the efforts of these individuals, claiming that enforcement of the One Way is for the overall benefit and security of the whole.⁴¹

In the dualistic method, competition drives the parts so that they avoid forming reciprocal relationships of responsibility, but instead assert only their 'rights' to receive benefits from others. Competition sets the parts against each other, creating an arena of contest to produce 'winners' at the expense of 'losers'. The 'survival of the fittest' is the motto that encapsulates the philosophy promoted by the dualistic method.⁴² The constant movement to secure one's position of privilege in the hierarchy (gained through cunning or might) results in a deep insecurity so that materialism and power become the new substitutes for status. This never-ending addiction to betterment or 'progress' is driven by a linear conception of time that paints the future as an improvement over present limitations and the 'primitiveness' of their ancestral past. The best scenario is always to be had in the future, which of course can never be arrived at, so that hope lies in always transcending the present situation. Development is equated with accelerating change; faster, bigger and more⁴³ are preferred to quiet stillness and contemplation.

Each part regards itself as akin to a whole, being a 'solid' autonomous unit complete in itself. Yet this is not a satisfactory outcome for the dualistic scientist, whose search leads to a detailed analysis of each so-perceived isolated part ever further into its micro-component parts. This reductionist methodology is ultimately mechanistic in intent and practice. In employing this analytical approach, each part eventually comes to be dissected to its lowest common denominator so that qualitative attributes are marginalised. Emphasis is then placed on the quantitative distinctions that can be probed, measured, recorded and scrutinised in infinitesimal detail.

⁴¹ For example, the Catholic Church took a definite stance against the Copernican hypothesis and sought to repress any scientific theory that contradicted scripture. In the Inquisition of the Counter-Reformation, the astronomer Giordano Bruno (among others) was charged with heresy and burned at the stake in 1600.

⁴² The 'survival of the fittest' is an aphorism associated with Charles Darwin's theory of evolution where he claims the struggle for survival, which he loosely identified with competition and natural selection, is the organising principle in nature and provides the means for evolutionary progress. See: Goldsmith, E. "Competition is a secondary Gaian interrelationship," *The Way: An Ecological World-view. op. cit.* Chapter Thirty Nine, pp.202-209.

⁴³ The object of change promoted by the dualistic method is to remove limits, to hasten the pace of change, to smooth out seasonal rhythms and reduce regional contrasts. The following series of postulates are derived: "...there is only one efficient speed, *faster*; only one attractive destination, *farther away*; only one desirable size, *bigger*; only one rational quantitative goal, *more*." Mumford, L. *The Myth of the Machine: The Pentagon of Power. op. cit.* p.173. [emphasis in original.] See Chapter Five below for a critique of modern economic 'development'.

On no other issue is dualism more markedly contrasted with the monistic method than that of independence of the parts with little or no binding to the whole. The dualistic method is characterised by autonomous beings, 'free' to develop their rights without external interference or restriction. But the more that parts are emphasised to the denial of the whole, the more those parts are reduced to isolated 'units'. As specialists probe further into the smallest atomic particulate, the units increase in multiplicity, seeming to always evade the certainty of finitude that scientists continually search for. René Guénon foresaw this in the trend of modernity that reduces everything to the 'reign of quantity'. Following the dualistic method to its extreme, the part eventually becomes identifiable only as a mere number, or 'pure quantity', where external and quantitative differences *count* at the expense of qualitative values that allow for real diversity.⁴⁴

Guénon summarises the factors contributing to the 'reign of quantity' in the following passage:

“...quantity will predominate over quality in individuals to the extent that they approach a condition in which they are, so to speak, mere individuals and nothing more... This separation turns individuals into so many 'units', and turns their collectivity into quantitative multiplicity; at the limit, these individuals would be no more than something comparable to the imagined 'atoms' of the physicists, deprived of every qualitative determination; and, although this limit can never in fact be reached, it lies in the direction which the world of to-day is following. A mere glance at things as they are is enough to make it clear that the aim is everywhere to reduce everything to uniformity, whether it be human beings themselves or the things among which they live, and it is obvious that such a result can only be obtained by suppressing as far as possible every qualitative distinction; but it is particularly to be noted that some people, through a strange delusion, are all too willing to mistake this 'uniformisation' for a 'unification', whereas it is really exactly the opposite, as must appear evident in the light of the ever more marked accentuation of 'separativity' implied. It must be insisted that quantity can only separate and cannot unite; everything that proceeds from 'matter' produces nothing but antagonism in many diverse forms between fragmentary 'units' which are at a point directly opposite to true unity, or at least are pressing towards that point with all the weight of a quantity no longer balanced by quality...”⁴⁵

⁴⁴ See: Panikkar, R. “Singularity and Individuality, The Double Principle of Individuation,” *op. cit.* The 'double principle of individuation' describes a thing according to a 'principle of singularity' based on external factors and quantitative attributes, while a 'principle of individuality' describes the qualitative distinctions grounded in the internal constitution of beings capable of self-identity.

⁴⁵ Guénon, R. *The Reign of Quantity and The Signs of the Times*. [Translated from the French by Lord Northbourne.] Maryland, U.S.A.: Penguin Books Inc. 1953 [1945], pp.61-62. [emphases added].

While those who take a dualistic stance assume that unity can be comprehended in the base atomic units of the universe, in employing this method Guénon argues that they move further from the pole of 'principal unity' to its opposite pole of 'uniformity'. The part is therefore reduced to an indiscriminate monad amongst the mass. Each monad, while individually counted as a numerical unit, in fact becomes more and more similar in character to the other monads until virtually all qualitative differences are eliminated. This can be seen as an attempt to replace unique individuality with uniformity. Yet no individual can truly exist in isolation from others, neither physically nor socially, and so the monad seeks comfort in conformity with a group. What results is a plurality of groups, each of which are collectives of self-similar parts. Again, the acceptance of diversity as the basis for pluralism (not merely multiplicity that constitutes 'plurality') is denied.

THE DIALECTICAL DILEMMA

The methods of perceiving reality have been restricted to a dialectic which sets up monism and dualism as competing and opposing forces, claiming that each exists independently of the other. The dilemma arises when each method endeavours to make apparent only the other's limitations according to their own (necessarily limited) outlook. Therefore, neither method fully appreciates the qualities for which the other strives. With each vying to better its opponent, the 'dialectical dilemma'⁴⁶ which results continually discards the old and puts in place the new, latest version of truth. This produces an action-reaction oscillation, like a pendulum swinging between its two extremes.⁴⁷

At any given moment the outcome of dialectically opposed positions is only relative. This is experienced as an alternation that temporarily favours one at the expense of the other. As one method gains favour and therefore 'wins', the 'loser' withdraws to 're-fuel' and

⁴⁶ The dialectic also refers to the: "art of investigating the truth of opinions, testing of truth by discussion, logical disputation", Concise Oxford Dictionary. David Hall and Roger Ames comment on the contemporary use of the term 'dialectic' with opposition (thesis-antithesis): "A philosopher's subjecting of predecessors to dialectical examination has more often than not constituted an effort to supplant those thinkers and to promote a new theoretical construction in place of the older mode of thinking. Historically, thinking has become associated with the dialectical process of discarding and reformulating ideas, the process of critique and reconstruction." Hall, D.L. and Ames, R.T. *Thinking Through Confucius*. New York: State University of New York Press. 1987, p.30. Therefore, dialectic is not simply an art of conversation, but a technique which empowers one to pass judgment on other people's opinions.

⁴⁷ "The dialectic dialogue supposes that we are rational beings and that our knowledge is governed above all by the principle of noncontradiction. You and I admit it as a given, and if you lead me into contradiction I will either have to give up my opinion or attempt to overcome the impasse." Panikkar, R. *The Intra-Religious Dialogue. op. cit.* p.29.

eventually comes back to retaliate with enhanced fervour (the oppressed reorganise to become the new oppressor). The more that monism and dualism compete with each other, the more exaggerated their own attributes become so that they are pushed ever further apart into unstable extremities. By denying wholeness, dualism has the tendency to fall into solipsism and ultimate meaninglessness. By disregarding the diversity of the parts, monism tends toward a state of totalitarian intolerance or nihilism.

When the methods of monism and dualism are framed as a dialectic, i.e., as extreme and opposing poles, each method will seek to permanently rule by excluding the other altogether. However, this forced position is ultimately in vain because such action is always met by a paradoxical counter-movement that ‘flips’ the pole at once into its polar opposite. This behaviour is termed *enantiodromia*⁴⁸ and it indicates the futility of grasping for extremes. In the competition of perceived opposites (each aiming to deny the effective expression of the other), the dialectic harbours the seeds of its own destruction.⁴⁹ Thus the Chinese Taoist prophesies that if you want to achieve anything, you should start with its opposite.⁵⁰

This paradoxical behaviour can be illustrated in both the methods of monism and dualism when they are taken to their extreme expressions. As mentioned above, when the monistic

⁴⁸ Enantiodromia, from Greek *enantios* – opposite, and *dromos* – course, running. Hence, the tendency of things to change into their opposites; literally ‘running in opposite ways’. *The New Oxford American Dictionary*. [Edited by E.J. Jewell and F. Abate.] New York; Oxford: Oxford University Press. 2001, p.559. Refer to: Eastham, S.T. *The Media Matrix: Deepening the Context of Communication Studies*. New York: University Press of America. 1990, p.115. This idea is symbolised in the *yin-yang* diagram (*T'ai-chi T'u* or ‘Diagram of the Supreme Ultimate’) by the two small dots in each tear-shaped half. Each dot is reversed, so that it represents the ‘other’ inside the alternative pole.

⁴⁹ When order is exaggerated to the extent that dis-order is feared and rationality is emphasised to the exclusion of the non-rational, then the negated aspects will manifest themselves in the other in unexpected ways. The consequences may deliver an over-order that is maniacally chaotic, and an over-rational temperament that ultimately becomes irrational. As Mumford illustrates: “There is no clean dividing line between the irrational and the super-rational; and the handling of these ambivalent gifts has always been a major human problem. One of the reasons that the current utilitarian interpretation of technics and science have been so shallow is that they ignore the fact that this aspect of human culture has been as open to both transcendental aspirations and demonic compulsions as any other part of man’s existence – and has never been so open and so vulnerable as today.” Mumford, L. *Technics and Human Development: The Myth of the Machine*. Vol.1. New York: Harcourt Brace Jovanovich. 1966, p.11.

⁵⁰ “If you would have a thing shrunk, You must first stretch it; If you would have a thing weakened, You must first strengthen it; If you would have a thing laid aside, You must first set it up; If you would take from a thing, You must first give to it. This is called subtle discernment: The submissive and the weak will overcome the hard and the strong. ...” Lao Tzu, *Tao Te Ching*. [Translated by D.C. Lau.] Hong Kong: The Chinese University Press. 1963, p.54. XXXVI. Some Confucian interpreters of Taoism accuse the reversal notion as a ‘scheming method’, as being blatantly dishonest. However, Taoists do not so much advocate that for a person to become dominant he or she should be submissive. Rather, the conclusion is that one cannot follow one codified guide in all situations. For further explanation of these differing interpretations, see: Hansen, C. *A Daoist Theory of Chinese Thought: A Philosophical Interpretation*. New York: Oxford University Press. 1992, pp.225-226.

authority of the One suppresses the individuality of the parts, the whole may be seen to stifle creativity. To escape the monotony of this rule, the parts may rebel in a revolution that overthrows the elite (or otherwise the parts collapse into a depressing state of nihilism). Thus the heteronomous shackles of the One are broken down by the liberals who assert the real basis of authority to be with the individual; the Many. The former monopoly of the One authority on truth is brought into scrutiny by the revolutionaries who claim that truth is in fact plural. When monism denies opportunities for the many to participate to their creative potential, those who are neglected resent their treatment and may eventually rebel to bring forth a new order that takes on the characteristics of the dualistic method.

The dualistic method also takes a paradoxical turn into monism when it comes to regard its way of perceiving reality as the only way. Universalism⁵¹ has come to characterise the modern secular attitude. Dualism as a way of thinking places limits on knowledge itself, restricting reality to what is rational and objectively proven.⁵² René Descartes paved the way for the dominance of dualism in the West by asserting that the individual must doubt everything (thus dispelling all formerly held beliefs) except the knowledge of one's own doubting. When the modern attitude of individualism is taken to such an extreme that each part is reduced to its lowest common denominator, a uniformity among the parts results (as discussed above). Therefore the many come to be regarded merely as a mass collection of self-similar monads, each reflecting the propaganda of the time. This tendency toward uniformity seeks to eliminate diversity. Furthermore, this trend is exported to all cultures because it knows no bounds, neither physically nor intellectually. This can be seen with the reductionist methodology of Western science that has taken on a universal influence (this has been made possible by its abstract nature). Thus the dualistic method comes full circle into a monistic intolerance of other ways of knowing, denying alternatives by claiming that there is only one true religion, science, technology, economics, and so on.

⁵¹ Krieger defines 'universalism' in the following: "Universalism is the way in which any human community establishes its collective identity, orients itself in the 'world' and articulates its basic common convictions about what is real, meaningful and of value. Apologetic universalism is that form of encompassing worldview constituted by the presupposition of its own absolute totality and the denial of the validity and truth of other worldviews. It is based upon a principle of exclusion/inclusion which nurtures the hope that eventually all opposition will be overcome." Krieger, D.J. *The New Universalism: Foundations for a Global Theology*. *op. cit.* p.4. [underline added].

⁵² "For if philosophy could not determine the limits of knowledge *as such*, it could not know how and whether any object at all could be known with certainty. It would lose its claim to be an autonomous judge of truth and error and thus give up its independence over against other sources of knowledge, for

The Dialectic Approach to Addressing Pluralism

As an approach for addressing the challenges of pluralism, neither monism nor dualism are appropriate. Monism attempts to assimilate the other into the One reality through coercive means. Dualism postpones true pluralism by excluding the other or tolerating differences on a surface level only.⁵³ Pluralism is superficially accepted in the dualistic method, that is, the dominant power postpones its annihilation of other cultures outwardly but exports its monocultural structures universally so as to eventually assimilate all under its one umbrella. Tolerance⁵⁴ is not a realistic option for it merely sustains division through ignorance and does not enable pluralism as acceptance of the 'other' to be genuinely attempted. Ultimately, the dualistic approach is also monistic in that it seeks to universalise its way by eliminating the diversity of others.

The dialectical dilemma is perpetuated because both monism and dualism claim to be absolute and universally valid (hence, the rise of 'apologetic universalism'⁵⁵). Supremacy between the two methods is continually contested, although no lasting victory can result for one over the other. This battle only allows the two methods to move further apart, bringing the consequences of extreme reactions. Yet neither can the quandary of the one or the many be 'solved' in a peaceful coexistence, nor in a compromise as a synthesis of the two into a third position. Ultimately this dialectical arena is futile, for it is bound either to

example, tradition. Secular thought, therefore, must claim universality and absoluteness." *ibid.* p.14. [underline added, italics in original].

⁵³ Stephen Gould's concept of NOMA (non-overlapping magisteria) attempts to deal with the conflicts between scientific and religious expressions of the world by promoting a 'golden mean' as a resting point between these two extreme positions (that usually work to eliminate the other). He claims that each 'magisteria' occupy separate but 'equal' realms and should come to a compromise where each respects the other's realm through mutual tolerance by exclusion. Further, Gould notes that: "The magisteria will not fuse; so each of us must integrate these distinct components into a coherent view of life." The tolerance that Gould advocates has obvious flaws, because it attempts only to avoid the clash of two ways of knowing that both claim to be absolute. By conceding territory to the other, each considers its own validity to be undermined. Furthermore, in passing the responsibility for addressing this conflict onto the individual's preferences, Gould side-steps the issue of 'apologetic universalism' altogether. Ultimately, the dialectical dilemma cannot be solved through the rational logic of the dualistic sciences. Gould, S.J. *Rocks of Ages: Science and Religion in the Fullness of Life*. New York: The Ballantine Publishing Group, 1999, p.58.

⁵⁴ Panikkar, R. "Tolerance, Ideology and Myth," *Myth, Faith and Hermeneutics. Cross-Cultural Studies*. New York: Paulist Press. 1979. Tolerance does not truly *accept* diversity but is ultimately a monistic technique where the other is tolerated until the dominant elitist party can conquer, convert, convince, or indoctrinate him as the weaker party. Pannikar summarises: "In a monistic worldview, there is no legitimate place for pluralism. It is at most *tolerated* – with kindness and patience (or sometimes without them) – to avoid a greater evil. Plurality is always provisional." Panikkar, R. "The Myth of Pluralism: The Tower of Babel," *Invisible Harmony. op. cit.* p.63.

⁵⁵ See Krieger, D. *The New Universalism. op. cit.* p.4. Refer to definition above.

stiffen to an unstable and explosive balance or fall into a compromise in which the minority is given only a consolation prize.⁵⁶ Again, pluralism is denied or at the most tamed. Because both monism and dualism claim to be absolute; there can be neither common ground nor peaceful accommodation.

In framing reality through this limited schematic, one ought to ask how the cross-cultural encounter is influenced by the dialectical approach? It becomes readily obvious that the dialectical arena entraps the monistic and dualistic methods within an argumentative mode that forces positions to be debated but does not necessarily lead to an improvement in understanding between cultures. Because neither of these methods acknowledge or respect the 'other' in their own right, the cross-cultural dialogue will always be avoided or nullified. Only when the 'other' is accepted as also having its own irreducible validity may pluralism be realistically approached. This opens the arena for a new way of approaching the dilemma – one that is neither monistic nor dualistic. The third, nondual way must reach beyond merely fixed positions towards a new and shared level of understanding and acceptance. Therefore, it must insist on a new orientation away from claims to universalism and toward dialogue.

COMPLEMENTARY POLARITY

While dual symbolic classification may be a feature of a number of diverse societies, not all peoples conceptualise the dualistic relation as representing two independent entities occupying mutually exclusive realms (as framed in the dialectical arena).⁵⁷ For example, in Chinese traditions, the binary pairs are not interpreted as competing opposites but as interdependent and complementary poles.⁵⁸ This understanding is expressed through

⁵⁶ See Panikkar, R. "The Myth of Pluralism: The Tower of Babel," *Invisible Harmony. op. cit.*, especially pp.62-66.

⁵⁷ See for example: Needham, R. (ed.) *Right and Left: Essays on Dual Symbolic Classification*. Chicago: The University of Chicago Press. 1973. The collection of essays illustrate how diverse societies categorise the world in terms of the division between right and left. They are based on Robert Hertz's 1909 essay, "The Pre-eminence of the Right Hand: A Study in Religious Polarity," and his thesis of polarity or opposition as basic to human expression. Rodney Needham comments: "These examples, taken briefly from a classical system of symbolic classification, show not only the importance of keeping the context of opposition perpetually in view, but also how it is that the dual scheme does not necessarily effect a total and exhaustive partition of all things and qualities into two mutually exclusive spheres." p.xxvii. Hertz, R. "La Prééminence de la main droite: étude sur la polarité religieuse," *Revue philosophique*. Vol.68. 1909, pp.553-580. [Translated by R. Needham in: *ibid.* pp.3-31.]

⁵⁸ Whereas Hertz's essay (see footnote above) postulated the dominance of the right (hand) over the left in 'primitive' societies, Marcel Granet's study on the dual symbolic categories of right and left in China revealed otherwise. Granet comments: "The diametrical opposition or polarity of which Hertz spoke is

traditional Chinese cosmology and the two primal forces or modes of creation; the *yin* and the *yang*.⁵⁹ Scholar Alan Watts explains: “The *yin-yang* principle is not... what we would ordinarily call a dualism, but rather an explicit duality expressing an implicit unity.”⁶⁰

Yin and *yang* are conceived as two sides of the same thing. Neither pole can exist without the other because they are interdependent and dynamically linked in a polar relationship with the other. The Chinese Taoist term *hsiang sheng* means mutual arising or inseparability. This indicates that at any moment when *yin* becomes prevalent, *yang*'s existence is not denied altogether. Rather, one pole is temporarily illuminated while the other remains in its shadow. Thus the relationship of *yin* and *yang* is likened to the shady and sunny sides of a mountain or two sides of a coin. When the poles are viewed through a dialectical lens, one is led to believe that only one side exists (or should exist), whereas ‘conceptual polarity’⁶¹ understands both poles to be always present but only one to be visible at any particular moment. This intrinsic and constitutive polarity in which the one makes possible the other, is further explained by Raimon Panikkar:

“The polarities we are speaking about have to do with the very character of reality. They need one another and *are* only in confrontation with, dialogue with, and dependence on each other. In point of fact, they are not two (anything) nor are they one. The ‘one and the many’ is the great fallacy of our mind. It is something which the mind cannot apply to itself.”⁶²

Whereas a reciprocal relationship between the poles is avoided outright in the monism–dualism dialectic, relationship in the *yin-yang* polarity is considered of great importance. A

not found in China.” “The Chinese attribute values to left and right which are unequal, and relative to the circumstances, but are always comparable. There is never question of an absolute pre-eminence, but rather of an alternation.” Granet, M. “Right and Left in China,” in: Needham, R. (ed.) *Right and Left: Essays on Dual Symbolic Classification*. *op. cit.* p.44.

⁵⁹ See: de Bary, W.T. (ed.) *Sources of Chinese Tradition*. Vol.1. New York: Columbia University Press. 1960, especially pp.191-196; “The Creation, Structure, and Working of the Universe.” The concept of the *yin* and the *yang* dates from very early times, but became a major element in Chinese thought through Han Confucianism. “Gradually and most notably in the works of Tung Chung-shu, a great body of correspondence was built up relating the two complementary principles of *yin* and *yang* to all phases of creation. Thus *yang* came to connote male, the sun, fire, and heat, Heaven, creation, dominance, spring and summer, etc., while *yin* was related to the idea of female, the moon, cold, water, earth, nourishing and sustaining, recessiveness, autumn and winter, etc.” p.191.

⁶⁰ Watts, A. *Tao: The Watercourse Way*. Middlesex, England: Penguin Books. 1975, p.26. [underline added].

⁶¹ This term is used by Hall and Ames to explain classical Chinese philosophy which “...requires that concepts which are significantly related are in fact symmetrically related, each requiring the other for adequate articulation.” Hall, D.L. and Ames, R.T. *Thinking Through Confucius*. *op. cit.* pp.17-21. [underline added].

balance is sought in the *yin-yang* polarity. Yet balance is not conceived as the static equilibrium of the monistic method, but as a dynamic balance between the poles. Dynamism indicates a movement, a 'trembling' that maintains the poles in tensile relationship to one another. When one pole over-balances, the other pole 'pulls' it back, thus mitigating the dialectic of forced extreme positions.⁶³ This relationship is represented in the ancient Chinese symbol, *T'ai-chi T'u* (or 'Diagram of the Supreme Ultimate') which represents the embrace of *yin* and *yang* as two tear-shaped characters, one dark and the other light. Each polar half endlessly transforms into the other in a cyclical revolution that is rhythmic like the tides or changes in seasons.⁶⁴

In the Chinese tradition of Taoism all changes in Nature are accepted as manifestations of the dynamic interplay between the polar opposites of *yin* and *yang*. In Taoism, change is not regarded as a disturbance to life (the monistic resistance to change) nor as a manic acceleration that demands blind submission to the whims of change (the dualistic stance). Rather, change is accepted as a natural process that allows for organic growth and, over time, establishes a harmonious balance among the myriad things. According to Chinese Taoist tradition, one must not set out to either resist or hasten change, but must accept natural changes and adapt one's own behaviour to Nature's rhythms.⁶⁵ To do otherwise is to interfere with the Tao, The 'ideal' Way, and this ultimately brings disharmony. The following passage of the *Tao te Ching* expresses this idea:

"To know harmony is called the constant;
To know the constant is called discernment.
To try to add to one's vitality is called ill-omened;

⁶² Panikkar, R. "Word of Silence: Non-dualistic Polarities," *Invisible Harmony. op. cit.* p.51. [emphasis in original].

⁶³ "Human beings were given a left foot and a right foot to make a mistake first to the left, then to the right, left again, and repeat. Between the over-controlled steering impulses, humans inadvertently attain the between-the-two desired direction of advance. This is not only the way humans work – it is the way the universe works. This is why physics has found no straight lines; it has found a physical universe consisting only of waves." This understanding in terms of feedback loops is basic to the study of *cybernetics*, from the Greek word for the steering of a boat. Fuller, R.B. "Mistake Mystique," *Intuition*. California: Impact Publishers. 1970, p.94.

⁶⁴ de Bary (ed.) continues: "Each force [*yin-yang*] as it reaches its extreme produces its opposite and the two continue to succeed each other in a never-ending cycle. This constant reaction of the two forces on the metaphysical and physical planes was used to explain all processes of growth and change in the natural world." de Bary, W.T. (ed.) *Sources of Chinese Tradition. op. cit.* p.191.

⁶⁵ The Chinese tradition of seeking the constant behind the changing can be compared with the Western approach. Angus Graham notes: "The West tends to seek it through the subject, as eternal substance with being both as existence and as being what is predicated of it; but for China there is nothing unchanging except the paths which things follow." Graham, A.C. *Disputers of the Tao: Philosophical Argument in Ancient China*. Illinois, U.S.A.: Open Court Publishing Company. 1989. Appendix 2, p.426.

For the mind to egg on the breath is called violent.
 A creature in its prime doing harm to the old
 Is known as going against the way.
 That which goes against the way will come to an early end.”⁶⁶

In Chinese understanding, all things are imbued with both *yin* and *yang* attributes.⁶⁷ Whichever pole manifests itself at any given moment is dependent on the context. The aim of the *yin-yang* conceptual polarity is not to exclude one pole in favour of the other, but to pay close attention to the contextual circumstances that indicate when a *yin* response is appropriate and *vice-versa*.⁶⁸ Therefore, according to traditional customs, emphasis is placed on attuning oneself with one’s surroundings, which requires an appreciation of the context in which either *yin* or *yang* behaviour is appropriate. At a personal level, etiquette is extremely important.⁶⁹ Rather than face the ‘other’ as an enemy to be eliminated through debate (the ‘battle’ of words), both poles are accepted outright as valid and necessary.

NONDUALISM – neither the One nor the Many

What is the third method, that which is neither the monistic whole nor the dualistic part? The framing of the one and the many as a dialectic is so prevalent that the mere suggestion of a third way seems unrealistic. Throughout political history, the tell-tale signs of swings from one extreme to the other have left battle wounds that do not easily heal.⁷⁰ And still we appear not to have learned from past mistakes. The notion of truth as an absolute is still

⁶⁶ Lao Tzu. *Tao Te Ching*. [Translated by D.C. Lau.] *op. cit.* p.81. LV.

⁶⁷ Watts explains: “Thus the art of life is not seen as holding to *yang* and banishing *yin*, but as keeping the two in balance, because there cannot be one without the other. When regarding them as masculine and feminine, the reference is not so much to male and female individuals as to characteristics which are dominant in, but not confined to, each of the two sexes.” Watts, A. *Tao: The Watercourse Way*. *op. cit.* p.21. The following passage of the *Tao Te Ching* confirms the presence of *yin* and *yang* principles in each creature: “The myriad creatures carry on their backs the *yin* and embrace in their arms the *yang* and are the blending of the generative forces of the two.” Lao Tzu. *Tao Te Ching*. [Translated by D.C. Lau.] *op. cit.* p.63. XLII. Extrapolating further, Panikkar suggests that in each person there is an East and West tendency, although usually one of these characteristics predominate. see: Panikkar, R. “The Supreme Experience: The Ways of East and West,” *Myth, Faith and Hermeneutics*. *op. cit.* especially pp.309-310.

⁶⁸ The Taoist sage does not strive for the ‘good’ and exclude the ‘bad’, but tries to maintain a dynamic balance between good and bad as relative partners. Furthermore, what is considered to be good in one context may be defined otherwise by another culture or generation. This understanding is contrasted with the Western expectation that a ‘better’ life can be achieved through seeking only the so-perceived ‘good’ aspects and excluding the ‘bad’, such as ridding oneself of pain, work, poverty – the so-called vices that technology is meant to solve. Graham comments: “...one begins to see an affinity even between Western attitudes as far apart as the Christian faith in the immortality of the soul and the scientist’s (before quantum mechanics) in universal causation; given the pairs ‘Life/death’ and ‘Necessity/change’, the West strives to abolish B and preserve only A.” Graham, A.C. *Disputers of the Tao*. *op. cit.* pp.331-332.

⁶⁹ For examples of how *yin* and *yang* inform Chinese etiquette, see: Granet, M. “Right and Left in China,” pp.43-58, in: Needham, R. (ed.) *Right and Left: Essays on Dual Symbolic Classification*. *op. cit.*

fiercely clung onto, either to be sought through adherence to the One authority or through secular revolt against all authority which claims that truth is only to be attained by the autonomous individual; the many. But throughout this battlefield where the debate ranges back and forth, the nondual way stands centred – not at a stand-still, but as assured in its path as it ever was. What is this third way, the nondual path?

The nondual path is challenging, yet only because one must trust one's own nature and be aware of the intuition that spontaneously presents itself. The nondual path is also fraught with danger, for the dialectic (the opposing forces of monism and dualism) continually tugs at the 'third way', attempting to explain it away according to the fallibilities each perceives in the opposite pole.⁷¹ It would appear that following one's 'own' way, *The Way*, is one of the hardest but most satisfying challenges. Loy explains the radical freedom of nondual action:

“Nondual action is spontaneous (because free from objectified intention), effortless (because free from a reified 'I' that must exert itself), and 'empty' (because one wholly *is* the action, there is not the dualistic awareness *of* an action).”⁷²

The nondualistic perception of reality is undeniably the hardest of the three methods to explain. This is even more so because the very act of interpreting the nondual experience and attempting to translate it into words is not nondual but dualistic.⁷³ The nondual perception does not separate the subject and object as dualistic thinking does. Instead, the nondual experience means immediate contact with the real, where the seer and the seen are one in an inseparable whole or unity. Therefore, the moment we begin to think about the nondual experience, we are no longer experiencing because “the awareness *of* an experience is not the experience.”⁷⁴

⁷⁰ Watts comments: “And looking back into Chinese history, there has been one revolution after another, each swinging with equal urgency to the opposite extreme from the previous government. Cyclically, after an equilibrium has been attained, a new imbalance begins to rise to its height, then a new revolution becomes necessary.” Watts, A. *Tao: The Watercourse Way. op. cit.* p.26.

⁷¹ For example, the holistic, nondual whole is interpreted by dualism as the absolute, monistic whole.

⁷² Loy, D. *Nonduality. op. cit.* p.10.

⁷³ Loy notes: “Concepts and intentions are dualistic because thinking is preoccupied with percepts and actions rather than being experienced as it is in itself, when it springs up creatively.” Loy, D. *Nonduality. op. cit.* p.11.

⁷⁴ Panikkar, R. “The Supreme Experience: The Ways of East and West,” *Myth, Faith and Hermeneutics. op. cit.* p.292. [emphasis in original].

One of the closest descriptions of how the nondual experience may be expressed in secular terms is through the understanding of the concept of ‘holism’.⁷⁵ But this takes a little explanation, for the concept of ‘holism’ has been largely misinterpreted and bandied about so much in the dialectical battlefield that it either lies abandoned by the dualistic method as a monistic ‘whole-ism’ or is considerably restricted in its use by the biological and social sciences.⁷⁶ Holism, as the word was originally intended, has a meaning quite different to the monistic whole of the Absolutists. Smuts coined the word ‘holism’ in 1926, from the Greek word *holos* for whole. Holism refers to the *process of whole-making*⁷⁷ and it embodies the conjoining of parts in a synthetic and dynamic intermeshing such that they result in a whole that is recognised as being ‘more than the sum of its parts’. That is, the functions of the separate parts actually change in the process of their coming together so that the whole has a functioning that is not wholly recognised in any one of its parts nor in their mere summation. Smuts explains:

“Taking a plant or an animal as a type of a whole, we notice the fundamental holistic characters as a unity of parts which is so close and intense as to be more than the sum of its parts; which not only gives a particular conformation or structure to the parts, but so relates and determines them in their synthesis that their functions are altered; the synthesis affects and determines the parts, so that they function towards the ‘whole’; and the whole and the parts therefore reciprocally influence and determine each other, and appear more or less to merge their individual characters: the whole is in the parts and the parts are in the whole, and this synthesis of whole and parts is reflected in the holistic character of the functions of the parts as well as of the whole.”⁷⁸

Those who take a dualistic stance react to the holistic proposition that life searches for meaning in wholes. A popular criticism of holism is that it favours the whole to the exclusion of the individual.⁷⁹ This interpretation renders holism as a type of monism where

⁷⁵ General Jan Smuts originally coined the term ‘holism’. Smuts, J. *Holism and Evolution. op. cit.* See especially Chapter Five, “General Concept of Holism,” pp.85-117.

⁷⁶ A holistic understanding not only underpins organismic biology and theories of evolution but has also influenced Gestalt psychology, ecology, and general systems theory.

⁷⁷ Smuts explains: “...‘wholes’ are basic to the character of the universe, and Holism, as the operative factor in the evolution of wholes, is the ultimate principle of the universe.” Smuts, J. *Holism and Evolution. op. cit.* p.98.

⁷⁸ *ibid.* p.86. [underline added].

⁷⁹ See for example the criticism of animal rights activists (who are concerned with the rights and status of individual organisms) versus deep ecologists (some argue that the rights of the individual must be subordinate to the well-being of the whole). This debate exemplifies the individual/population (part) versus community (whole) and is widely prevalent in ecology. The debate can be recognised generally as an illustration of the dialectic between dualism versus monism. The holistic approach avoids the dialectical dilemma because it does not deny the validity of either the part or the whole, but regards the interrelationships to be most important.

the whole is regarded as a 'studiable unit'.⁸⁰ Yet the holistic understanding of a whole sees it as part of a dynamic and evolutionary process, not a static entity or 'unit'. The philosophical conception of the absolute whole (as in monism) leaves no room for change. In contrast, holism implies growth or 'creative development', for no organism is ever really frozen forever (even death is part of an ongoing process of decay and renewal).

Although the holistic understanding of the whole as more than the sum of its parts may be accepted as a concept, attempts to apply this understanding often occur within a dualistic methodology. This treatment of holism presents a scenario where the parts are considered to be the real entities and they come together ('holistically', it is claimed) to make up the whole as a simple conglomerate. This is akin to the jigsaw puzzle game where the broken whole is then analysed piece-by-piece and eventually re-integrated into a synthesised whole, this time revealing the picture as complete and finite. However, any attempt to apply this analytical-synthetic⁸¹ approach to living organisms is obviously incongruous, because the whole (organism) is *not* the mere sum of its parts (organs).

What does holism mean when it claims that the whole is more than the sum of its parts? What is the 'more'? Definitely it is not a quantifiable value.⁸² It is not a mystery substance simply added to the assembly of component parts.⁸³ Nor is the whole something additional

⁸⁰ A common layman understanding defines 'holism' as: "Holism is the doctrine that the studiable units in nature are the more-or-less integrated wholes, rather than their constituent parts unrelated to each other." Eglar, F. *The Way of Science. op. cit.* p.32.

⁸¹ Some biologists are coming to a realisation of the limitations of the analytical-synthetic method of science. For example, Paul Weiss comments: "We are concerned with *living organisms*, and for those, we can assert definitely, on the basis of empirical investigation, that the mere reversal of our prior analytic dissection of the Universe by *putting the pieces together* again, whether in reality or just in our minds, *can yield no complete explanation of the behaviour of even the most elementary living system.*" Weiss, P. "The living system: determinism stratified," in: Koestler, A. and Smythies, J.R. (eds.) *Beyond Reductionism: New Perspectives in the Life Sciences.* [The Alpbach Symposium.] London: Hutchinson. 1969, p.7. [emphasis in original].

⁸² Weiss notes: "...the term 'more' [than the sum of parts] is often interpreted as an algebraic term referring to numbers. However, a living cell certainly does not have more content, mass or volume than is constituted by the aggregate mass of molecules which it comprises." *ibid.* p.11.

⁸³ When the 'more' is viewed as a relationship between two (or more) phenomena, William James warns against the understanding of the relation as a third entity. He argues that that philosophy is flawed because rather than bridging the one original chasm, it creates two smaller chasms. James explains: "Since a *regressus ad infinitum* is deemed absurd, the notion that relations come 'between' their terms must be given up. No mere external go-between can logically connect. What occurs must be more intimate. The hooking must be a penetration, a possession. The relation must *involve* the terms, each term must involve *it*, and merging thus their being in it, they must somehow merge their being in each other, tho, as they seem still phenomenally so separate, we can never conceive exactly how it is that they are inwardly one." James, W. "Monistic Idealism," *A Pluralistic Universe. op. cit.* p.37. [italics in original].

to the parts.⁸⁴ But the ‘more’ does have a certain feel to it, a quality that changes those parts forever and demands of the whole something that cannot be replaced if the whole is analytically split into parts. Indeed, the destruction of the whole is forever, since one can never achieve a replica through integration. Ecological restoration is an attempt to heal environmental destruction by ‘reconstructing’ ecological wholes. Unlike a machine that can be *improved* by adding and deleting parts, tinkering with living systems leaves holes in the whole forever. That is, once the original ecosystem has been fragmented, it can never be re-created to its original whole because the interconnections will have changed. At best, a new ‘artificial’ ecosystem can be introduced.

Once analysts get to the whole, the ‘more’ is irretrievably lost.⁸⁵ That quality slips silently through the cracks between the fragmentary categories that dualism creates. The ‘more’ is beyond classification: it is not definable according to any sort of rational logic.⁸⁶ Intuitively, one can only ‘feel’ the energy of the parts when they act synergistically as a whole. Synergy is the term Buckminster Fuller gives to the holistic ‘more’ than the sum of its parts. In the process of whole-making, the parts are changed forever. What changes them is their *active relations* to one another; their interrelationships and the intrarelations that emerge in that process. Fuller defines ‘synergy’ in the following passage:

“*Synergy* is one
of those generalized principles.
It is defined scientifically
as behavior of whole systems
unpredicted by behaviors
of any of their separate parts.
Synergy is disclosed, for instance,
by the attraction for one another
of two or more separate objects.”⁸⁷

Above all, holism claims victory neither for the whole nor for the part. In this way it avoids the dualistic dialectic that demands allegiance to either the one or the many. In overcoming

⁸⁴ Smuts states: “It is very important to recognise that the whole is not something additional to the parts: it *is* the parts in a definite structural arrangement and with mutual activities that constitute the whole.” Smuts, J. *Holism and Evolution. op. cit.* p.104. [emphasis in original].

⁸⁵ Panikkar affirms this: “In a way the parts are but abstractions of the Whole which, in this very process of abstraction, loses something irretrievable, something which cannot be recouped by any art or integration.” Panikkar, R. *The Rhythm of Being. op. cit.* p.44.

⁸⁶ Smuts can only hint at what it may be: “A whole... has something internal, some inwardness of structure and function, some specific inner relations, some internality of character or nature, which constitutes that *more*.” Smuts, J. *Holism and Evolution. op. cit.* p.102. [emphasis in original].

the part-versus-whole dialectic, Arthur Koestler introduced the concept of the ‘holon’. He coined the word from the Greek word for whole, *holos*, with the suffix *-on*, denoting a part (as in *proton* and *neutron*). Thus the holon is Janus-faced⁸⁸: it is both a whole and a part, not as discrete entities but as inseparable and complementary poles. Koestler asserts that every organism can be understood as a holon and will appear to be either a whole or a part depending on the hierarchical context in which it is viewed. The following passage explains this position:

“...each member of this hierarchy, on whatever level, is a sub-whole or ‘*holon*’ in its own right – a stable, integrated structure, equipped with self-regulatory devices and enjoying a considerable degree of *autonomy* or self-government. Cells, muscles, nerves, organs, all have their intrinsic rhythms and patterns of activity, often manifested spontaneously without external stimulation; they are subordinated as *parts* to the higher centres in the hierarchy, but at the same time function as quasi-autonomous *wholes*.”⁸⁹

How is it that a holon can be a ‘whole’ and a ‘part’ at the same time when the methods of monism and dualism both adamantly defend that only one position is real? Koestler attempts to overcome this dilemma by explaining that a holon is not solely a part or a whole, but rather displays *tendencies* that allow it to express itself in either of those roles. This means that a holon has the tendency to act as an autonomous individual when it is *self-assertive*, but when it seeks to conjoin with others in a holistic process to create a new whole, the holon exhibits an *integrative* tendency as a part among others. Neither tendency should be judged preferentially, but seen as necessary complements. Because a holon only tends toward expression as a whole and as a part, this concept avoids falling into the dialectical trap of claiming only one or the other is ‘real’. Thus Koestler advocates that a dynamic equilibrium be maintained between the two tendencies of the holon, arguing that if the equilibrium is upset dire consequences result.⁹⁰

Whether the holon expresses itself as a part or as a whole depends on its hierarchical context. ‘Hierarchy’, however, is a loaded term and therefore requires further explanation.

⁸⁷ Fuller, R.B. *Intuition. op. cit.* pp.33-34. [emphases in original].

⁸⁸ Referring to the two-faced Roman God, Janus.

⁸⁹ Koestler, A. *Janus: A Summing Up*. London: Hutchinson. 1978, p.27. [emphasis in original].

⁹⁰ Koestler confirms the notion of a basic polarity where the stability of the multi-levelled holarchy depends on the equilibration of the dual aspects of its holons, as wholes and parts. When either tendency (self-assertive or integrative) is restrained, psychological effects may result in obsession, disorder, malignant growths, etc. For further explanation see: *ibid.* pp.58-60.

The common use of hierarchy⁹¹ connotes a rigid ladder of power based on heteronomous rule. This gives the impression of a monistic authority, associated with military order and bureaucratic organisation. However, the hierarchy that Koestler refers to is not a top-down model.⁹² The alternative understanding of hierarchy views the universe as a series of levels of organisation and complexity; a multi-levelled view that sees holons embedded in larger holons, and so on.⁹³ This hierarchy of existence can also be called a ‘nested hierarchy’, or ‘holarchy’ as is sometimes preferred to avoid the negative associations of linear interpretation.⁹⁴ However, the levels of hierarchy are not only vertical but also include horizontal networks. Koestler draws an analogy of the hedge as an example of this interaction:

“The bushes are vertical, *arborizing* structures. The entwined branches form horizontal *networks* at numerous levels. Without the individual plants there would be no entwining, and no network. Without the network, each plant would be isolated, and there would be no hedge and no integration of functions. ‘*Arborization*’ and ‘*reticulation*’ (net-formation) are complementary principles in the architecture of organisms and societies.”⁹⁵

The hedge example above has its own limitations. Hierarchy is represented as the criss-cross of vertical and horizontal relations, lines upon lines. The nondual understanding of relationship, however, is holistic in the sense that it embodies interrelationships that are fundamentally nonlinear. Hierarchy is then realised as the matrix of interconnections in which each and every thing is genuinely *interdependent*.⁹⁶ At this point we return to an appreciation of the nondual way that perceives the part and the whole as interrelated in complementary polarity. Only when at least one of these poles is viewed as a substantial

⁹¹ Hierarchy, from the Greek *hierarkhe*: *hieros*, sacred; *-arkhes*, ruler. Concise Oxford Dictionary. Hierarchy also means: order, pattern, beginning. Gregory Bateson refers to the ‘hierarchy of patterns’ as: “...a pattern of patterns. It is that metapattern which defines the vast generalization that, indeed, *it is patterns which connect*.” Bateson, G. *Mind and Nature: A Necessary Unity*. New York: E.P. Dutton. 1979, p.11. [italics in original.]

⁹² Although Koestler himself employs the linear descriptions of looking ‘up’ to see a whole and ‘down’ to see its constituent parts.

⁹³ This is evident in social hierarchies where every social holon (including the various levels: individual, family, clan, tribe, nation, etc.) is a coherent whole relative to its constituent parts, yet at the same time part of a wider social entity.

⁹⁴ These ideas form ‘Hierarchy Theory’ in ecology and the systems sciences. See Chapter Four below.

⁹⁵ Koestler, A. *Janus. op. cit.* p.47. [emphases in original].

⁹⁶ This contrasts with the monistic linear hierarchy that requires the parts to be *dependent* on the authority of the whole (i.e., heteronomy). It also contrasts with the dualistic rebellion against any external order or hierarchy whatsoever, which maintains that the parts are *independent* of each other and the whole (i.e., autonomy). The latter method has the tendency to lead to anarchy when any sense of order is dispelled. Koestler observes: “A society without hierarchic structuring would be as chaotic as the random motions of gas molecules colliding and rebounding in all directions.” Koestler, A. *Janus. op. cit.* p.34.

entity that can be isolated from the other, does the risk of slipping into dialectic become real.⁹⁷

The holistic approach overcomes the dialectical dilemma by explaining that ‘part’ and ‘whole’ are not substantial entities at all, for that is the way of the dualistic method that seeks to dissect and objectify. Panikkar states that beings are brought into existence because of their relationships; therefore ‘being’ does not exist prior to ‘relationship’. Therefore, to think holistically we need to *think relationally*.⁹⁸ When we fail to do this, the relationship takes secondary importance so that we think one ‘individual’ part simply chooses to relate to another part. Relationship in this sense is restricted to ‘relation’; as a simple linear connection between two or more so-called independent entities. A completely different approach is required for the holistic awareness, since parts are no longer regarded as the foundation of the relationship. Panikkar explains: “A relationship is not ‘something’ that sets antecedently given or existent ‘other’ things in relationship; it is the very constitution of the things as ‘such.’ ...we discover that things are relationships.”⁹⁹

In contrast to the ‘biunivocal’ association of relation, Panikkar asserts the notion of the ‘radical relativity’ of all beings. One must be careful to distinguish the terminology of ‘relativity’ from an agnostic ‘relativism’ that allows no possibility of truth and slips dangerously closer to a state of nihilism.¹⁰⁰ The word ‘relativity’ is here understood as relatedness, not simply voluntary relation. By ‘relativity’ Panikkar refers to the myriad of connections and interwoven threads of relationship in which beings emerge from a matrix that is whole, yet never static or complete. This relativity is ‘radical’ for it involves

⁹⁷ Panikkar confirms: “But this [polarity] makes sense only if we restrain from substantivizing one of the poles or considering their relation as secondary and subsidiary to their (independent) being. An unrelated being, like an unworded word, is a sheer contradiction.” Panikkar, R. “Word of Silence: Non-dualistic Polarities,” *Invisible Harmony. op. cit.* p.51.

⁹⁸ Panikkar summarises: “When we think ‘relation,’ it is difficult not to think this ‘relation’ substantively: that is, either we think of a *something* that unites, separates, conditions – in a word, sets in relationship – two or more things with one another; or else the entire thinking capacity is drawn precisely to the substantiality of the things that enter into the relationship. But this is to fail to think ‘relationality’ itself.” Panikkar, R. *The Silence of God: The Answer of the Buddha*. [Translated from Italian by R.B. Barr]. New York: Orbis Books. 1989, p.135. [emphasis in original].

⁹⁹ Panikkar, R. *The Silence of God. op. cit.* p.136. [italics in original, underline added].

¹⁰⁰ “Relativism destroys itself when affirming that all is relative and thus also the very affirmation of relativism. Relativity, on the other hand, asserts that any human affirmation, and thus any truth, is relative to its very own parameters and that there can be no absolute truth, for truth is essentially relational. The latter case is the reverse of the former.” Panikkar, R. “The Invisible Harmony: A Universal Theory of Religion or a Cosmic Confidence in Reality?” *Invisible Harmony. op. cit.* p.156.

everyone, every being, sentient or non-sentient. The pure relativity, or ‘total reciprocity’ among beings is expressed clearly by Panikkar in the following passage:

“...the discovery in question is that every being is what it is precisely because it is itself an ensemble of relationships and enters into intimate, constitutive relationship with other beings. And this relationship is such that it forms a radical unity that does not render things uniform, but, on the contrary, permits them to be diverse. Unity, then, and not the contrary, is the fundamental fact. This radical unity of relativity is intimate to each thing, and yet at the same time it is transcendent, inasmuch as no thing really exhausts it, nor indeed all things together. The relativity of things is not merely their sum.”¹⁰¹

The relativity presented here allows for centering, so that a being may be viewed as the centre of a matrix where a ‘radial order’¹⁰² extends outward from the centre in all directions. This centre is like the ‘focus’ in a wider ‘field’, where the focus is the particular among a field that is a whole.¹⁰³ The focus (part) simply shifts within the field (whole) when the centre of attention is moved. Thus parts and the whole are not considered to be dialectically opposed categories, because the part actually *is* the whole – but not the whole in totality. What has formerly been regarded as a ‘part’ is now to be recognised as the whole, but only a partial aspect of the whole. As Panikkar expresses it: “They [polarities] are not parts of a whole, but rather they are the whole in a part, the whole partially (seen).”¹⁰⁴

The dialectic of the one and the many may now be revisited in a new light, given a wider appreciation of the different conceptual understandings of the relation of the part and the whole. David Hall and Roger Ames¹⁰⁵ outline some of these conceptual models in the

¹⁰¹ Pannikar, R. *The Silence of God. op. cit.* p.140.

¹⁰² The underlying (invisible) structure is what Chinese ‘Han’ thinking refers to as: “an emanating and centripetal ‘radial’ order.” Therefore, “A particular person pursues realization as the center of a circle of familial relationships that are deepened through effective communication.” Yuan Dao. *Tracing Dao To Its Source*. [Translated by D.C. Lau and R.T. Ames]. New York: Ballantine Books. 1998, p.10.

¹⁰³ Hall, D.L. and Ames, R.T. *Thinking Through Confucius. op. cit.* pp.237-241. The authors note that: “A particular is a focus that is both defined by and defines a context – a field.” “By particular focus we mean to stress the notion that each focus is the focus of an alternative whole that constitutes its distinctive context. Alternative foci entail the notion of alternative wholes. In this model there is no overarching whole, no single context that contains all foci.” p.238. Clearly, this understanding avoids the monistic claim to the ultimate whole and has obvious links with Smuts’ appreciation: “The great whole may be the ultimate terminus, but it is not the line which we are following. It is the small natural centres of wholeness which we are going to study, and the principle of which they are the expression.” Smuts, J. *Holism and Evolution. op. cit.* p.100. [underline added].

¹⁰⁴ Panikkar, R. “Word of Silence: Nondualistic Polarities,” *Invisible Harmony. op. cit.* p.50.

¹⁰⁵ The following quotes are sourced from: Hall, D.L. and Ames, R.T. *Thinking Through Confucius. op. cit.* pp.237-238. [underline added].

following definitions: (1) “A part may be simply a piece of a greater whole in the sense of being one of its constituents.” This is the whole as the dualistic collective; simply the sum of its parts. (2) “Or the part may be a functionally interrelated element helping to constitute an organism.” The concept of the holon embodies this relationship of parts (as a lower level holon) within the whole (a higher level holon). Smuts’ definition of the whole as more than the sum of its parts affirms the interrelatedness of the functions of the parts in the whole. Hall and Ames explain further: “In the first instance parts are extrinsically related; in the second case the parts are intrinsically related in accordance with the aim or function of the organism.”

Hall and Ames continue their discussion: (3) “A third model presents a whole as a universal or archetype and the part as a particular or instance. In this case the particular is one of the class of items instantiating the universal.” This interpretation is that of the monistic whole, where parts are merely dimensions of the absolute One. (4) “But the model most relevant for our considerations is yet another, in which a part reflects or contains its whole in some adumbrated sense. This model is that of the hologram.” In this latter conceptual understanding, the notions of the part/focus in the whole/field are relevant. The field appears as hologrammatic in that each ‘part’ contains the adumbrated whole. Yet, the part is never equal to the whole: The part cannot exhaust the whole because the whole is itself only part of an ever-wider Whole that grows.

The fourth definition (above) is basic to an understanding of the third, nondual way. It may be characterised by an attitude of *ontonomy*, which is neither the whole suppressing the parts by *heteronomy*, nor the complete abdication of the whole through the absolute self-promotion of the parts as in *autonomy*. Rather, *ontonomy* is ‘radical freedom’ to grow and to follow one’s destiny in the light of the whole. *Ontonomy* assumes that the universe is a whole with relationships between each and every part of reality. Panikkar defines this neologism as:

“By *ontonomy* we mean that degree of awareness, which, having overcome the individualistic attitude as well as the monolithic view of reality, regards the whole universe as unity so that the regulation of a particular being is neither self-imposed nor dictated from above, but a part of the whole discovering or following its destiny. *Ontonomy* is the realisation of the *nomos*, the law of the *on*, being, at that profound level where unity does not impinge upon diversity, but where the latter is

rather the unique and proper manifestation of the former. It rests on the *specular* character of reality, in which each 'part' mirrors the whole in a way proper to it."¹⁰⁶

Spider's Web: Holism in Metaphor

The analogy of a spider's web may help to clarify some of the ideas expressed above. If one pictures a spider's web, monism can only recognise the net as one whole entity (the myriad of polyhedrally configured threads). In contrast, dualism focuses simply on the nodal points (where the spider threads overlap) to the exclusion of the net. The holistic method, however, values with equal merit both the *net as a whole* and the *parts as nodal points* of inter-thread connections. Yet holism, understood nondually, not only considers the visible and tangible qualities of a spider's web. It also fully appreciates the 'empty' spaces of the web.¹⁰⁷ These silent spaces hold the whole together in a tensional dynamic, allowing relationship with its environment. Thus, the web can 'breathe', can flex and shift and adapt itself in resilient response to changing weather conditions and the perturbations occasioned by the spider's prey and enemies.

As a whole, the spider's web has an integrity of its own. This integrity is maintained in a dynamic tension that balances the requirements for strength and flexibility.¹⁰⁸ Where the threads overlap, each nodal point experiences a concentration of forces compressing that point. If the force is too great, those overburdened points may collapse inwardly. However, when tension is applied the structure as a whole is pulled outward and given shape. The challenge is to maintain the optimal strength of each part in balance with a tensional pull of

¹⁰⁶ Panikkar, R. *Worship and Secular Man. op. cit.* p.29. [emphasis in original].

¹⁰⁷ 'Empty' here does not imply nothingness, as in 'devoid of qualities' or 'a vessel deprived of its contents' (see definition in Concise Oxford Dictionary). Rather, the use of the word 'empty' is intended in the manner that the *Tao Te Ching* expresses it: "Is not the space between heaven and earth like a bellows? It is empty without being exhausted: The more it works the more comes out." Lao Tzu. *Tao Te Ching. op. cit.* p.9. V. [underline added].

¹⁰⁸ The idea that the whole (structure) has a tensional integrity, or 'tensegrity', is key to understanding Buckminster Fuller's architectural geodesic dome structures. As a whole, each geodesic dome structure that Fuller engineered has integrity and a structural stability not borne of sheer, solid weight but of the forces of compression (push) in balance with tension (pull). Fuller explains: "All structures consist of a balanced interaction between tensile and compressive forces. Nature services all her tension functions rigidly with three crystalline, maximum-cohesion bonds, and services her compression-resisting functions with double-bonded, flexibly hinged, variously viscous hydraulics. These are noncompressible, but being flexible, they distribute their loads evenly to all the surfaces of their triple-bonded, tensional-container systems. As long as the triple-bonded tensional crystalline's containers are strong enough, the hydraulic structural system will hold its tensionally pre-designed, optimally extended shapes because the contained liquids, which entirely fit the designed container, are noncompressible." Fuller, R.B. *Critical Path*. New York: St. Martin's Press. 1981, p.4.

the whole. Each part can be conceived spatially as unique, yet remains always interconnected to the whole.

As one starts to appreciate an approach that celebrates interconnections, a doubt creeps in that if everything is really connected to everything else surely this implies the possibility of over-connectedness leading to monistic stagnation? The hesitation arises when the whole is seen as some sort of closed container that is ultimately bounded. In the monistic interpretation, relationship is considered to have finitude. Here the spider's web is no longer a creative artistic expression, but merely an attempt to repeat the perfect web pattern. Yet the spider resists such repetition, for it must assess the particular limits of its unique surroundings and choose its angular placement carefully. Every web is a new creation; relationships are never exhausted but continually renewed and begun anew. Thus in the spider's web, the interwoven threads of relationships are polyhedral (not simply linear) and intrinsically open. These open-ended channels of communication allow the whole to remain alive and alert, adaptive and responsive to its environment.

Of equal significance to the interwoven network of knots and threads, is the open space at the centre of the web, as well as the non-bounded space that allows for further growth from the largest ring outward. The growth referred to here is an 'organic growth', which must be distinguished from the openness of the dualistic notion of growth expanding endlessly with no apparent limits. The spider realises that maintaining the web in a healthy condition requires full-time surveillance. Therefore, if the web is spread so widely that it grows beyond an optimal size, the net as a whole becomes brittle. So too do the nodal points become vulnerable if they are disentangled from the whole, leaving the threads hanging loosely, exposed to every change in the wind (passing trends). In this expression, the spider's web is no longer an elegant creation but a discarded cobweb; an 'insidious entanglement' of broken threads that can never be re-woven into a usable web.

In contrast, organic growth is the natural and creative expression of life itself, unfolding according to its own intrinsic rhythms and in harmony with the Whole. Here 'growth' implies expansion and progress, yet only according to the inner regularities of each field of activity. 'Progress' is to be regarded as more than simple change or movement which constitute the dynamic, dualistic conception. This alternative understanding also overcomes the static, substantialistic vision of reality that is ultimately monistic. In explaining the third

way of viewing growth, Panikkar employs the word ‘*epestatic*’ or ‘*epektasis*’ which implies: “...pure tension, simple transcendence, superation, not in the sense of rectilinear change, nor again of a circular process, but in a kind of spiral progression, continually begun again, yet always new and original – after all, we find the very universe of being to be in a process of expansion.”¹⁰⁹

Recapitulation

How does one attempt to explain these differing methods to those who prescribe to one or the other; either the One or the Many? How do we begin to explore the third method, that of the nondual, when the dialectic between the monistic and dualistic methods continues to dominate the Western secular worldview to the near exclusion of the nondual perception? How is an appreciation of the strengths of other methods to be sought when the dialectic enhances conflictual relations only? And after all, how is this all to be helpful when one considers the cross-cultural encounter? Perhaps an exploration of the geometrical symbols which seem to be deeply ingrained in these methods might aid attempts to arrive at a clearer understanding of the issues posed above.

SYMBOLS

Buckminster Fuller, who understands symbols and their mathematical and philosophical fallout almost intuitively, challenges the Greeks’ definition of the sphere – a definition which modern peoples have adopted almost without question. Fuller explains that the Greek sphere is defined as “...a surface equidistant in all directions from a point.”¹¹⁰ This definition conceives of a sphere whose surface is the same all over, such that it is tightly

¹⁰⁹ Panikkar, R. *The Silence of God. op. cit.* p.142. Panikkar explains the etymology: “Composed of *epi-*, which implies possession, and the divine immanence, *ek-*, which suggests emergence from oneself, and transcendence, and the root *-sta-*, which means precisely ‘to be here’ – just to have a perfect *coincidentia oppositorum*.” *ibid.* “Notes”, fn.169, p.221. Elsewhere, Panikkar refers to what the ancients meant by *epektasis*: “the forward tension of Man towards his goal – the infinite Mystery.” Panikkar, R. “Introduction,” *Myth, Faith and Hermeneutics. op. cit.* p.2.

¹¹⁰ Fuller, R.B. *Utopia or Oblivion: The Prospects for Humanity*. Middlesex, England: Penguin Books. 1969, p.81. [emphasis in original]. In “Timaeus”, Plato presents his account of the creation of the universe: “Wherefore he made the world in the form of a globe, round as from a lathe, having its extremes in every direction equidistant from the center, the most perfect and the most like itself of all figures, for he considered that the like is infinitely fairer than the unlike. This he finished off, making the surface smooth all around...” Plato’s “Timaeus,” Translated by Benjamin Jowett, pp.1151-1211, in: Hamilton, E. and Cairns, H. (eds.) *The Collected Dialogues of Plato, Including the Letters*. Princeton, New Jersey: Princeton University Press. 1961, p.1164.

bounded as a closed system. Significantly, it is also a 'solid' and hereby expresses the Western obsession with solidarity as the basis of the real.¹¹¹

The consequences of the Greek sphere on the psychological, philosophical and mathematical axioms that underpin modern thinking is significant. The closed sphere creates a bias, for only the 'bound' area was considered to have validity, finitude and identity. Therefore, the Greek definition sets those who are inside the sphere against an infinite and boundless 'unknown'. And so boundaries were established and over time hardened; boundaries that seek always to separate clans, nations, religions. The upshot is that preferential treatment is always reserved for the benefit of the 'self', while the 'other' is denigrated. Fuller comments: "We tend to think only of *one side* of a line as definable, organized, and valid. ...All humanity has been conditioned to accredit only its own local area of experience as being natural..."¹¹²

In the above explanation, the Greek sphere can be regarded as the monistic whole, as an absolute and impenetrable One.¹¹³ Yet when the Greek sphere is multiplied in number and reduced to the micro-scale of tiny atoms, each sphere becomes the solid and complete autonomous part within itself. Therefore, the monistic boundary bias also underpins the atomistic tendency of the dualistic method, expressed outwardly in a fierce competition that forces all 'solid-parts' into a reactive mode. Ultimately, the bias of the Greek closed sphere applies to both the monistic and dualistic worldviews, eventually turning dualism into its monistic opposite.

¹¹¹ In modern metaphysics (Descartes' subject-object dualism), the mark of 'the real' is that which has substance (i.e., can be measured, etc., hence 'substantiated'). This contrasts with the traditional Greek concept of the unity of being, as with the translation of the Greek *hypokeimenon* to Latin *subiectum*. Martin Heidegger explains: "The *subiectum* is what is placed and thrown under in the *actus* and can then be joined by other things. ... *Subiectum* and *substans* mean the same thing: what is truly constant and real, what suffices for reality and constancy and is therefore called *substantia*. Soon the essence of *hypokeimenon* ..., of what lies present of itself, is interpreted from the perspective of *substantia*. ...The concept of substance is un-Greek, but it dominates together with *actualitas* the essential character of Being in the metaphysics to follow." Heidegger, M. "Metaphysics as History of Being," pp.1-54, *The End of Philosophy*. [Translated by Joan Stambaugh.] New York: Harper & Row. 1973, p.27. See especially pp.26-32, "The Transformation of Hypokeimenon to Subiectum."

¹¹² Fuller, R.B. *Utopia or Oblivion. op. cit.* pp.139-140. [emphasis in original].

¹¹³ Note the *eukyklos sphaera*; the Greek well-rounded sphere. In Plato's "Sophist", Theaetetus and Stranger discuss 'the real'. Stranger asks: "Then if it is a whole – as indeed Parmenides says, 'Every way like the mass of a well-rounded sphere, evenly balanced from the midst in every direction, for there must not be something more nor something less here than there' – if the real is like that, it has a middle and extremities, and consequently it must have parts, must it not?" The conversation continues as a dialectic of the monistic whole (unity in the 'true sense' without parts) and the dualistic notion of the whole as the aggregate or sum of all the parts. Plato's "Sophist", Translated by F.M. Cornford, pp.957-1017, in: Hamilton, E. and Cairns, H. (eds.) *The Collected Dialogues of Plato. op. cit.* pp.988-989.

Fuller argues that the Greek definition of the sphere is misleading. First of all, there are no 'solids' as quantum physicists have discovered. This in turn implies that there can not be equidistant lines from a point extending outward to an impervious surface. As one reaches the surface, the line must bend inward because always in life there is an exchange between inside and outside, between a being and its environment. This is confirmed by the second law of thermodynamics which concludes that all systems are continuously losing energy to outside universe, also known as entropy. The sphere, therefore, is "full of holes"; the surface must be semi-permeable and there must be relationship. A more appropriate description of the sphere is suggested by Fuller: "The best definition that we can have of a sphere is a plurality of events approximately equidistant in approximately all directions from approximately one event, at approximately the same time."¹¹⁴

Secondly, the Greek sphere can not exist within a backdrop that is infinite, for the Earth is a finite globe. Draw a triangle, Fuller suggests, on a flat piece of paper and at once you have created bias. All that is within the bounds of the triangle must be real and that which is outside slips into infinity. Instead, take the same triangle and place it on the Earth. It shapes itself to the curvature of the Earth, becoming a spherical triangle bounded by great circle arcs. The Earth has finite space and so what is outside the triangle is as real as what is inside.¹¹⁵ There is insiderness and outsiderness, within and without, the 'self' and the 'other'. Both are regarded as real; the one-sided bias is dissolved.

Instead of the immovable boundaries created by the Greek sphere, Fuller presents his 'omni-directional halo' as a symbol more appropriate for our present time. This halo looks like a ripple on a pond, rings extending outward nonlinearly, networks within networks, holons nested in larger holons, the lithosphere, hydrosphere, atmosphere, and so on. The omni-directional halo no longer presents a 'boundary' as such, but replaces this defining limit with 'approximate spheres of influence'. The relationship between the outwardness and inwardness of the omni-directional halo is described by Fuller as follows:

¹¹⁴ Fuller, R.B. *Utopia or Oblivion. op. cit.* p.82.

¹¹⁵ Fuller explains: "The area apparently 'outside' one triangle is seen 'inside' the other. Because every spherical surface has two aspects – convex if viewed from outside, concave if from within – each of these triangles is, in itself, two triangles." This example is presented diagrammatically in: *ibid.* p.112. Fuller confirms elsewhere: "Every triangle has two faces – its obverse and reverse. Unity is two." Fuller, R.B. "Omnidirectional Halo," *No More Secondhand God and Other Writings*. New York: Anchor Books. 1963, p.128. These descriptions accept complementary polarity over the dialectical opposition implied by the Greek sphere.

“We thus discover that systematic recollection and thought-out *definition* lies within a *geometrically conformed* zone which inherently subdivides the universe into distinctly separate microcosm and macrocosm, which two are, however, only meagerly isolated from one another by a local constellation of considerable relationships.”¹¹⁶

The introduction of new symbolic terminology may prove to be more beneficial in meeting the challenges presented by pluralism. When it is accepted that closed boundaries do not characterise life,¹¹⁷ nor that unlimited openness is healthy in the long run, then it is pertinent that consideration is given to the exchanges that take place (or have the potential to take place when given adequate opportunity) between peoples who hold diverse worldviews. Such exchanges may be enhanced where mutual reciprocity between worldviews enables growth together but also allows for each to retain ‘core values’ that may continue to be expressed independently (unity in diversity). Ultimately, an understanding is required that worldviews no longer exist in isolation from each other (the autonomous Many), nor that it is feasible that one worldview attempts to succeed in dominating to the exclusion of others (the universal One). In overcoming the inherent bias of Greek closed spherical thinking, a new opening is called for – one requiring more appropriate avenues of expression that are inclusive of all. It is to these forms of celebrating a holistic awareness across traditional worldview boundaries that attention is now turned.

¹¹⁶ *ibid.* p.122. [emphasis in original].

¹¹⁷ Lewis Thomas marvels at the ‘membrane’ of the atmosphere surrounding the Earth which provides the planet with the functions of catching energy, holding it, storing needed amounts and releasing what is not needed. He concludes: “It is another illustration of our fantastic luck that oxygen filters out the very bands of ultraviolet light that are most devastating for nucleic acids and proteins, while allowing full penetration of the visible light needed for photosynthesis. If it had not been for this semipermeability, we could never have come along.” Thomas, L. “The World’s Biggest Membrane,” *The Lives of a Cell: Notes of a Biology Watcher*. New York: Penguin Books. 1974, p.147.

CHAPTER THREE – RITUAL AND GAME

INTRODUCTION

Revealing the underlying epistemological bases (and biases) of the three methods of monism, dualism and nondualism has allowed an abstract appreciation of their differing characteristics. Such abstract representation aims to remedy misinterpretations of these methods by illuminating each from the position of the others, and then, by redefining key aspects, to gain a clearer understanding of each method. Thus, Chapter Two provides the conceptual language necessary to address the central themes of the thesis and to strengthen links between the chapters. The cross-cultural focus puts discussion of those methods into the context of worldviews. It readily becomes apparent that the assumptions inherent to each way of perceiving reality are prevalent at all levels of cultural interaction. These assumptions are apparent not only in philosophical and theoretical arenas but underpin the day-to-day encounter of cultures in praxis. In this chapter, ‘ritual’ and ‘game’ are introduced as particular instances, and then extrapolated as analogies for different cultural worldviews.

LÉVI-STRAUSS’ RITUAL AND GAME

The French anthropologist Claude Lévi-Strauss, who was fond of binary classifications (some might say dialectical expression), describes an interesting difference in the relation between games and rituals and how each are ‘played out’ by a number of cultures he studied. He defines the relation between games and rituals as follows:

“All games are defined by a set of rules which in practice allow the playing of any number of matches. Ritual, which is also ‘played’, is on the other hand, like a favoured instance of a game, remembered from among the possible ones because it is the only one which results in a particular type of equilibrium between the two sides.”¹

Games are without limit and can thus potentially be played forever. As long as all players abide by the a priori set of established rules, then the game can be sustained, apparently indefinitely. Since the set of rules is the same for both sides, symmetry is preordained (presuming that both sides are aware of and agree to the ‘rules’). It is assumed in the game that there is a ‘level playing field’, or conditions that have allowed all participants to enter

the game as equal competitors. In the playing of the game, however, the assumed initial state of equality rapidly moves into a dynamic state of disequilibrium, so that asymmetry is engendered. The game is competitive and incites confrontation among the players who must jostle for the favoured positions. Success is justified as an inevitable consequence of natural intentions, chance or talent.² The game therefore distinguishes between (or produces) winners and losers, rich and poor, strong and weak.

Rituals contrast markedly with games. The main distinction, as Lévi-Strauss portrays it, is the conscious intention of ritual participants to bring about an equilibrium (whereas the game encourages differences and creates disequilibrium). While players may ‘compete’ within the ritual, the ultimate aim is not to out-compete others (or compete them *out of* the ritual altogether, i.e., to be outcast as a ‘loser’) but to make *all* the participants pass to the winning side. Not only is each participant explicitly recognised as not ‘equal’, but differences are accommodated in order to overcome the factors that may disadvantage them. Diversity is fully acknowledged from the outset, recognising that players may be from diverse origins, travel varying distances, arrive at different times, with varied skills, talents, ages, experience, and so on. Ritual may also be expressed as a particular instance of a ‘game’ that is played out with the aim of bringing about a symmetry between the two (or more) initially separate groups.³

The result of the ritual is to induce equality in conditions among these diverse participants, ultimately uniting them in a state of equilibrium.⁴ Therefore, the outcome is inevitably determined in advance. In contrast, the game assumes equality exists at the outset and that

¹ Lévi-Strauss, C. *The Savage Mind*. London: Weidenfeld and Nicolson. 1962, p.30.

² The game exemplifies Charles Darwin’s evolutionary process of natural selection, whereby it is claimed by proponents of this theory (neo-Darwinists) that the principle of the ‘struggle for survival’ (originally formulated by Herbert Spencer) is won by the fittest. Other social theorists have supported this proposition, including Adam Smith (who justified individualism, competitiveness and aggression as inevitable concomitants of industrialisation, leading eventually to economic and social prosperity) and Thomas Malthus (who “...insisted that the struggle for food and resources was a mathematical necessity and that poverty, malnutrition and famine were quite normal, indeed desirable, since the victims of the struggle for survival would make way for the victors – the best adapted who alone displayed the qualities required for creating an efficient and prosperous society.”). For a critique of these theorists and others, refer to: Goldsmith, E. *The Way. op. cit.* p.203. See especially Chapter 39, “Competition is a secondary Gaian interrelationship,” pp.202-209. For an alternative review of Darwin’s works: Loye, D. *Darwin’s Lost Theory of Love: A Healing Vision for the New Century*. San Jose: toExcel. 2000.

³ Lévi-Strauss notes the adoption rites of the Algonkin Indians [sic] which are “...normally accompanied by competition sports, games of skill or chance between teams which are constituted on the basis of an *ad hoc* division into two sides...” He continues: “...since the two teams are asymmetrical in what they stand for, the outcome is inevitably determined in advance...” Lévi-Strauss, C. *The Savage Mind. op. cit.* p.31.

all participants have equal opportunities to better themselves, since the same rules apply to everyone. On the basis of this assumption of equality, the inequalities that come about through competitive interaction are justified.⁵ The game results in a dynamic state of disequilibrium, established through a difference among individual players or between teams. In the ritual, diverse participants merge in a communion which binds players to each other without requiring them to be bound to the game's set of rules. In summary: games appear as *disjunctive*, while ritual is characterised by the inverse; it *conjoins*.⁶

Ritual: The Xavante Log Race

David Maybury-Lewis observes, participates in, and comments on the log race ritual of the Xavante, a tribe in central Brazil. This ritual activity creates much excitement within the community and culminates the climactic event of any important ceremony. In the log race, the community is split into moieties; a division of two complementary halves.⁷ Two logs are cut from the forest and are raced into the village by the two teams over a distance of a few miles. Throughout the race, the logs are transferred from the shoulders of runners, with participants taking turns to share the weight. Much laughing, leaping and 'shambled running' accompanies the race. When the logs are finally brought into the village, many discussions follow, praising the racers and exulting over how 'beautiful' the race was.⁸ Maybury-Lewis' analysis of the log race is interesting:

⁴ An example is the North American First Nations' potlatch (an elaborate gift-giving ceremony) where wealth was redistributed from 'haves' to 'have-nots' in the traditional economy.

⁵ In a competitive market economy, underpinned by *laissez-faire* economics, any measures to 'correct' the imbalance of wealth in society (i.e., through direct government intervention and the welfare state) is often vehemently opposed by the economically successful. The wealthy minority (private interests) claim that intervention by the State (representing public interests) is an 'unjust' attempt to take from those who have worked hard to earn their wealth and redistribute this to those who have not (i.e., the welfare dependent). They argue that redistribution is a violation of individual rights.

⁶ See Lévi-Strauss, C. *The Savage Mind. op. cit.* p.32.

⁷ David Maybury-Lewis notes that these moieties are not fixed opposite groups, but that people are assigned to different moieties for various purposes. This relieves the possibility of dialectically-opposed groups becoming permanent and thus unsettling the stability of the whole community through contentious social conflicts. Rather, the moieties are regarded as complementary partners, thus representing the fundamental oppositions in human experience and in the cosmic scheme of things. Through the log race (among other rituals), the 'opposites' are brought together to form a harmonious whole. See: Maybury-Lewis, D. *Millennium: Tribal Wisdom and the Modern World*. New York: Viking. 1992, pp.148-153.

⁸ Maybury-Lewis comments: "Now the senior runners launched into speeches. ...I was fascinated by the postmortems. There were elaborate discussions of who had run well, though the people who came in for most praise were not those who had carried the log farthest or fastest." *ibid.* p.152. This would indicate that 'strongest', 'fittest' and 'fastest' are not sole criteria for judgment in this ritual game, but that 'beauty' (a qualitative value) in how the race is performed is the more important factor.

“It was not a race at all, at least not in our [Western] sense. It was a ceremony, an aesthetic event. Xavante meant it when they asked if it was beautiful. They were nonplussed by notions of winning and losing as we might be if a Xavante turned to us at the ballet, after watching the principal dancers leap athletically off the stage, and asked, ‘Who won?’”⁹

Maybury-Lewis describes a particular instance of the log race where one log was obviously much heavier than the other. Yet, when the disadvantaged team fell behind, members from the ‘winning’ moiety joined the other team to help them out. The two logs therefore arrived in the village virtually at the same time. From this observation, it may be concluded that the ritual ‘game’ is not about winning, but about *how* the race is run. What is important is the journey and the shared pleasure that comes about through running together. Although the path is the same for everyone, the way it is run may be different for each runner and indeed differs for each instance of the ritual race (especially as members of each moiety are always changing).¹⁰ The running race for the ritual players is aimed at bringing unity through a synthesis among all the participants, without reducing that experience to a single fixed route or routine.

Game: Modern Sport

In the modern expression of the ‘game’, the running of the race matters only insofar as the performance singles out the winner. Whoever crosses the finish line first gains fame, admiration and has opportunities made available to him or her as an assured winner.¹¹ No one can afford to lose, so the struggle to win becomes a competition that may turn into a bloody contest, albeit with sometimes cunning measures employed. In a sense it doesn’t matter how one gets to the finish line, nor for that matter why one wishes to get there. What is of concern to the competitor is that he or she gets there with speed, that he or she does not take a wrong turn. Stopping to help a wounded fellow competitor would only

⁹ *ibid.* pp.152-153.

¹⁰ Hall and Ames comment: “Ritual practices are invariably unique not only because they require personalization, but because they display the qualitative differences of the performers.” Hall, D.L. and Ames, R.T. *Thinking from the Han: Self, Truth, and Transcendence in Chinese and Western Culture*. New York: State University of New York Press. 1998, p.34.

¹¹ In the Olympic games, for example, gold medal winners gain worldwide recognition (and are often elevated to the status of ‘modern heroes’), whereas other competitors are all but forgotten (except perhaps by fans in their respective home countries). Sponsorship of prominent sportspeople by powerful multinational corporations (e.g., U.S.A. basketball player Michael Jordan is associated with Nike, New Zealand rugby player Jonah Lomu is associated with Reebok, etc.) points to a distortion in opportunities available for so-called ‘equal’ competitors in their sportsgame. Furthermore, this reflects the increasing control of business even in the traditional arena of ‘play’.

detract from one's own hard-earned efforts to succeed and 'get ahead'. What is required, or in fact demanded, is efficiency and the strength of a single-minded focus. In short, *winning is everything*.

In this understanding, the 'game' is no longer connected with ritual. Nor is the game simply an expression of play, where contests in skill, strength and perseverance are performed for fun and festivity. Rather, the game becomes organised and serious, as illustrated by the modern rendition of game as 'sport'. With the transition of game from a celebration-through-play to serious sport, come other changes: rules become stricter and more elaborate, records are stored and results calculated with increasing precision. In addition, tolerance for margins of error is reduced as the stakes become higher – the sportsperson can no longer even 'afford' to lose.¹² This is further exemplified in the spirit of professionalism whereby the game moves further from the spontaneous and carefree character of spirit of play toward increasing systemisation and regimentation.

INDIGENOUS 'RITUAL' AND MODERNITY AS 'GAME'

The discussion of ritual and game, however, should not be restricted to a particular activity or ceremony in any given society. The classifications of the 'ritual' and the 'game' are of particular value to the present study when each is extrapolated to the level of cultural typology, or worldview status.¹³ On first appraisal, one may recognise an apparent parallel between ritual and game as corresponding respectively to: religion and science, sacred and secular-oriented societies, socialism and capitalism (within the secular realm of politics), traditional and modern peoples, 'primitive' and 'developed'¹⁴ technologies, tribal and

¹² The increasing use of performance-enhancing drugs in world-class sports events may indicate the extent of the risk that sportspeople feel impelled to take in order to gain even a microsecond advantage over their competitors.

¹³ Lévi-Strauss may have intended the ritual–game relation to apply only to particular instances. However, he hints at a greater significance of this relation when he reflects on his preceding discussion of mythical thought (theoretical) and 'bricolage' (practical), stating: "Like science (though here again on both the theoretical and practical plane) the game produces events by means of a structure; and we can therefore understand why competitive games should flourish in our industrial societies. Rites and myths, on the other hand, like 'bricolage' (which these same societies only tolerate as a hobby or pastimes), take to pieces and reconstruct sets of events (on a psychical, socio-historical or technical plane) and use them as so many indestructible pieces for structural patterns in which they serve alternatively as ends or means." Lévi-Strauss, C. *The Savage Mind. op. cit.* pp.32-33.

¹⁴ The words 'development' and 'primitive' are enshrouded in cultural biases that reflect the prevailing attitude of the modern, secular worldview toward the 'other'. Refer below to Chapter Five for a discussion of 'development' and its contemporary interpretation and expression in guiding the modern economic (and cultural) movement.

economic man, and so on. In such a comparison, religion could be explained as the binding ritual culture, guided by adherence to traditional conduct and a sense of preordained destiny. The game may represent modern economic culture, where competition and individualism are promoted to excess, to the extent that disjunctive interactions disrupt the stability of the societal whole. For the purposes of this study, the cultures of interest are those of indigenous peoples¹⁵ and moderns¹⁶ (originating in Western Europe but no longer restricted to that geographic area).

Caution, however, is required to ensure that the ritual and game classifications of Lévi-Strauss are not simplified to the extent that they are mistaken for absolute characterisations attributed only to certain cultures. Cultures that display tendencies dominant in either the game or ritual characteristics have elements of the other inherent in their own expressions. For example, given the emphasis on social cohesion and celebration of the sacred, ritual cultures have traditionally developed highly competitive (but controlled) games as outlets for certain self-assertive tendencies that may otherwise find expression through violent means (see below). Similarly, the competitive game culture employs ritual (although marginalised or degenerated into its lowest form of ‘ritualism’¹⁷) as a form of social control. Yet in both cases the ‘other’ is suppressed within the context of the dominant mode (either ritual-based or game-based culture). Therefore, it would be presumptuous to suggest that either ritual or game cultures embrace the ‘other’ openly, for this would overlook the historic and ongoing struggles that inhibit dialogue between those cultures.

¹⁵ Recall that the explanation of the use of ‘indigenous’ in this thesis refers to autochthonous peoples.

¹⁶ The emergence of the period known as ‘modernity’ arose between the fifteenth and sixteenth centuries in Western Europe as a result of the Renaissance, the Reformation, and the Scientific Revolution. Collectively, these dialectical movements rebelled against the medieval Church and the ancient authorities in Europe, establishing the more individualistic, sceptical, and secular spirit that has come to characterise modern peoples. See: Tarnas, R. *The Passion of the Western Mind: Understanding the Ideas That Have Shaped Our World View*. New York: Ballantine Books. 1991, especially his Chapter Five, “The Modern World View,” pp.223-323. Also, see: Berman, M. *All That Is Solid Melts Into Air: The Experience of Modernity*. New York: Penguin Books. 1988, especially “Introduction: Modernity – Yesterday, Today and Tomorrow,” pp.15-36.

¹⁷ Panikkar explains the difference between *ritual* (as a “symbolic act”) and *ritualism*: “Ritualism is the great enemy of ritual. We may understand by the former the degeneration of the latter. Ritualism is the mere continuation of the externals of the rite without the internal faith, the inertia of the rubrics without the enlivening power of the *nigrics*; the empty shell, the habit of sticking to a determined action once it has lost its symbolic power.” Panikkar, R. “Man as a Ritual Being,” *Chicago Studies. op. cit.* p.12. [italics in original]. When all that remains of a ritual is its external appearance, participants can only rely on the repetition of ritual actions. This is potentially dangerous, however, as Ninian Smart observes: “...exact repetition gives great prominence to formulae, and gradually to the notion that the formulae become effective in themselves. This imparts a manipulative character to ritual.” Smart, N. *Dimensions of the Sacred: An Anatomy of the World’s Beliefs*. London: HarperCollins. 1996, p.73. [emphasis added]. There is also, as Mumford notes, mechanisation as the kind of ‘automatic’ ritual of industrial societies. See: Mumford, L. *The Myth of the Machine. op. cit.* Volumes One and Two.

Ritual: Indigenous Kosmology

A ritual may be carried out with the intention of restoring relationships that have fallen into disharmony through either deliberate or unperceived circumstances, such as illness or a serious disagreement among tribal members.¹⁸ The significance of the ritual, however, goes well beyond smoothing out ruffled relations within the societal group. Relieving tensions and avoiding tragic conflicts is only a particular instance of a ritual: ritual is far more than conflict-relief and this function is indeed only secondary. Panikkar asserts that: “True liturgy is not primarily a balm or medicine for what ails Man, or a beautiful psychological outlet for draining all our violent tendencies, frustrations and unfulfilled desires.”¹⁹ Rituals may perform these functions and indeed be considered necessary expressions of creativity, violence, need for self-affirmation, sense of uniqueness; namely the qualities of the self-assertive tendency of holons.²⁰ Yet ritual has a much deeper urgency and importance: “...the central claim of ritual in shaping Man’s life and even in helping direct the destiny of the entire cosmos.”²¹

The significance of ritual has to do with maintaining correct relationships in the very ‘kosmos’²² of which the culture is an interconnected and integral part.²³ The Xavante log race represents “ritual” in its etymological sense; as the maintenance of *order* in the

¹⁸ Malidoma Patrice Somé recalls a ritual performed by married couples in some villages in Africa, including his own. The ritual is performed in order to relieve friction that naturally occurs where there is close connection between people. This ritual takes place every five days and each couple must enter into a ritual space to renew their relationship for another five days. Somé observes: “This suggests that even healthy relationships need a ritual, because ritual provides a container for friction within the sacred.” Somé, M.P. *The Healing Wisdom of Africa: Finding Life Purpose Through Nature, Ritual, and Community*. New York: Jeremy P. Tarcher/Putnam. 1998, p.307. [emphasis added].

¹⁹ Panikkar, R. “Man as a Ritual Being,” *Chicago Studies. op. cit.* p.17.

²⁰ Not only does ritual allow *self-assertive tendencies* to be expressed (as in ritual ‘games’), but importantly enables *integrative tendencies* within a community to be reinforced (as in ritual healing ceremonies). See Chapter Two for discussion of the two tendencies of Koestler’s holons.

²¹ Panikkar, R. “Man as a Ritual Being,” *Chicago Studies. op. cit.* p.18.

²² See Panikkar’s explanation below for the distinction between ‘kosmos’ and ‘cosmos’.

²³ Mumford comments: “Among many primitive [sic] peoples, anthropologists have discovered, the tribe feels that it has a heavy responsibility for ensuring, by ritual and verbal spells performed punctually from day to day, that the sun shall rise and the universe shall not fall apart.” Mumford, L. *Technics and Human Development: The Myth of the Machine. op. cit.* p.87. Australian Aborigines take this responsibility very seriously, as John Broomfield explains: “Every Aboriginal since the Beginning has been the guardian of the Song or his or her totemic Ancestor and through it of a section of land crossed by that Songline. Their obligation is to keep the land the way it was. To do this they periodically must ‘go walkabout’: a ritual journey treading in the footprints of the Ancestors and singing the Ancestors’ Songs, without changing a word or note. Thus they recreate the creation. The land exists first in the mind. In order to be born, it then must be sung. To be reborn or maintained, it must be sung again and again.” Broomfield, J. *Other Ways of Knowing: Recharting Our Future With Ageless Wisdom*. Rochester, Vermont: Inner Traditions. 1997, pp.68-69.

kosmos.²⁴ Unity, stability, harmony and order are all aimed at sustaining the long-term survival and integrity of the cultural group as a whole. The ritual is important in this regard as it aims to establish a balance among two (or more) divergent groups and thus maintain harmony within the whole. Maybury-Lewis comments:

“The logs are cut in the forest and run into the village, thus linking the realm of nature with the realm of human culture. They are carried by two teams, representing the oppositions that Xavante believe go to make up the universe. The running of the logs expresses the dynamic tension between opposing principles. The purpose of the ceremony is to stress that these antitheses need not tear the world apart. If one is careful, oppositions can be controlled, they can complement each other and create equilibrium and harmony. And what better symbol of equilibrium than two teams that exert themselves to the utmost and finish in a dead heat? At last I understood that this was the ideal, the most beautiful outcome of a log-running, for it established the perfect synthesis.”²⁵

In the above description of a particular instance of ritual, the ideals celebrated in the ritual can be observed as ideals that are espoused in the very basis of the structure of that culture. Clearly, ritual is conducted to bring about *order*, this being the basis for unity and stability of the community as a whole. Order is here understood not as the elimination of ‘competing opposites’, but as the balancing of dynamic tensions that may also be regarded as ‘complementary polarities’.²⁶ If disorder is not ‘corrected’ through ritual ordering, then disorder may potentially spin into its extreme of chaos, resulting in harm to members of the culture.²⁷ However, this is not approached dialectically with the intent to destroy the source of disorder. Instead, the opposing polarities are taken as a given and, instead of

²⁴ “The Sanskrit word *rita* is related by its root to the Latin *ordo* and it is scarcely necessary to point out that it is related even more closely to the word ‘rite’: a rite is, etymologically, that which is accomplished in conformity with ‘order’, and which consequently imitates or reproduces at its own level the very process of manifestation; and that is why, in a strictly traditional civilization, every act of whatever kind takes on an essentially ritual character.” Guénon, R. *The Reign of Quantity. op. cit.* f.10, p.338. [italics in original].

²⁵ He adds: “I remembered the accounts I had read of communities of North American Indians playing lacrosse against each other for days at a time and ending the game only when they had achieved a tie.” Maybury-Lewis, D. *Millennium: Tribal Wisdom and the Modern World. op. cit.* p.153.

²⁶ See the discussion in Chapter Two on the dualistic ‘dialectical dilemma’ where poles are regarded as opposites in competition with each other. Compare this to the nondual appreciation of poles as different but complementary, as represented in the Chinese *yin-yang* philosophy.

²⁷ Somé comments on the importance of ritual in healing conflict within African communities. He states: “Indigenous societies concede the existence of conflict but view it as something of importance and of interest to the community. The conflict is some sort of message directed to the entire community but expressed through the individuals embroiled in the conflict. ...The message for the community that lies behind the friction two people are experiencing must be assimilated and resolved successfully to serve the greater good of the community. ...Ritual provides a way of getting past the simple differences that are polarizing a relationship so that the conflict can become an opportunity for those in the relationship to come closer together.” Somé, M.P. *The Healing Wisdom of Africa. op. cit.* pp.303-304.

eliminating one in favour of the other, order is sought out of disorder.²⁸ Because equilibrium is never static or permanent but is as dynamic as the tensions that continually contest (and constitute) it, ritual – as the basic act of maintaining order in the cosmos – is fundamental to indigenous cultures.

As Maybury-Lewis' analysis indicates, the role of the human participants in the ritual is also symbolic of the wider need for bringing harmony into their universe.²⁹ Harmony can be understood as attunement to an 'aesthetic' order rather than imposition of a 'rational' or 'logical' order.³⁰ The difference between the two meanings of order (aesthetic or rational) is important, for it underlies the socio-political relationships of quite different cultures.³¹ Hall

²⁸ This is reflected in the creation story of the Ganienghehaga, or "Mohawks", whereby the daughter of the woman who fell from the Sky World gave birth to twin sons. One was born the 'right way' (named Teharonhiawako – "Holder of the Heavens") and the other broke through his mother's side, therefore killing her (named Sawiskera – "Mischievous One"). When the time came for the sons to create things of this world, "Terahonhiawako would create beautiful trees, and his brother would refashion them to create the opposite side effect. ... At the end, it seemed that everything balanced out evenly. But it always looked like one would win over the other." (p.5) Finally the brothers agreed to a contest to see who would be "The Ruler of the World" (i.e., good *or* evil personified). Rather than eliminate the other altogether, the fight resulted in a compromise between 'good' and 'evil': "... what they did was divide the world in half." But, "Sawiskera ... warned his brother that he would always be there and would be thinking about how he had been beaten and how he was going to get revenge, so they agreed to split up." (p.6). Therefore, evil is never destroyed, but remains a constant threat. Neither good nor evil is absolute, but is relative to the other. Together, they are held in dynamic tension, such that the balance between 'utopia' and 'kakotopia' is indeed a delicate one. North American Indian Travelling College. *Traditional Teachings*. Cornwall Island, Ontario: North American Indian Travelling College. 1984. See Volume One, pp.3-13, for "The Creation Story" as told by Mike Myers and Michael Kanentakeron Mitchell.

²⁹ "If people suffer, it is usually because they are out of harmony with nature, and though this is not always the fault of the individual, harmony must be restored. Every action in regard to nature must have its reciprocal action. ... A ceremony is one way in which people contribute to maintaining the world as it should be. Since mankind is related to the universe in reciprocity and balance, an act correctly performed should always obtain the appropriate response. A gift given compels a gift in return." Hughes, J.D. *North American Indian Ecology*. El Paso, Texas: Texas Western Press. 1996, p.15.

³⁰ See: Hall, D.L. and Ames, R.T. *Thinking Through Confucius*. *op. cit.* p.134-8. These terms can be slightly misleading. Although indigenous cultures may be seen to represent an 'aesthetic' order, this does not imply that they are 'irrational' or 'illogical'. More appropriate, that is less controversial, terminology could be 'abstract' or 'universal' in place of 'rational' or 'logical' order. Manu Aluli Meyer's comments clarify this position: "The colonial educational system in Hawai'i ... is rooted in the apolitical and acultural assumptions of oppression and power." "Hawaiians experience their world in fundamentally unique ways that reflect broader definitions of rationality in specific and timeless fashion." Meyer, M.A. "Native Hawaiian Epistemology: Exploring Hawaiian Views of Knowledge," *Cultural Survival Quarterly*. Vol.22, Issue No.1. Spring 1998, pp.38, 40.

³¹ This distinction is important not only when contrasting modernity (where justice is based on standardised rules and laws; a 'rational'/'logical' order) with indigenous ritual cultures (often relying on moral lore which is context-dependent; 'aesthetic' order), but is also useful when comparing Western ritual culture (of the Middle Ages) with indigenous ritual. Medieval ritual culture was also characterised by an 'aesthetic' order, as displayed by the 'brother element' in justice (in contrast to the 'formal element' of the State in modern times). Petr Kropotkin explains: "Even when appearing before the guild tribunal, the guild-brother answered before men who knew him well and had stood by him before in their daily work... : men who were his equals and brethren indeed, not theorists of law nor defenders of someone else's interests." Kropotkin, P.A. *Mutual Aid: A Factor of Evolution*. [With Introductory Essay by J. Hewetson.] London: Freedom Press. 1993 [First published, 1902], pp.145-146.

and Ames explain that rational or logical order gives precedence to the repetition of a given pattern or set of formal relations and is seemingly indifferent to the elements whose mutual relatedness comprise the order (it moves towards the universal). Aesthetic order, on the other hand, is concerned with concrete particularity and the uniqueness of things as they interrelate and contribute to the ‘balanced complexity’ of their context. Restoring harmony through ritual is not simply the smoothing out of difference to a preconceived ‘ideal’ state (the rational or logical order), but is the continuous negotiation between tensions of significance to a particular group of people. Hence, diversity is valued, context is all important, and the uniqueness and particularity of ritual allow for its continual renewal.

Ritual enables the kosmos to be continually ordered, or maintained in order. Indeed, as Mumford states: “...ritual creates order and *is* order...”³² Order applies especially with respect to *relationships*. Such ‘order’ often concentrates on intangible qualities of the whole, so that to the outsider a ritual may appear as chaotic, psychotic or as a hypnotic trance. To the participants, however, the ritual is orderly, renewing relationships within and reawakening and confirming relationships that may have lapsed or been neglected. In a ritual properly conducted, all are present: the physically alive and the deceased, that is; the spirits of the ancestors who watch over and guide the group. Because the situations for which the ritual is required are always changing, in turn the ritual will express that need and be adapted accordingly. Therefore, there is no one ritual for all occasions, for what is appropriate and purposeful for the given occasion takes utmost importance. Ritual, in this expression, is the creation of an ‘aesthetic order’.

The different interpretations of order (aesthetic or rational/logical) may be understood further with reference to another important distinction; that of the modern, scientific interpretation of the universe, or ‘cosmology’, and its etymological root: the Greek word ‘kosmos’.³³ Panikkar draws on this distinction to indicate that the reigning *kosmology* (with a ‘k’) has always been intimately connected with the conception of God (or the Divine, Spirit, Creator).³⁴ In contrast, the study by the natural sciences of Nature (as ‘environment’)

³² Mumford, L. *Technics and Human Development: The Myth of the Machine*. *op. cit.* p.66. [emphasis in original]. Indeed, as Guénon explained (above), the words ‘ritual’ and ‘order’ are linked etymologically.

³³ ‘Cosmos’ is defined as: “the universe as an ordered whole”, and is derived from the Greek ‘kosmos’. Concise Oxford Dictionary.

³⁴ “Every theology in its widest arc is intrinsically linked with a kosmology.” Panikkar, R. *The Rhythm of Being*. *op. cit.* p.96. Vachon (after Panikkar) also refers to ‘kosmology’ with respect to Mohawk politics as *Kosmocratic* or *Kosmophanic*. Whereas ‘democracy’ comes from Greek *demos* (referring to human beings only) and *kratein* (meaning to govern), Kosmos refers to all relatives; humans and non-humans,

and the 'cosmos' subsumes the idea of the material world, or the universe as a whole, under a very general scientific perspective (the abstract nature of science exemplifies the rational/logical order).³⁵ Thus, *cosmology* excludes the realm of the divine or at the most attempts to restrict it within defined bounds. In contrast, the sacred constitutes the very basis of the indigenous kosmology and is interpreted in ways unique to specific local experiences (such particularity is indicative of an 'aesthetic order').³⁶ Guénon comments on the two different emphases given to religion:

“In such civilizations religion is not something restricted, narrowly bounded and occupying a place apart, without effective influence on anything else, as it is for modern Westerners...; on the contrary it penetrates the whole existence of the human being, or better, it embraces within its domain everything which constitutes that existence...”³⁷

Game could almost be said to stand in direct contrast to ritual. Whereas ritual is 'played out' with the intent of maintaining order in the very kosmos of those peoples, the modern association of game does not set out to reflect or even relate to the scientific description of cosmology at all. Unlike ritual, modern sport is not a culture-creating activity.³⁸ The game is

and *phanic* comes from the Greek *phanein* (to shine forth). Therefore, Vachon refers to the kosmos as the expression or shining forth of Reality in all its dimensions. See: Vachon, R. "The Mohawk Nation and Its Communities. Chapter 2 Western and Mohawk Political Cultures: A Study in Contrast," *INTERculture. op. cit.* p.6.

³⁵ In his discussion on the foundations of the modern worldview, Richard Tarnas describes the difference between the kosmology of the classical era and the modern cosmology according to the scientific discourse: "In contrast to both the ancient and the medieval world views, the celestial bodies of the modern universe possessed no numinous or symbolic significance; they did not exist for man, to light his way or give meaning to his life. They were straightforwardly material entities whose character and motions were entirely the product of mechanistic principles having no special relation either to human existence per se or to any divine reality." Tarnas, R. *The Passion of the Western Mind. op. cit.* pp.287-288.

³⁶ Many 'natural phenomena' (such as mountains, waterfalls, rocks, some forests and trees, birds, animals and insects) are held in great esteem for religious and spiritual reasons. Often these are specific to a people and a geographic place as, for example, with 'sacred spaces'. J. Donald Hughes explains: "Sacred space is a place where human beings find a manifestation of divine power, where they experience a sense of connectedness to the universe. There, in some special way, spirit is present to them." Hughes, J.D. "How Much of the Earth Is Sacred Space?" *Environmental Review*. Vol.10, No.4. Winter 1986, pp.247-260.

³⁷ Guénon, R. *The Reign of Quantity. op. cit.* p.72. Guénon is referring here to Christianity in Western civilisation during the Middle Ages, but Hughes makes a similar point with regard to North American indigenous peoples when he states that: "Their actions in respect to nature were in harmony with their view of the world as a sacred place, so if we wish to understand why they practiced conservation and avoided destructive exploitation, we will find that it is just as important to study their religion as it is to study their economy." Hughes, J.D. *North American Indian Ecology. op. cit.* p.14. [emphasis added].

³⁸ Johan Huizinga states: "The ability of modern social techniques to stage mass demonstrations with the maximum of outward show in the field of athletics does not alter the fact that neither the Olympiads nor the organized sports of American Universities nor the loudly trumpeted international contests have, in the smallest degree, raised sport to the level of a culture-creating activity. However important it may be for

viewed as another activity in the modern secular lifestyle; as a recreational pursuit of physical and mental challenge only. Games may then be seen simply as isolated, one-off events that individuals participate in by choice. Unlike the ritual that fulfills a deeper purpose, the game takes place within a backdrop that is almost entirely agnostic. Reflecting on the play element in various cultural epochs, Johan Huizinga makes the following pertinent comments about contemporary civilisation:

“In modern social life sport occupies a place alongside and apart from the cultural process. The great competitions in archaic cultures had always formed part of the sacred festivals and were indispensable as health and happiness-bringing activities. This ritual tie has now been completely severed; sport has become profane, ‘unholy’ in every way and has no organic connection whatever with the structure of society, least of all when prescribed by the government.”³⁹

In the indigenous kosmos, one’s actions and beliefs correspond closely: every action has universal repercussions.⁴⁰ Nothing is said to happen ‘by coincidence’ or as simply ‘good luck’.⁴¹ Therefore, careful consideration is given to the way in which an activity is carried out, so that all possible consequences are regarded. Ritual patterns that have been ‘proven’ to bring success (in survival, unity, order) over the generations are relied on to invoke continued prosperity, whereas unfavourable conditions are judged to be a result of a ritual that was not performed correctly.⁴² Malidoma Patrice Somé continues: “When something of cosmic proportion occurs, such as an earthquake, plague, or drought, seeing it as part of a wheel or as a cosmological message determines the approach toward it.”⁴³ New events especially must be treated with respect and accorded due consideration in order to make them intelligible within the context of that kosmology. Somé explains further:

the players or spectators, it remains sterile. The old play-factor has undergone almost complete atrophy.” Huizinga, J. *Homo Ludens: A Study of the Play Element in Culture*. Boston: Beacon Press. 1955, p.198.

³⁹ *ibid.* pp.197-198. See Chapter 12, “The Play-Element in Contemporary Civilization,” pp.195-213.

⁴⁰ “The human order and the cosmic order are not in reality separated, as they are nowadays all too readily imagined to be; they are on the contrary closely bound together, in such a way that each continuously reacts on the other and so that there is always correspondence between their respective states.” Guénon, R. *The Reign of Quantity. op. cit.* p.140.

⁴¹ Everything is reckoned to have a meaning, a wider significance. To this extent, no event is singular or an isolated instance. The interrelatedness of life and the interpenetration of secular and sacred realms infer that any one event is in fact an overlap of multiple causes with any number of potential effects. Interrelatedness is a key feature of the emerging new scientific paradigm (see Chapter Four), as indicated by the ‘chaos theory’ (also known by its ‘Butterfly Effect’, i.e. the notion that a butterfly stirring the air today in Peking can turn into storm systems next month in New York).

⁴² “The Papagos say they dance to ‘keep the world in order’ and prevent floods. ...If properly done, they firmly believe, the ceremonies will achieve their purposes. They could only fail through mistakes in repeating the ritual, or evil thoughts that intend to hurt someone else. ...A good ceremony, the Hopis say, is ‘for the benefit of the whole world,’ and one participates simply by being present with a good heart.” Hughes, J.D. *North American Indian Ecology. op. cit.* p.90. [emphasis added].

“An indigenous African interpretation [of an earthquake] would be that the shaking of the earth is a message to us. We may not understand it at first, which does not mean that we should ask Mother Earth to repeat what she already said so eloquently... Meanwhile village life is suspended until all prescribed rituals are done. Then reconstruction, if appropriate, can begin in peace. This approach is based on an understanding of the cyclical nature of life, in which everything that exists in time and space – the earth, the moon, and other planets – is part of a continuous wheel and is connected to everything that happens. An event that is not addressed properly, that is cosmologically, is bound to happen again in a more forceful tone because it needs to be understood and adequately replied to, not silenced or ignored. This is why cosmology is key to indigenous life and spirituality.”⁴⁴

In the indigenous kosmos, everything has meaning and significance because all are interrelated in the ‘web of life’. Therefore, kosmology is key to all aspects of indigenous life. Kosmology is expressed through the stories of creation and is apparent everywhere in the symbolism of that culture; its art-forms, oration, architectural structures, and its ritual ceremonies. Often the symbolism is strongly centred on the rhythmic processes and patterns of Nature, reflecting a fundamental respect for and acceptance of those rhythms.⁴⁵ In turn, moral codes of social behaviour take cognisance of these wider natural and kosmological patterns, resulting in a response that ensures human actions do not transcend natural limits which may potentially offend the ancestors and deities.⁴⁶ Somé expresses the symbolism of the Dagara people (an indigenous African culture) who view the kosmos as a wheel:

“In Dagara cosmology, the image and structure of the circle, or wheel, organizes perceptions of the world. The wheel not only refers to the cyclic nature of life, but it is also a microcosm of the circular nature of the planet where we live. The

⁴³ Somé, M.P. *The Healing Wisdom of Africa. op. cit.* p.164.

⁴⁴ *ibid.* pp.165-166.

⁴⁵ “A public ceremony like a Pueblo Indian rain dance can be expected, if done properly, to set up the same kind of resonance with the clouds, so that the people are in harmony with the forces of nature, and receive what they need to live. All this is conceived as a process, not of bending nature to human will, but of subordinating the human will to natural rhythms.” Hughes, J.D. *North American Indian Ecology. op. cit.* p.16. [emphasis added]. Modernity is characterised by the inverse, as Panikkar states: “One of my critiques of the modern technocratic System is that it has shattered both cosmic and human rhythms. Modernity aspires to make everything artificial, including intelligence, precisely in order to escape the natural rhythms of life.” Panikkar, R. *The Rhythm of Being. op. cit.* p.51.

⁴⁶ John S. Mbiti explains: “Each [African] society is able to formulate its values because there is moral order in the universe. These values deal with relationships among people, and between people and God and other spiritual being; and man’s relationship with the world of nature.” Mbiti, J.S. “African Views of the Universe,” pp.174-180, in: Gottlieb, R.S. (ed.) *This Sacred Earth: Religion, Nature, Environment.* New York: Routledge. 1996, p.178.

indigenous tendency therefore is to perceive all of life within the context of this circular cycle, or cosmology.”⁴⁷

A common criticism of traditional societies from the perspective of modernity is that they are ‘closed’.⁴⁸ However, it is important to distinguish between conceptions of *boundedness* and *closure*. While the kosmos is bounded (as a wheel is), it is not closed (spokes and ‘empty’ spaces alternatively comprise the structure of the wheel). Whereas a closed system is static, resists change, and resorts only to strict repetition of the past, the kosmos continues to grow: the potential for expressing and interacting with the creation of the kosmos is unlimited.⁴⁹ The attribute of boundedness provides outer guidelines and places limits on what may otherwise be experienced as a vacuum of vast, infinite space.⁵⁰ It could be argued that the very presence of ritual is evidence enough that the boundaries of the kosmos are not solid or absolute (hence punctures in the wheel are repaired through ritual celebrations!).

Indigenous Identity: Roles That Define

The analogy of the ‘family network’ forms a useful microcosmic image of the kosmos as a whole; while the family is bounded (defined genealogically) it continues to grow inter-

⁴⁷ Somé, M.P. *The Healing Wisdom of Africa. op. cit.* p.164. The symbol of the circle is not restricted to African cosmologies, but is important to many cultures that draw their inspiration from Nature. Broomfield suggests: “Our [Western] science needs to lay aside the driven symbol of the straight line and adopt once more the ancient symbol of the circle, which represents harmony, moderation, and balance – optimization rather than maximization.” Broomfield, J. *Other Ways of Knowing. op. cit.* p.139. For an illustrated introduction to the symbolism of the circle and spiral in a number of cultures across a range of historical periods, see: Purce, J. *The Mystic Spiral: Journey of the Soul.* London: Thames and Hudson. 1974.

⁴⁸ Seen from the perspective of its participants, ritual is crucial in securing kosmological order (placing limits on human conduct in accord with natural limits and spiritual laws). Observed from an outsider’s viewpoint, however, these societies may appear as closed to other conceptions and hence restricting of the individual’s choices. While modernity is characterised by unlimited openness, ritual is often perceived as its opposite – closed and repressive. This characterisation is indicative of the ‘dialectical dilemma’, as explained in Chapter Two.

⁴⁹ Mbiti confirms: “There can be no end to the development of people’s views about the universe, as this process is a continuing one.” Mbiti, J.S. “African Views of the Universe,” *op. cit.* p.174.

⁵⁰ Blaise Pascal, at the turn of the modern period when these ‘infinite’ spaces first opened up, exclaimed: “*Le silence éternel de ces espaces infinis m’effraye.*” – “The eternal silence of these infinite spaces fills me with fear.” Stewart, H.F. *Pascal’s Pensées.* [Translation and Introduction by H.F. Stewart.] New York: Pantheon Books. 1950, p.173. no.313. Kosmos with no limits at all is unbearable to the individual, for activities become meaningless when there is no context to them, as Mumford explains: “Today our [modern] civilization is relapsing into a state far more primitive, far more irrational, than any taboo-ridden society now known – for lack of any effective taboos.” Mumford, L. *Technics and Human Development: The Myth of the Machine. op. cit.* p.70.

generationally.⁵¹ In indigenous societies, a person's identity is not narrowly defined according only to individual (physical) attributes, but is contingent foremost on relations to the person's kinship group and the wider familial and environmental contexts in which that person is embedded. One can observe Koestler's concept of the 'holon'; the individual within the family, the clan, the tribe, and so on. This is reflected in Joan Metge's description of the Maori value of *whānaungatanga*, kinship in its widest sense:

“Whānaungatanga is ego-centred kinship: traced outwards from each individual, it includes not only the members of his or her whānau [family] but a large number of other relatives as well.

The value of whānaungatanga reinforces the commitment members of a whānau have to each other but also reminds them of their responsibilities to all their other relatives. The imperative to extend aroha [unconditional love] to *all* whānaunga [relatives] ensures that every whānau is embedded in a web of cross-cutting kinship ties. Its members are enjoined to look outwards as well as inwards.”⁵²

Inalienable duties are accorded to each family member of ritual culture in the form of social roles. Louis Dumont comments: “... each particular man [sic] in his place must contribute to the global order, and justice consists in ensuring that the proportions between social functions are adapted to the whole.”⁵³ The ‘cohesive glue’ that holds the whole together is formed of an array of expectations that each member will fulfill his or her reciprocal

⁵¹ For example, see: Munro, D.J. “The Family Network, the Stream of Water, and the Plant: Picturing Persons in Sung Confucianism,” pp.259-291, in: Munro, D.J. “Introduction,” pp.1-32, in: Munro, D.J. (ed.) *Individualism and Holism: Studies in Confucian and Taoist Values*. Michigan, U.S.A.: The University of Michigan, Center for Chinese Studies. 1985, especially pp.264-269. Munro explains: “The picture of the family network does the job because the family is a unit with a clear explanation for the integration of its parts: reciprocal obligations based on what each member provides the others. Parents provide food to children, children provide old-age protection to parents; ancestors watch over the family's good fortune, and family members ritually give food and other sacrifices to ancestors. Each provision creates an obligation for the recipient. What holds the whole together is psychological expectations and reciprocal, specialized duties.” p.264. [emphasis added].

⁵² Metge, J. *New Growth From Old: The Whānau in the Modern World*. Wellington, New Zealand: Victoria University Press. 1995, p.82. [italics in original]. A family-based network is of similar importance in Chinese ritual societies, as Hall and Ames recognise: “Mencius suggests that the human being emerges in the world as a spontaneously arising and ever changing matrix of relationships through which, over a lifetime, one defines one's nature and character. ... An infant in this tradition is thus not born in any sense an ‘individual.’ In fact, to call a person an ‘individual’ would be to abstract one from the value invested network of particular familiar and cultural conditions and the immediate cognitive and practical relationships that define one and make growth possible.” Hall, D.L. and Ames, R.T. *Thinking from the Han*. op. cit. p.278. Thus, the individual is because of their family.

⁵³ Dumont, L. *Homo Hierarchicus: The Caste System and Its Implications*. [Translated by M. Sainsbury, L. Dumont and B. Gulati, Complete Revised English Edition.] Chicago: The University of Chicago Press. 1980 [1966], p.9.

obligations to others and, in turn, receive from them: this being a factor of ‘mutual aid’.⁵⁴ Therefore, in ritual cultures, each person within the cultural group must take personal responsibility for his or her own actions with respect to the community’s needs. One could observe that individuals are morally bound to the destiny of the whole.⁵⁵ Living in congruence with mores established by the societal whole, in accord with traditional ways,⁵⁶ is to seek harmony in attune with the rhythms of the kosmos.

Throughout one’s life, the full extent of a person is expressed through his or her various roles within the societal whole. The social whole forms a ‘holistic hierarchy’⁵⁷ that may be regarded as static in the sense that roles per se do not change, but is dynamic in that any individual’s duties towards others change as those individuals change.⁵⁸ For example, as a

⁵⁴ Petr Kropotkin referred to ‘mutual aid’ as the tendency to form groups for social purposes, and he demonstrated that the operation of this principle was a much more potent influence in securing evolutionary survival than mutual struggle. Kropotkin, P. *Mutual Aid. op. cit.* For a useful overview of mutual aid with respect to social theories, see the introductory essay by John Hewetson, “Mutual Aid and the Social Significance of Darwinism,” pp.vii-11.

⁵⁵ See: Panikkar, R. “Morality and Myth. The ‘Moral’ of Myth and the Myth of Morals,” pp.37-64, *Myth, Faith and Hermeneutics. op. cit.* A society is morally bound when its citizens accept and live by morals without discussion, or appeal to rational reason to justify them. When morals cease to be valid (binding), Panikkar asserts that they become a “pragmatic regulation of coexistence.” p.46. In discussing the Western notion of “Human Rights”, Panikkar reflects on the Indian word *Dharma*: “The starting point here is not the individual, but the whole complex concatenation of the Real. ...Dharma is the order of the entire reality, that which keeps the world together. The individual’s duty is to maintain his ‘rights’; it is to find one’s place in relation to Society, to the Cosmos, and to the transcendent world.” Panikkar, R. “Is the Notion of Human Rights a Western Concept?” *Invisible Harmony. op. cit.* p.128.

⁵⁶ Tradition is of utmost importance, binding all generations in adherence to the lore that has been endorsed by the ancestors and proven through time. Hall and Ames explain this most eloquently: “Ritualized roles and institutions, as a corpus of meaning-invested practices, preserve and transmit cultural significance. For this reason, the performance and embodiment of the ritual tradition both socializes and makes one a member of a community. Ritual informs the particular person with shared values and provides one with the opportunity to integrate in a way conducive to the maintenance and enrichment of community. And the lived body is the concrete and particular medium through which the substance of the tradition is expressed. It is this shared, participatory harmony at all levels, physical as well as psychological, that Confucianism seeks to cultivate as productive of human enjoyment.” Hall, D.L. and Ames, R.T. *Thinking from the Han. op. cit.* p.32. [emphasis added].

⁵⁷ The term ‘holistic hierarchy’ is not to be mistaken for the artificial organisation of the chain of command; the heteronomous stratification of a ‘power hierarchy’. See: Dumont, L. *Homo Hierarchicus. op. cit.* Refer to the Introduction, pp.1-20, for a discussion on notions of individualism, equality, hierarchy, and holism in traditional societies (with a particular emphasis on the caste system of India). See especially pp.19-20; “Necessity of hierarchy”.

⁵⁸ Donald Munro differentiates three different holisms in the Ch’emg-Chu (twelfth-century) school in Chinese history. He explains: “One holism, which predates the Sung period, explains persons in terms of their occupancy of mutually related social roles that form parts of a hierarchical social order. That order itself is part of a cosmic order, explained by analogy with the family, in which each thing in nature and cosmos has a fixed place, akin to the fixed social places of father, wife, older son, younger son, and so forth in the family. The Chinese term for role is *fen*, literally meaning ‘portion.’ It overlaps in meaning to some extent with the Western notion of rights. However, one’s *fen* is always conceived of as a share of the whole, such as the Tao, and not as a distinct set of rights belonging to the individual as an individual.” Munro, D.J. “Introduction,” pp.1-32, in: Munro, D.J. (ed.) *Individualism and Holism. op. cit.* p.18. [italics in original, underline added.]

person grows through different life-stages (e.g., from childhood to parenthood), that person is defined by new relationships and must take on the different responsibilities that are expected of his or her assumed roles. This dynamic complex of roles is the very basis of the ritual definition of the *self*; a person is truly *oneself* when fully articulating the breadth and depth of his or her roles.⁵⁹ Henry Rosemont, Jr. explains the Chinese Confucian notion of ‘role-bearing persons’:

“...I am the totality of roles I live in relation to specific others. ...They [early Confucians] emphasize the interrelatedness of what I am calling ‘roles’, that is to say, they are cognizant of the fact that the relations in which I stand to some people affect directly the relations in which I stand with others, to the extent that it would be misleading to say that I ‘play’ or ‘perform’ these roles; on the contrary, for Confucius I am my roles. Taken collectively, they weave, for each of us, a unique pattern of personal identity, such that if some of my roles change, others will of necessity change also, literally making me a different person.”⁶⁰

Different roles meet with various levels of status and prestige in the community, so that, for example, an elder is respected by all for his or her life experiences and wisdom. With positions of status, however, come both responsibilities and restrictions. Social restrictions ensure that people with roles of status do not misuse (or abuse) their powers for personal betterment.⁶¹ Such limits are designed to meet the interests of the societal whole rather than to serve specific individuals only. If role duties are not adequately performed or are neglected, the society as a whole suffers. Munro explains: “...people can ‘stop’ in these

⁵⁹ “The conception of self in Confucius is dynamic as a complex of social roles. It is the quality of these roles that focuses one’s identity, and which is constitutive of oneself as a self. Not just role playing, but good role playing, creates a self. The ‘we’ is embedded in and reinforced by the relations that define self.” Ames, R.T. “Reflections on the Confucian Self: A Response to Fingarette,” pp.103-114, in: Bockover, M.I. (ed.) *Rules, Rituals, and Responsibility: Essays Dedicated to Herbert Fingarette*. La Salle, Illinois: Open Court. 1991, p.107. [italics in original, underline added.]

⁶⁰ Rosemont, H.Jr. “Rights-Bearing Individuals and Role-Bearing Persons,” pp.71-101, in: Bockover, M.I. (ed.) *Rules, Rituals, and Responsibility. op. cit.* p.90. [italics in original, underline added.] Rosemont continues: “...seen in this socially contextualized way, it should become clearer that in an important sense I do not achieve my own identity, am not solely responsible for becoming who I am. ...Personhood, identity, in this sense, is basically conferred on us, just as we basically contribute to conferring it on others.” p.91.

⁶¹ In some North American First Nations, chiefs that go against the Way may consequently lose their ‘name’ and the associated responsibilities and status. Vachon explains that in the Mohawk polity “...the *rotiiane* [chiefs] are ‘raised up’ (not elected) by a consensus... The clan mother can depose him through his sub-chief, after the consensus of the whole Nation and Confederacy as expressed by the condoled *rotiiane*.” Vachon, R. “The Mohawk Nation and Its Communities. Chapter 2,” *INTERculture. op. cit.* p.12. [italics in original]. Traditional forms of decision-making (such as the Iroquois Confederacy, of which the Mohawk Nation is a part) are being undermined by government-appointed legislative bodies (where leaders are ‘elected’ from without, not ‘raised up’ from within). For a discussion of problems arising from the clash of these two very different systems of decision-making, see: Alfred, G.R. *Heeding the Voices of our Ancestors: Kahnawake Mohawk Politics and the Rise of Native Nationalism*. Toronto: Oxford University Press. 1995.

positions; or they can do evil by ‘transgressing their boundaries’.”⁶² In this way, the boundedness of the kosmos as a whole is assured by each person correctly respecting appropriate relationships in his or her everyday conduct. To cross the ‘unspoken’ codes of behaviour is an offence that is morally reprehensible. Awareness of and adherence to such limits is pertinent to survival, both on a physical-material level and on socio-psychic levels.⁶³ To deliberately go against the grain of the Way is to invite disharmony, to displease the Spirits, invoking a response that may ultimately challenge the very basis of one’s survival.

Man⁶⁴ of Nature: Living Within Natural Limits

There is another set of limits that act upon the human social context. Those limits are drawn from the observed laws of Nature. Because indigenous peoples do not traditionally separate themselves from (‘Mother’) Nature and take seriously their dependence on her for subsistence, they respect the natural limits required for renewal. This in turn engenders a response from within the culture to develop self-enforcing limits that, over time spent within an ecological niche, become encoded in the cultural modes of behaviour.⁶⁵ For example, strict hunting customs are upheld in order to maintain the balance between

⁶² Munro, D.J. “The Family Network, the Stream of Water, and the Plant: Picturing Persons in Sung Confucianism,” pp.259-291, in: Munro, D.J. (ed.) *Individualism and Holism. op. cit.* p.265. Social roles may be conceived spatially, with ‘boundaries’ that distinguish one social position from another, marked by relational attributes (such as respect for older persons expressed through the exercising of obedience, listening and learning from elders’ experiences and teachings).

⁶³ “For the Indians, living in careful balance with the natural environment was necessary to survival, since they lived so close to it and depended on it so completely. If they made serious mistakes in their treatment of nature, they felt the results right away; that is, they got immediate feedback.” Hughes, J.D. *North American Indian Ecology. op. cit.* p.5. Mbiti adds: “Man is not the master in the universe; he is only the centre, the friend, the beneficiary, the user. For that reason he has to live in harmony with the universe, obeying the laws of natural, moral and mystical order. If these are unduly disturbed, it is man who suffers most.” Mbiti, J.S. “African Views of the Universe,” *op. cit.* p.180.

⁶⁴ Panikkar explains that Man with a capital ‘M’ refers to the entire human being – *anthropos* – prior to the differentiation of the sexes: “...the word *Man* means the androgynous human being and not the male element which has hitherto monopolized it... It is not that the masculine stands for the whole Man, but that the whole Man has allowed this untoward domination by the male. The solution is not juxtaposition (he/she, etc.), but integration.” Panikkar, R. *The Cosmotheandric Experience. op. cit.* p.3, n.8. A note of caution: juxtaposition renders the ‘humanum’ to a dualistic dialectic whereby genders are placed in competition with each other. Refer also to: Illich, I.D. *Gender*. London: Boyars. 1982. Some feminists react to the reference to ‘Man’; this is understandable given that many authors do not approach the gender issue with the same (nondualistic) attitude of Panikkar and Illich.

⁶⁵ Goldsmith draws on the example of an anthropologist, Roy Rappaport, who “...interpreted the ritual cycle of a small social group in New Guinea in cybernetic terms, showing it to be, above all, a means of controlling the group’s impact on its natural environment so as to assure its sustainability or stability.” Rappaport, R. *Pigs for the Ancestors*. New Haven: Yale University. 1967. Cited in Goldsmith, E. *The Way: An Ecological World-view. op. cit.* pp.129-130. Refer to Chapter Four discussion of cybernetics and Chapter Five section, “Indigenous as Romanticised Hero: The Ecologically Noble Savage.”

hunters and hunted, involving at its deepest level a human-animal reciprocity.⁶⁶ The occurrence of an ecological ‘disaster’ – earthquake, drought, flood, or a change in migration pattern of a hunted species – may be interpreted to indicate a limit overstepped.⁶⁷ Such violation requires reparation through ritual prayer and action. In his studies of Tukano Amazonian Indians, Gerardo Reichel-Dolmatoff observes:

“Their strong belief in the land as a legacy of the ancestors who continue to be a ‘living presence’, calls for obedience to a multitude of responsibilities and restrictions which must govern man’s interaction with nature, always taking into account the limits of nature’s resources and the pressures exercised by increasing demands.”⁶⁸

Yet the ‘sustainable’ practices of indigenous peoples are not simply derived from secular needs, although these play an essential part in ensuring long-term survival and comfort. Many indigenous peoples believe the Earth to be a ‘living organism’; a Mother to whom they are genealogically related and therefore morally and spiritually bound to care for.⁶⁹ Spirit is invested throughout Nature; humans, as a ‘natural product’, are by inference also considered to be sacred. Indeed, indigenous peoples truly regard themselves as *a part of* Nature, not as *apart from* Nature in the (Western) dualistic, objective sense. Panikkar summarises:

⁶⁶ See: Kinsley, D. “The Mistassini Cree: Hunting as a Religious Ritual,” pp.7-21, *Ecology and Religion: Ecological Spirituality in Cross-Cultural Perspective*. New Jersey: Prentice Hall. 1995.

⁶⁷ Although moderns may not accept an eco-theological link between disrespectful attitudes to ‘Mother Earth’ (or Gaea) and retribution by the gods (e.g., in the form of a flood, famine, etc.), there is now irrefutable scientific evidence of a direct causal link between the exploitation of natural resources and the global ‘environmental crisis’. International recognition of the need to adopt more ‘sustainable’ patterns of human behaviour with respect to the carrying capacity limits of Nature reflect the ancient ideals and practices of many pre-modern societies. Refer below to discussion in Chapter Five, “Development and the Global Environmental Crisis”.

⁶⁸ Reichel-Dolmatoff, G. *The Forest Within: The World-View of the Tukano Amazonian Indians*. Devon, United Kingdom: Themis Books. 1996, p.31.

⁶⁹ Maori cosmogony provides an example of the deep nature of the relationship between Maori and land. From the creation of *Ranginui* (the male principle, or ‘sky father’) and *Papatuanuku* (the female principle, or ‘earth mother’) as the two primal parents, arose many offspring, each responsible for, or guardians of, particular natural phenomena. “Because the offspring of Ranginui and Papatuanuku were all gods possessing *ira atua* (supernatural life), it was necessary for them to find or to create a female of earthly origin from whence *ira tangata* (mortal life) could be brought forth. ... So they [the gods] moulded a human form from the red clay of Kurawaka at Hawaiki (the ancestral homeland of Maori). ... Thus was Hineahuone, the earth-formed maiden, created from the *whenua* (earth) of Papatuanuku, and imbued with the *mauri* (life force) of the gods. Hineahuone and Tane [(Tane the greatest son of Rangi, personified as Tane Mahuta; god of the standing forest)] then produced Hinetitama (the Dawn Maid), whom Tane took to wife so that the human species might continue.” Roberts, M.; Norman, W.; Minhinnick, N.; Wihongi, D. and Kirkwood, C. “Kaitiakitanga: Maori Perspectives on Conservation,” *Pacific Conservation Biology*. Vol.2, No.1. 1995, p.9. [italics added]. Refer also to the section in Chapter Six; “Kaitiakitanga Versus ‘Resource Management’.”

“...the ecumenic age, a period we might entitle *Man of Nature*. Here Nature is the *oikos*, the house, the habitat of Man. Here the divine is subsumed in Nature, which is not merely ‘natural’ but sacred, and ultimately one with the divine. ...The entire World is Man’s habitat; he lives on and cultivates the Earth. He has no ‘sense’ of Nature, for he is part of it. He does not feel the need to contemplate Nature, since he himself belongs to it. ...He is neither a spectator nor an actor on Earth, but its ‘natural’ product. He is thus sacred, for the entire universe is sacred, and he is a part of the whole. Communion with reality is coextensive here with the absence of a separating and reflective self-consciousness.”⁷⁰

There is a hierarchy present in kosmology. The hierarchy extends to and is inclusive of the ‘widest orbit’ of the Spirit world as manifest through Nature. Humans are considered an integrated and, in many ways, vital part of Nature.⁷¹ Yet, always humans and Nature are within the larger realm of Spirit. In this way the human sphere can not be regarded as a closed system, for this would deny the independence and transcendence of the Spirit world which can never be exhausted nor is totally comprehensible to the rational human intellect. Indeed there is a relationship between the secular, material world and the sacred or supernatural realm, both of which are penetrated by and through human experience.⁷² Sacred and secular elements may be regarded as complementary, although the laws of each realm are clearly very different. The sphere of the sacred must be treated with utmost respect and approached only in ways deemed strictly appropriate, so as to avoid violating those laws.⁷³

⁷⁰ Panikkar, R. *The Cosmotheandric Experience. op. cit.* pp.24-25.

⁷¹ While humans are considered to be *a part of Nature*, the indigenous perspective should not be misunderstood as an ‘irrational’ belief that humans and non-human species are the same. Panikkar explains: “Certainly Man is conscious of Nature, just as he is aware of himself; he distinguishes himself more and more from Nature, but without separating himself from her.” Panikkar, R. “The Three Kairological Moments of Consciousness,” *ibid.* p.25. [emphasis added].

⁷² Within the secular and sacred embrace, cultures have formed an understanding of distinct orders of reality to which they associate different laws. Panikkar recognises a common link among many peoples which he dissociates as a trinitarian relationship that constitutes the three interrelated and inseparable realms of Nature (*cosmos*), Divine (*theos*) and Human (*anthropos*). Panikkar coined the neologism ‘*cosmotheandric*’ to account for the “...equally irreducible character of the divine, the human and the cosmic (freedom, consciousness and matter), so that reality – being one – cannot be reduced to a single principle.” Panikkar, R. *The Cosmotheandric Intuition. op. cit.* p.121. He explains further: “The cosmotheandric intuition is not a tripartite division among things, but an insight into the threefold core of all that is, insofar as it is.” Panikkar, R. *ibid.* p.61. Speaking from experience as a Maori tohunga (‘priest’), Maori Marsden offered his understanding of the relationship between sacred (spiritual), secular (physical/natural), and human (psychic) realms: “The idea of manipulating environment is based on the Maori view that there are three orders of reality – the physical or natural, the psychic and the spiritual. Whilst the natural realm is normally subject to physical laws, these can be affected, modified and even changed by the application of the higher laws of the psychic and spiritual.” Marsden, M. “God, Man and Universe: A Maori View,” pp.143-163, in: King, M. (ed.) *Te Ao Hurihuri, The World Moves On: Aspects of Maoritanga*. Wellington: Hicks Smith & Sons Ltd. 1975, p.146.

⁷³ Marsden explains: “Where contamination occurs through contact with sacred objects in the normal course of a tohunga’s [priest] duties, he must cleanse himself before resuming his secular life if he is to avoid spreading this contamination or avoid offending the gods.” He continues: “For neutralising tapu

To ensure that actions in the human realm are carried out effectively and in adherence with the laws of the Spirit realm, that is, with respect and reverence to the ancestors, shamans are called on. Shamans are recognised as leaders who have attained and nurtured spiritual powers in communicating across metaphysical realms, seeing beyond the dimensions of sensory or material existence alone. Shamans are responsible for ensuring that spiritual laws are not transgressed. Where offence occurs, shamans may be called on to heal the wounds pierced in the fabric of the whole. In the ritual, shamans may take on a role akin to that of a conductor of an orchestra; a harmoniser of sorts, producing harmony not only between the various players, but harmony in the music received by the wider audience. In this way, the shaman is an involved and participating *mediator*, not an independent or neutral *intermediary*.

In summary: Ritual brings about a unity, not only by bonding participants in the ceremony to each other but as a 'harmonious unity' that extends from the ritual group outward to encompass their entire universe, or kosmos. As such, ritual opens humans to the mystery beyond the rational reality of secular routines. In fact, ritual is important as a communal celebration of the cosmos itself. Yet to truly understand ritual, one has to live a ritualised life. In this way, almost all activities in an indigenous culture take on ritual significance and symbolic meaning.

The Communal Spirit of Medieval Ritual

While kinship defines the common bond of unity in indigenous ritual cultures, the communal spirit was also strong in the European village community during the medieval period. Although peasants laboured in the fields and carried out handwork on the monks' land, in addition to paying services, rents and an army due, the pagan rituals and sentiments still prevailed, despite the disapproval of the Church.⁷⁴ The ancient rituals and ceremonies

[sacred, holy] or for the propitiation of the gods, the sacramental means was cooked food. ...or after a person had inadvertently transgressed the tapu of an object, he washed himself in water dedicated to the god Rehua." *ibid.* pp.147, 148. In these examples, cooked food and water act as the *noa* (common) elements that break the *tapu*. This relationship recognises the importance of the secular and sacred as complements, not only as vested in specific elements but in all aspects of human life.

⁷⁴ Eileen Power confirms this in her reconstruction of the life of a peasant (Bodo) on a country estate in the time of Charlemagne. She comments on the dancing and festivities in which Bodo and his family and friends participated: "They were very merry and not at all refined, and the place they always chose for their dances was the churchyard; and unluckily the songs they sang as they danced in a ring were old pagan songs of their forefathers, left over from old Mayday festivities, which they could not forget, or ribald love-songs which the Church disliked. ...over and over again the bishops forbade these songs and

were indicative of a strong relationship to Nature, with particular ties to agriculture and its marking of the seasons. William Anderson explains: “In many cases the Church took over these [pagan] rituals, ... but, whether or not the Church approved, the rituals had to be performed because they were a means of bonding small communities together and also of educating new generations.”⁷⁵ Even when Christianity gained a stronghold over pagan rituals, the door to the enchanted world of Nature remained open to the medieval people. Significantly, the medieval perception was still intact, united by a common ‘kosmology’, an “all-encompassing, multifold reality”, as Carolly Erickson describes the ‘holistic’ medieval worldview.⁷⁶

In part, the sense of community solidarity was enabled through the fortification of villages throughout Europe during the tenth and eleventh centuries. This allowed for a degree of protection from outside invaders and also enhanced a sense of common interest among the village dwellers.⁷⁷ This common interest gave birth to a new life of freedom, empowering the folkmore collectively to resist the encroachments of its ‘inner enemies’; the lords. Throughout the medieval period, the village community resisted the growth of feudalism and maintained self-jurisdiction, which entailed self-administration and self-legislation. Petr Kropotkin comments:

dances; but in vain. In every country in Europe, right through the Middle Ages to the time of the Reformation, and after it, country folk continued to sing and dance in the church yard.” Power, E. *Medieval People*. London: Methuen & Co. 1924, pp.14-15.

⁷⁵ Anderson, W. *Green Man: The Archetype of our Oneness with the Earth*. London: HarperCollins. 1990, p.54. [emphasis added]. William Anderson claims that, if the ‘Green Man’ signifies the relationship of humans to Nature, it took on a new form during the Dark Ages as the disgorging and devourer of vegetation. This alludes to the victory of Christianity over paganism, whereby the worship of trees was condemned. Thus, “...the missionary saints needed to bring the greatest source of living power on earth under the guidance of the Christ: the power that is in grass and leaf and sap on which all living things depend.” p.54. See Chapter Three, “The Green Man in the Dark Ages,” pp.50-60.

⁷⁶ Erickson explains: “...medieval people tended to perceive an all-encompassing multifold reality, knit together by a commonly held perceptual design. All-encompassing, because no part of experience or knowledge was conceived to be alien to the pattern of Christian revelation. Multifold, because it was a cultural habit to endow individual things with multiple identities. And in terms of a common perceptual design, because it was the mutually held network of beliefs, expectations and assumptions about reality that made medieval culture comprehensible to those who lived their mental lives within its bounds.” Erickson, C. *The Medieval Vision: Essays in History and Perception*. New York: Oxford University Press. 1976, p.8. Johan Huizinga expresses a similar sentiment about these times: “Every event, every action, was still embodied in expressive and solemn forms, which raised them to the dignity of a ritual.” Huizinga, J. *The Waning of the Middle Ages: A Study of the Forms of Life, Thought and Art in France and the Netherlands in the Dawn of the Renaissance*. New York: Doubleday Anchor Books. 1954, p.9.

⁷⁷ Mumford suggests that the walled city, which brought about a new sense of security, was a far more significant factor in the foundation of the new type of medieval city in the eleventh century than the revival of trade. The security provided by the wall enabled local craftsmen and peasants and fishermen to come together for a regular market. Eventually they sought permanent quarters for themselves within the walled city. See: Mumford, L. *The Culture of Cities*. London: Secker & Warburg. 1938, in particular Chapter One, “Protection and the Medieval Town,” pp.13-72.

“It is well known by this time that feudalism did not imply a dissolution of the village community. Although the lord had succeeded in imposing servile labour upon the peasants, and had appropriated for himself such rights as were formerly vested in the village community alone (taxes, mortmain, duties on inheritances and marriages), the peasants had, nevertheless, maintained the two fundamental rights of their communities: the common possession of the land, and self-jurisdiction.”⁷⁸

As commercial centres continued to prosper from the growth of new trading routes and a diversity of occupations, crafts and arts, a new form of union was required: the guilds. Similar to the clan/tribal connection of indigenous peoples and to the village community, the guilds (brotherhoods, friendships) expressed the sense of shared destiny and collegial unity within the medieval city. Craftsmen came together, united by their common enterprise and vested interests in the protection of all ‘brothers’ as equals before the guild. Guilds extended to all professions and were even founded for task-specific purposes, such as the building of a cathedral.⁷⁹ Allegiance to the brotherhood was paramount, for it was within the group that one’s identity was confirmed: “Only when a brother had broken the faith towards his guild-brethren, or other people, he was excluded from the brotherhood ‘with a Nothing’s name’...”⁸⁰

The medieval city was based not on autocratic rule, but rather on an ‘organic hierarchy’.⁸¹ Reflecting its origins in the village-community, the medieval city developed as a federation

⁷⁸ Kropotkin, P. *Mutual Aid. op. cit.* p.136. Refer especially to his Chapters Five and Six; “Mutual Aid in the Mediæval City,” pp.129-153, pp.154-179. [emphasis added.]

⁷⁹ A communal spirit remained strong among both the town and country folk throughout the Middle Ages as noted, for example, in the building of the Notre-Dame cathedral in Paris (from the twelfth to the fourteenth centuries). Allan Temko explains: “A rise in trade and manufacture, safety in travel, the growth of guilds and banking, the new dignity of the royal house, were simultaneously causes and effects of a revolutionary atmosphere in France. A national sentiment was developing, and with it would come the cathedrals. No city and no cathedral would reflect the period of consolidation more faithfully than Paris and Notre-Dame.” Temko, A. *Notre-Dame of Paris: The Biography of a Cathedral.* The Viking Press: New York. 1952, p.59. Indeed, Kropotkin affirms: “A cathedral or a communal house symbolized the grandeur of an organism of which every mason and stonemason was the builder, and a mediæval building appears – not as a solitary effort to which thousands of slaves would have contributed the share assigned them by one man’s imagination; all the city contributed to it. ...the cathedral of a mediæval city was intended to glorify the grandeur of the victorious city, to symbolize the union of its crafts, to express the glory of each citizen in a city of his own creation.” Kropotkin, P. *Mutual Aid. op. cit.* pp.171-172. [emphasis added.] This echoes the earlier affirmation of John Ruskin, see: Ruskin, J. “The Nature of Gothic,” pp.118-139, *The Stones of Venice.* [Edited and Introduced by J. Morris]. London: Faber and Faber. 1981.

⁸⁰ Kropotkin, P. *Mutual Aid. op. cit.* p.143.

⁸¹ Of course this does not imply that inequality did not exist in medieval society. Among class groups equality was the ideal and, generally, the practice (enforced through the self-jurisdiction of the guilds, etc.). Between classes, however, inequality existed and in fact was considered a necessary factor in maintaining the societal structure as a whole. Richard Tawney explains: “The facts of class status and inequality were rationalized in the Middle Ages by a functional theory of society... Society, like the human body, is an organism composed of different members. Each member has its own function, prayer,

of householders united by the street, the parish, the section – and also, importantly, of individuals united by oath into the guilds. These groups came together in mutual aid and support, allowing for the creative genius of each separate group to be freely expressed while avoiding the excessive restraints of the (still embryonic) State. Yet, this basis for organisation did not derive from a preconceived plan, but was an extension of *natural growth* which allowed for variety in expression among the medieval cities throughout Europe, but still presented a similarity in the spirit which animated them.⁸² Kropotkin explains:

“...the mediæval guild, like the mediæval parish, ‘street,’ or ‘quarter,’ was not a body of citizens, placed under the control of State functionaries; it was a union of all men connected with a given trade... For the inner organization of the trade its assembly was sovereign... It had its own self-jurisdiction, its own military force, its own general assemblies, its own traditions of struggles, glory, and independence, its own relations with other guilds of the same trade in other cities: it had, in a word, a full organic life which could only result from the integrality of the vital functions.”⁸³

And yet the medieval city of independent federations associated through interdependent relations was not to last: A complex of factors contributed to the decay of communal institutions and eventually overthrew the medieval city. The protective wall of the city (which had enabled enrichment of cities in terms of crafts, arts, architecture, etc.) had contributed to a growing sense of superiority. As the cities grew increasingly rich, the divide deepened between the peasant, who still toiled on the land under the rule of the feudal lords, and the relative freedom of the city folk. While wars were fought throughout

or defence, or merchandise, or tilling the soil. Each must receive the means suited to its station, and must claim no more. Within classes there must be equality; if one takes into his hand the living of two, his neighbour will go short. Between classes there must be inequality; for otherwise a class cannot perform its function, or – a strange thought to us – enjoy its rights. Peasants must not encroach on those above them. Lords must not despoil peasants. Craftsmen and merchants must receive what will maintain them in their calling, and no more.” Tawney, R.H. *Religion and the Rise of Capitalism*. Harmondsworth, Middlesex: Penguin Books. 1926, pp.35-36. Indeed, inequality was celebrated!, as Huizinga reveals: “Through all the ranks of society a severe hierarchy of material and colour kept classes apart, and gave to each estate or rank an outward distinction, which preserved and exalted the feeling of dignity.” Huizinga, J. *The Waning of the Middle Ages. op. cit.* p.54.

⁸² Kropotkin confirms: “Everywhere we see the same federations of small communities and guilds, the same ‘sub-towns’ round the mother city, the same folk-mote, and the same insigns of its independence.” Kropotkin, P. *Mutual Aid. op. cit.* p.154.

⁸³ *ibid.* pp.161-162. John Papworth comments on the symbolism of the banners waved in support of each contrade (quarter) within medieval Siena, which are still an important feature today in sports contests, civic or religious festivals, as well as in annual carnivals and feasts. He notes: “Evidently, medieval Siena was not a mass society, not just one amorphous entity governed from a single centre; it was an organic, multicellular body in which each cell – in this case each contrade – had its own vibrantly assertive role in the life of the city.” Papworth, J. “The Ecology of Art,” *The Ecologist*. Vol.29, No.5. August/September 1999, p.340. Ezra Pound’s *Leopoldine Cantos* celebrate these communal aspects of Siennese life, all medieval vestiges: “Thus arrive the gold eagles, the banners of the contrade and boxes of candles... alias

Europe in an attempt to abolish feudal control, even where those wars achieved those aims (or partially did so), peasants were still not accorded the ‘rights’ of citizenship enjoyed by their city counterparts.

Antagonism between the country and the city worsened and resentment brewed among the serfs. The growing autocracies capitalised on these divisions as opportunities to further exert their influence, as Kropotkin confirms: “Mutual aid and support cannot be limited to a small association; they must spread to its surroundings, or else the surroundings will absorb the association.”⁸⁴ The tendency toward exclusivity was also a characteristic of the merchant guild, which originally was open to all: both rich and poor, but gradually began to exclude ‘outsiders’ so that privileges in trade were retained by the few. It thus was in danger of becoming an oligarchy; a tendency that the craft guilds kept in check (and were mostly successful in doing so throughout the tenth to twelfth centuries).

Ritualism and the Economic Game

Toward the close of the medieval period in Europe, the ritual order of medieval communal life had begun to degenerate into a stagnant feudal ‘ritualism’ in which the Church established the proper place and function for every aspect of social life. By assuming the role of an intermediary in spiritual matters, the Church laid claim to absolute authority in the deliverance of Truth.⁸⁵ The combination of ecumenical absolutism and institutional dogmatism gave rise to the abuse of power by clergymen and the priesthood.⁸⁶ In addition,

serve God with candles.” Pound, E. “Canto 48,” *The Cantos*. New York: New Directions. 1970, pp.216-217.

⁸⁴ Kropotkin, P. *Mutual Aid. op. cit.* p.176. Mumford explains: “...the defect of the medieval urban policy was that it had never – outside certain regions in Italy – embraced a sufficient area of country. It was an island in a hostile sea. ...Cities attempted to solve the problem of a common union by forcing their peasant neighbors into a state of subjection. ...Instead of creating allies in the open country, who could have helped strike at the roots of feudal power, they created a sullen wall of enemies.” Mumford, L. *The Culture of Cities. op. cit.* p.68.

⁸⁵ Richard Tarnas comments: “...the Church had replaced faith in the person of Christ with faith in the doctrine of the Church. It had thereby vitiated the potency of the original Christian revelation and placed the Church opaquely in the middle of man’s relation to God. Only direct contact with the Bible could bring the human soul direct contact with Christ.” Tarnas, R. *The Passion of the Western Mind. op. cit.* pp.236-237. [emphasis added.]

⁸⁶ For example, money was paid to the Church in exchange for the forgiveness of sins: “An indulgence was the remission of punishment for a sin after guilt had been sacramentally forgiven – a Church practice influenced by the pre-Christian Germanic custom of commuting the physical penalty for a crime to a money payment. To grant such an indulgence, the Church drew from the treasury of merits accumulated by the good works of the saints, and in return the recipient made a contribution to the Church. A voluntary and popular arrangement, the practice allowed the Church to raise money for financing crusades and building cathedrals and hospitals.” *ibid.* p.233.

the feudal system accentuated economic inequalities between the ruling class of lords and the mostly illiterate and landless villeins; a disparity the Church did little to avail. Thus, the ideals of 'ritual' were corrupted as a form of 'ritualism' that profited religious authorities. For heretics, the abuses of the Church hierarchy provided reason enough to abhor the presence of any heteronomous authority, especially those of traditional or religious derivation.⁸⁷

It is critical at this point to emphasise that this ritualism differs in a number of ways from the ritual of indigenous cultures and the communal spirit of medieval European culture.⁸⁸ Rather than encouraging the conjoining of diverse peoples through 'cooperative communion', liberal heretics argued that ritualism tricked its participants into 'compulsory coercion' through religious indoctrination. They further claimed that because the outcome of ritualism may be determined in advance, it was open to interpretive manipulation by the power-wielding elite. In turn, that elite could justify their favourable 'outcome' as divine intention (through intervention in matters of the divine). However, the Reformation was to change all that: The Bible, which was formerly restricted to Latin and thus enabled the Church to retain exclusive interpretation, was translated into the vernacular by Martin Luther (1483-1546).⁸⁹ Protestants insisted that people did not need the Church as intermediary: the exclusive authority of Catholicism was irreparably shattered.

While ritual originally sought to establish order and social stability to curb the destructive side of human creativity, the counter-side of ritual (ritualism) had some less desirable effects.⁹⁰ For example, innovators and inventors were distrusted and condemned by the

⁸⁷ Krieger explains the heteronomous basis of Christian orthodoxy: "...the principle of *authority*, remained the foundation for all knowledge until the modern period. In all important matters one did not rely upon one's own reason or experience so much as upon 'authorities,' which were handed down by tradition and acknowledged by all." Krieger, D. *The New Universalism. op. cit.* p.11. [italics in original].

⁸⁸ In this way, viewing ritual and game simply as dialectical opposites, as Lévi-Strauss presented them, is inadequate. Recall Panikkar's distinction between ritual as a symbolic act and ritualism as repetition without the internal faith. Today, moderns scorn all ritual expression as ritualism (e.g., religion as the 'opium of the masses'; spirituality as superstitious persuasion, etc.), without acknowledging that the modern economic order of the global market is precisely ritualism masquerading as 'game'.

⁸⁹ Commenting on this aspect of the Reformation, Ninian Smart explains: "The Bible, no longer screened by a learned language, now spoke directly to people's feelings; it became the great fount of *narrative*. Printing brought it into many households. You could judge about matters of truth by referring to it, without relying on learned commentary or priestly exposition. ...The Old Testament, which on the whole had been kept away from the laity by the Catholics, was a rich source of ideas and stories." Smart, N. *The World's Religions: Old Traditions and Modern Transformations*. Cambridge, England: Cambridge University Press. 1989, p.325. [italics in original].

⁹⁰ Mumford points out: "Though ritual provided an orderly channel for man's unconscious impulses, it has often obstructed the application of intelligence and hindered the development of consciousness.

Church as heretics, resulting in considerable intellectual confinement.⁹¹ However, during the Counter-Reformation, the Jesuits' education allowed that Order some intellectual independence from the Church.⁹² The philosophical revolution, in which René Descartes played a decisive part, saw the balance of power shift from knowledge derived from outside authorities to reason acquired within by the individual.⁹³ The former reliance on faith as the binding factor of ritual was scorned as superstitious belief: "Clearly, from now on, religion is possible 'within the limits of reason alone.'" ⁹⁴ Reason was held to be the special trait of humans, referred to as the ability to intuit universal truths and logically deduce other truths from them. According to Descartes, reason was by nature equal in all individuals and gave them personal, unmediated access to truth. Hence, the birth of the modern rights-bearing individual.

A further threat to the authority of the medieval Church came from the emerging bourgeois class of merchants and artisans. The Church reacted by condemning certain trades as avarice: "The Church attacked the rising merchant class as a parasitic force, a group of conspirators who created nothing of value and only exploited the work of others."⁹⁵ However, the Church's contempt of the middleman was not enough to curb the advance of the 'money economy'.⁹⁶ From the fifteenth century onwards trade monopolies

Rituals by their very success too often fall back into the automatism of unconscious existence, and so arrest human development." Mumford, L. *Technics and Human Development: The Myth of the Machine*. *op. cit.* p.65.

⁹¹ For example, in 1616 the Catholic Church declared Copernican theory "false and erroneous" and in 1633 Galileo was condemned by the Inquisition. Smart comments: "Christianity had to cope with the effects of the new science on its traditional picture of the universe: the trial of Galileo for heresy and the intellectual debates over Evolution in the nineteenth century were two main instances of this." Smart, N. *The World's Religions*. *op. cit.* p.316.

⁹² It is important to point out, however, that the Jesuits did not originally intend to undermine the Church's authority. Rather, the Jesuit educational strategy aimed to develop critically intelligent Christian men capable of outwitting the Protestant heretics. As a consequence of the liberal programme, however, emerged nonorthodox tendencies, scepticism and even revolution. It is worthy of note that those who received Jesuit educations were highly influential in the Scientific Revolution which eventually overthrew the stronghold of Christianity in the West, namely: Galileo, Descartes, Voltaire and Diderot.

⁹³ Krieger elaborates: "For Descartes, all knowledge which comes to us from *outside*, perceptions of the external world as well as the opinions which tradition has handed down to us, are subject to distortion and thus the only absolutely certain knowledge we may attain must be found *within*." Krieger, D. *The New Universalism*. *op. cit.* p.11. [italics in original].

⁹⁴ *ibid.* p.12.

⁹⁵ Rifkin, J. *Time Wars: The Primary Conflict in Human History*. New York: Henry Holt and Company. 1987, p.135.

⁹⁶ The commercial activity of the late Middle Ages (exemplified in the Italian cities) saw the change from a 'goods economy' to a 'money economy', as Mumford summarises: "One must remember, with Max Weber, that the rational administration of taxation was an accomplishment of the Italian cities in the period *after* the loss of their freedom. The new Italian oligarchy was the first political power to order its finances in accordance with the principles of mercantile bookkeeping – and presently the fine Italian hand of the tax expert and financial administrator could be observed in every European capital." Miller, D.L.

took over town monopolies (the guilds): “Big industry, investment banking, and wholesale trade were not on a single town basis.”⁹⁷ The organic weave of medieval society was thus re-woven into the universal law, order and uniformity of the baroque city driven by the ‘economic game’ of mercantilist capitalism. The new set of symbols and images signified the beginnings of the modern age, which Jeremy Rifkin summarises: “The new god was science and technology; the new salvation, material progress; the new church, the industrial order; the new idol, the clock and watch; and the new ritual, the daily schedule.”⁹⁸

The Birth of the Modern Rights-Bearing Individual

In direct contrast to the assignment of roles within the societal whole, the ‘individual’ was created. The individual was accorded a set of ‘rights’ which encouraged the nurturing of a self-centred sense of autonomous freedom. ‘Freedom’ (originally) meant liberation from the hegemony of authoritarian dominion. The Western emphasis on freeing the individual by replacing ‘rites’ with ‘rights’ led to the systematic severing of the limits that had formerly been the mainstay of commitment to the Church and its traditions. Through defending one’s rights, former obligations to the societal hierarchy could be relinquished. No longer is the individual obliged to fulfill his or her role and carry out duties for the betterment of the societal whole. Instead, the modern individual demands *rights without restrictions*: restrictions, of course, include the mutual reciprocity of a relationship.

The modern individual typically determines his or her level of involvement in societal matters on the basis of what he or she personally stands to gain (financially) from making a

(ed.) *The Lewis Mumford Reader*. Athens: The University of Georgia Press. 1995, p.133. To meet the demands of merchant apprentices, a number of treatises on practical arithmetic were composed such as Lucas Pacioli’s (ca.1445-1517) treatise on double-entry book-keeping; the basis of the accounting profession. Pacioli, an Italian mathematician, provided the first printed work setting out the ‘method of Venice’. In his writings may be observed the quantitative rationalisation that dominates the business world today: “...always taking care of the things that go by number, of those that go by weight, and of those that go by measurement, because it is the custom to conduct business in these three ways, everywhere.” Pacioli, L. *An Original Translation Of the Treatise on Double-Entry Book-Keeping*. [Translated from Italian by P. Crivelli]. London: The Institute of Book-Keepers, Ltd. 1924 [Venice: 1494], p.7. For a biography of Pacioli and his bibliography, refer to: Gillispie, C.C. (ed.) *Dictionary of Scientific Biography*. Vol.10. New York: Charles Scribner’s Sons. 1974, pp.269-272.

⁹⁷ Mumford, L. *The Culture of Cities*. *op. cit.* p.66. Mumford comments on the limited extent of influence of the guilds and how this contributed to their eventual downfall: “...on the whole, the guild was able to exercise its authority only over those who actually came to practice within the walls of the town. Once the lanes of travel opened and the countryside became safe, the towns were helpless.” *ibid.* p.67.

⁹⁸ Rifkin, J. *Time Wars: The Primary Conflict in Human History*. *op. cit.* p.147.

contribution with minimum, if any, reciprocation.⁹⁹ No relationship is engendered by the individual; it is only a one-way transfer. In the competitive ‘game’ of the market economy, the most important player is oneself. To seek collegial relations with others is now referred to, in a business sense, as ‘networking’. Relationships of the individual to the whole, therefore, became voluntary; ‘duty’ was reduced to mere ‘responsibility’.¹⁰⁰ This transition was radical in the sense that individual rights became the means of defence against all forms of *authority*.

In reaction to the static hierarchy of power that promoted subservience to a governing principle (be that God or King), a new climate was shaped through the dual ideals of *equality* and *liberty*. The modern ideal of ‘equality’ proposes that regardless of ethnic origin, gender, age, country of birth, religious creed, and even culture, every individual may enjoy the same set of rights as others. As ‘equals’, the individual becomes the ‘universal unit’ of comparison; the indivisible, elementary human being who, in a sense, incarnates the whole of humankind.¹⁰¹ To this end, the abstract notion of the human individual as a creature without context is created. This is implicit in the promotion of a ‘universal set of human rights’.¹⁰² Thus the game mindset breaks down culturally-defined bonds and redefines all moderns as ‘equal individuals’.

⁹⁹ An article on U.S.A. multimillionaires of the technology boom reports a manipulative motive for their philanthropy. “For most entrepreneurs, however, there is an enlightened self-interest at work in their philanthropy. A healthy society creates a healthy market for everything from software to cell phones. ... ‘If you want to keep making a profit,’ says Powell [retired General Colin Powell, founder of the education foundation America’s Promise], ‘then you’ve got to keep growing the society, so that you have people out there who are workers and consumers.’” Greenfield, K.T. “The New Philanthropy: A New Way Of Giving,” *Time*. No.29. 24 July 2000, p.47.

¹⁰⁰ Peter Berger *et al.* note: “Bureaucracy engenders very specific and peculiar modes of reciprocity. Typically, there is limited reciprocity between bureaucrat and client. The two are not mutually involved. They have different ‘problems.’ Thus the client’s ‘problem’ is to get his passport; the bureaucrat’s ‘problem’ is to get rid of the client. In other words, bureaucrats and clients are not engaged in common tasks and therefore have difficulty in reciprocally identifying with each other’s roles in the process.” Berger, P.; Berger, B. and Kellner, H. *The Homeless Mind: Modernization and Consciousness*. New York: Vintage Books. 1973, p.59.

¹⁰¹ Dumont comments on the human being in modern society: “Each particular man in a sense incarnates the whole of mankind. He is the measure of all things (in a full and novel sense). The kingdom of ends coincides with each man’s legitimate ends, and so the values are turned upside down. What is still called ‘society’ is the means, the life of each man is the end. Ontologically, the society no longer exists, it is no more than an irreducible datum, which must in no way thwart the demands of liberty and equality.” Dumont, L. *Homo Hierarchicus*. *op. cit.* pp.9-10. [emphasis added.]

¹⁰² For a cross-cultural reflection on the notion of the universality of human rights, see: Panikkar, R. “Is the Notion of Human Rights a Western Concept?” *Invisible Harmony*. *op. cit.* pp.109-133. Hall and Ames raise the issue of cultural determinants with regard to human rights: “The question is whether rights are objectively grounded. That is, are there *natural* rights, or are rights merely the contingent products of a particular form of community?” Hall, D.L. and Ames, R.T. *The Democracy of the Dead: Dewey, Confucius, and the Hope for Democracy in China*. Chicago: Open Court. 1999, p.109. [italics in original]. For an interesting (and entertaining) use of the United Nations’ *Universal Declaration of Human Rights*

The game-model of modern society shattered the bounds of the indigenous kosmos and the communal spirit of medieval ritual and replaced these instead with a seemingly boundless cosmos. To play the game one need claim allegiance to no one culture as such (although its origins were in Western Europe, today modernity is evidently a multi-ethnic, global reality).¹⁰³ Any individual is accepted as a ‘contestant’ with the proviso that he or she abides by the game’s rules.¹⁰⁴ Competition requires self-interested individuals only and is not fussy about his or her prior cultural beliefs or religious affiliations, as long as those rituals now take a secondary (if any) status in that individual’s life. The race, in order to be effective, seeks to engage everyone. To this extent, the running race incorporates all ‘races’ (ethnic origins): it is open to all, initially without prejudice.

Western modern liberalism assumes equality, yet in reality people are not ‘equal’. Whilst equality was proposed as a modern ideal, it was only introduced to “...compensate for the ineluctable fact of inequality.”¹⁰⁵ It is important, however, to distinguish between ‘moral inequality’ and ‘natural inequality’.¹⁰⁶ Renaissance libertarians argue that the Church in feudal ritualism exploited natural inequality for its social ends, resulting in a social order that exhibited considerable moral inequalities. Moderns similarly claim that while

(adopted in 1948), refer to: Davis, G. *My Country Is The World: The Adventures Of A World Citizen*. New York: G.N. Putnam’s Sons. 1961. Garry Davis renounced his United States nationality (in opposition to ‘nation-state tyranny’) and instead declared himself a World Citizen; a subject of the World Government (in operation since 1953). Davis has travelled extensively under the auspices of his ‘world citizenship’, often spending time in airport security and prisons as a result of not holding an ‘authentic’ passport! The thesis of his argument is that individual sovereignty is the key to challenging the arbitrary power of nations. The ‘ugly side’ of this proposition, however, is the increasing power usurped by multinational corporations over national governments and citizens. The latter (governments) are rendered somewhat ‘puppet-like’ while the real actors behind the scene toy with the purse strings.

¹⁰³ Berman explains: “Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion and ideology: in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, a unity of disunity: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish. To be modern is to be part of a universe in which, as Marx said, ‘all that is solid melt into air.’” Berman, M. *All That Is Solid Melts Into Air*. *op. cit.* p.15. [emphasis added].

¹⁰⁴ The ‘rules of the game’ (of modernity) include: *individual autonomy* (through rejecting all forms of authority); *equality* (in place of social roles in a traditional hierarchy); *democracy* (as governance by an elected majority in place of decision-making by a single ruler or elite); and *freedom* (from social and natural limits placed on the individual). Of note: each ‘rule’ has been derived dialectically.

¹⁰⁵ Dumont, L. *Homo Hierarchicus*. *op. cit.* p.12.

¹⁰⁶ Dumont notes that in Jean-Jacques Rousseau’s *Discourse On the Origin and Foundations of Inequality Among Men*, Rousseau distinguished “...between natural inequality, which is but a small thing, and moral inequality, or ‘inequality of combination’, which results from the exploitation of natural inequality for social ends. The man of nature ... is sometimes said to be free and even to be acquainted with equality (p.199 [of Rousseau]), which must no doubt be understood in the sense of absence of moral inequality...” Dumont then adds an intriguing question: “...(but would it not be better to say he [‘man of nature’] is acquainted with neither of the two opposites?)” However, inequality was deemed to be inevitable, especially from an economic point of view. Equality was therefore proposed as the political norm, legitimised in the political form of democracy. *ibid.* p.12. [emphasis added].

indigenous ritual cultures may claim to seek an equitable outcome for all, that is only achievable at the individual's expense through retarding his or her natural inclinations. As Munro observes: "Role fulfillment deemphasizes particular qualities the person may possess as an individual."¹⁰⁷

Instead, modern liberals uphold the logic of the game which they claim to most fairly allow individuals to excel according to their inherent natural inclinations. In reverse logic, the ritual hierarchy of social inequalities was re-woven into the ideology of utopian progress: driven by and beneficial to a collective 'society' of self-sufficient autonomous individuals.¹⁰⁸ Hence the modern economic game claims that equality exists at the outset and that it works to keep the base of all individuals equitable – or democratic. It is then up to each individual to seize for oneself what he or she wants out of (the game of) life. With these assurances of equality in conditions, competitors assemble together at the starting line.

The running race of the modern game is now held in a limitless field where every direction offers endless possibilities. Limits, where they still exist, are regarded as obstacles and are soon eliminated. While a 'level playing field' is supposed, for many the journey is over rough terrain, with hidden potholes.¹⁰⁹ From the moment that the race begins, however, inequality becomes justified as that which is 'natural' (so that the 'natural law' of winners and losers takes effect as positive law).¹¹⁰ The capitalist game is justified on the basis that it generates optimum performance from each individual when resources are scarce: through

¹⁰⁷ Munro, D.J. "Introduction," pp.1-32, in: Munro, D.J. (ed.) *Individualism and Holism. op. cit.* p.18.

¹⁰⁸ The 'myth' (and futility) of endless utopian schemes is elucidated by Panikkar: "As long as several historical realms and empires of all sorts were on the planet, Men could go on believing that the cruelties and inconsistencies of one system could be corrected by another, and that, at least theoretically, historical existence was the destiny of the human being." Panikkar, R. "The Crisis of History," pp.108-119, *The Cosmotheandric Experience. op. cit.* p.108. [emphasis added.]

¹⁰⁹ In his study of the play element in culture, Huizinga traces the transition from occasional amusement to the system of organised clubs and matches to nineteenth century England. While he cites English social life as an important causal factor, he also recognises: "...the geography of the country and the nature of the terrain, on the whole flat and, in the ubiquitous commons, offered the most perfect playing-fields that could be desired, were of the greatest significance. Thus England became that cradle and focus of modern sporting life." Huizinga, J. *Homo Ludens: A study of the play element in culture. op. cit.* p.197. It might now be observed, however, that this 'level' playing field seems to have been tilted to such an extreme that, for some, they must play uphill!

¹¹⁰ Panikkar retorts: "Competitive society is bound to self-destruct. If success means reaching the top, the moment others are alerted that they too can reach it, they will try to destroy you, and one another after that." Panikkar, R. *The Cosmotheandric Experience. op. cit.* p.116.

competition, ingenuity is maximised in order to profit oneself over others¹¹¹ (for this reason, among others, ritual-based societies did not eliminate competition altogether).

The Competitive Game Within Ritual Culture

It may be argued that ritual cultures deliberately over-emphasise cooperative behaviour (or integrative tendencies) in order to retain harmonious relations in the social group as a whole.¹¹² However, if 'peace' is only superficially retained through compromise, the longer-term implications of not addressing underlying conflicts may manifest in more extreme forms of rebellion.¹¹³ For these reasons, competition was not altogether rejected in ritual cultures but, to the contrary, played an important and sometimes creative role.¹¹⁴ Whereas competition in game culture is encouraged almost without limit, within a ritual structure competition was controlled and *formalised* (and therefore the 'competitive game' became ritualised).¹¹⁵ Although the ritualised game has the potential to become violent, competitors

¹¹¹ It is further considered that only in isolation is each unit truly efficient, whereas cooperation (which is emphasised in ritual societies) is deemed 'inefficient'; hence, debilitating the active pursuit of 'progress' and (economic) 'profit'. Alternatively, socialists would argue that disequilibrium is the outcome of the (capitalist) game *because* the social net of security has been eroded in the break-down of hierarchical roles and relationships.

¹¹² Hughes notes: "Most ceremonies and economic activities [among North American indigenous peoples] were done by cooperative groups. A competitive attitude was regarded as antisocial or malevolent." Hughes, J.D. *North American Indian Ecology. op. cit.* p.61. In a volume of exploratory research into cooperative and competitive habits among 'primitive' peoples (including thirteen indigenous cultures), editor and contributor Margaret Mead comments: "...the most basic conclusion which comes out of this research: that competitive and cooperative behavior on the part of individual members of a society is fundamentally conditioned by the total social emphasis of that society, that the goals for which individuals will work are culturally determined and are not the response of the organism to an external, culturally undefined situation, like a simple scarcity of food." Mead, M. (ed.) "Introduction," *Cooperation and Competition Among Primitive Peoples*. Boston: Beacon Press. 1937, p.16. [emphasis added].

¹¹³ Panikkar highlights the futility of violent movements that seek 'peace' and states: "Victory never leads to Peace." He explains: "Witness thereof are the some eight thousand peace treatises we know of and possess along the millennia of human history. None of those victories has ever brought a true peace. It cannot be retorted that this is so for such is human nature, because most of the wars have started, and found their 'justification', as counter measures against the previous peace treatises. The archetypes of the defeated, when not their immediate children, will sooner or later emerge and demand what was denied to them. Not even the repression of evil will bring lasting results." Panikkar, R. "Nine Sutras on Peace," *INTERculture*. Issue No.110. Winter 1991, p.52. [emphasis added].

¹¹⁴ John Papworth comments on the creative aspect of rivalry in medieval Europe: "...on this small human scale, the rivalry to achieve the creative best, to be known among one's neighbours as a top-ranking master craftsman or trader must have been intense. To establish a reputation gave its owner standing and dignity in his contrade..." Papworth, J. "The Ecology of Art," *The Ecologist. op. cit.* p.341.

¹¹⁵ Kropotkin explains: "Happily enough, competition is not the rule either in the animal world or in mankind. It is limited among animals to exceptional periods... In the great struggle for life ... natural selection continually seeks out the ways precisely for avoiding competition as much as possible." He continues: "And when animals can neither fall asleep, nor migrate, nor lay in stores, nor themselves grow their food like the ants, they do what the titmouse does, and what Wallace (*Darwinism*, ch.v) has so charmingly described: they resort to new kinds of food – and thus, again, avoid competition." Kropotkin, P. *Mutual Aid. op. cit.* pp.72, 73. Goldsmith has picked up on Kropotkin's theme and cites examples in

must accept the 'rules' of the game and so avoid extreme retribution among those whose relationships may currently be marred by conflict. Goldsmith comments:

“Another form of ritualization is the substitution of a match or tournament between two or more champions for a conflict between two armies. ... This strategy was resorted to a great deal during the Middle Ages in Europe. Sport also provides a means of ritualizing conflict between two social groups...

Perhaps the most sophisticated of such ritual conflicts is the Palio of Siena, in which the *contrades* – medieval associations, each of which inhabits its own area of the city – compete with each other by means of a horse race around the city's incredibly beautiful Piazza del Campo. Significantly, there is remarkably little crime in this city: People have learned to live with each other and the Palio plays a considerable role in enabling them to do so.”¹¹⁶

The game has taken on a role much advanced from its playful function as competitive-release in the tight-knit ritual society. Today, as Christopher Lasch explains: “The mania for winning has encouraged an exaggerated emphasis on the competitive side of sport, to the exclusion of the more modest but more satisfying experiences of cooperation and competence.”¹¹⁷ The game is now competitive to the extreme that it almost appears to be anti-society: it proposes a new 'society' simply as a collective of rights-bearing individuals divorced from cooperative interrelationships and social duties. This competitive arena breaks down the 'natural' limits of organic growth that have kept communities intact for centuries. The game produces winners and losers on a grand global scale, financed by corporate elite powers who have invaded all aspects of 'convivial' life. Thus modern ideals take on an increasingly 'ugly' betrayal; their inversion is almost complete, as Hall and Ames confirm:

“It is certainly possible to sympathize with the first theorists of rights-based, liberal democracy. Historically, their strategy was to defend the members of society against the invidious distinctions perpetuated by monarchical traditions. Seen in this light, liberal understandings of 'autonomy' and 'equality' make a great deal of pragmatic

both the animal kingdom and vernacular human societies where competition was formalised within a context in which cooperation – for the most part – prevailed. He explains: “What is more, when real competition actually occurs it tends to be highly formalized. Intraspecific conflict in the animal kingdom is indeed little more than a ritual conducted according to a set of rules designed, above all, to prevent the occurrence of death or mutilation. Thus rival rattlesnakes, capable of killing with a single bite, never actually bite each other. Their conflict, Konrad Lorenz reports, is a strange ritual resembling Indian wrestling: ‘the successful snake pins the loser for a moment with the weight of his body and then lets him escape.’” Goldsmith, E. *The Way: An Ecological World-view. op. cit.* pp.206-207.

¹¹⁶ *ibid.* pp.208-209. [italics in original.]

¹¹⁷ Lasch, C. *The Culture of Narcissism: American Life in An Age of Diminishing Expectations.* New York: W.W. Norton. 1979, p.103.

sense. However, the historical conditions occasioning these interpretations have altered so significantly as to lead one to question their contemporary relevance.¹¹⁸

THE BETRAYAL OF MODERN IDEALS

The Individual Versus Society

It is true that among indigenous peoples there is an emphasis on the cultural group as a whole, and that this is commonly contrasted with modern views of individualism. From this dialectical standpoint, however, 'society' is interpreted as a collectivist notion. Dumont comments: "There is often claimed to be an antagonism between 'the individual' and 'the society', in which the 'society' tends to appear as a non-human residuum: the tyranny of numbers, an inevitable material evil running counter to the sole psychological and moral reality which is contained in the individual."¹¹⁹ In this way, the individual stands individuated as one against the many. Guénon, however, is fully aware of the danger of this interpretation, and warns that "...despite an erroneous opinion only too widespread among the moderns, species must in no way be conceived as a 'collectivity', the latter being nothing but an arithmetical tool of individuals; a 'collectivity' is, unlike species, entirely quantitative."¹²⁰

People are 'complex knots' of relations linked to other knots through familial and communal interrelationships.¹²¹ Yet Western man has deliberately severed those often invisible, intangible links of reciprocity with others.¹²² Jacques Ellul attributes this to the

¹¹⁸ Hall, D.L. and Ames, R.T. *The Democracy of the Dead. op. cit.* p.116. [emphasis added.]

¹¹⁹ Dumont, L. *Homo Hierarchicus. op. cit.* pp.4-5. [emphasis added.] The individual is deemed the primary and basic unit, with society a collection of many individuals. Alan Randall states: "Because society is merely a human artifact, all rights initially reside with the individual. To avoid anarchy, individuals would rationally delegate some rights to a central authority, that is, government." Randall, A. *Resource Economics: An Economic Approach to Natural Resource and Environmental Policy.* [Second Edition.] New York: John Wiley & Son. 1987, p.40. The key point is that society is not seen to exist prior to the individual; only the individual is 'real' (that is, measurable, counted).

¹²⁰ Guénon, R. "The Principle of Individuation," Chapter Six, *The Reign of Quantity. op. cit.* pp.60-61.

¹²¹ See: Panikkar, R. *Invisible Harmony. op. cit.* p.133 for a metaphor of the knots (individuality) and the net (personhood). Panikkar explains: "An individual is an isolated knot; a person is the entire fabric around that knot, woven from the total fabric of the real. The limits to a person are not fixed, they depend utterly on his or her personality. Certainly without the knots the net would collapse; but without the net, the knots would not even exist." *ibid.* p.123. [emphasis added].

¹²² Panikkar provides a definition of the 'individual' as a separated entity, with a relationship to society that is extrinsic and democratic: "...An individual is a practical, pragmatic, and artificial abstraction, i.e., the concept of 'individual' appears when we have cut away the living relationships of a human being and reduced him [sic] to a unit which can be seized and manipulated, a unit which is limited by the body, or

almost exclusive effect of technique,¹²³ and explains that: “[Technique] ...dissociates the sociological forms, destroys the moral framework, desacralizes men and things, explodes social and religious taboos, and reduces the body social to a collection of individuals.”¹²⁴ Thus, the notion of a ‘community of persons’ is no longer fitting, for it is replaced by a ‘collection of individuals’. The societal whole is now merely the sum of the parts (these being singular individuals or groups) – and no more than this. Torn asunder from any links to others, each individual becomes homologous to the whole. And thus is born the ‘modern monad’¹²⁵, as Dumont describes:

“This individual is quasi-sacred, absolute; there is nothing over and above his legitimate demands; his rights are limited only by the identical rights of other individuals. He is a monad, in short, and every human group is made up of monads of this kind. Common sense finds no problem about the harmony between these monads. Thus is conceived the social class, or what is called at this level ‘society’, that is an association, and in some respects even a mere collection, of such monads.”¹²⁶

From Citizen to Groups

No individual can truly exist alone: “no man is an island.”¹²⁷ Humans are social beings, and are attracted to others because they yearn to express their integrative tendency. And so the modern individual is attracted to groups. According to John Ralston Saul, there have been four forms of authority in Western history: gods, kings, groups, and the individual as citizen (of a societal whole). Saul explains that gods, kings and the groups require *acquiescence* whereas citizens require *participation*.¹²⁸ The first three authorities effectively

rather by what some cultures would call the gross-body.” Panikkar, R. *Worship and Secular Man. op. cit.* pp.4-5.

¹²³ ‘Technique’ is not simply ‘technology’, i.e. machinery. Jacques Ellul uses the term ‘technique’ for that which *transforms ends into means*. He explains: “The term technique ... does not mean machines, technology, or this or that procedure for attaining an end.” Robert K. Merton elaborates: “Technique refers to any complex of standardized means for attaining a predetermined result. Thus, it converts spontaneous and unreflective behavior into behavior that is deliberate and rationalized.” Ellul, J. *The Technological Society*. [Translated from French by J. Wilkinson with an Introduction by R.K. Merton.] New York: Alfred A. Knopf. 1965 [1954], pp.xxv, vi.

¹²⁴ *ibid.* p.126. [emphasis added].

¹²⁵ Concise Oxford Dictionary defines ‘monad’ as: “ultimate unit of being (e.g., a soul, an atom, a person, God), esp. in philosophy of Leibniz...” See section below; “Mass Man and Totalitarianism.”

¹²⁶ Dumont, L. *Homo Hierachicus. op. cit.* pp.4-5.

¹²⁷ John Donne (c.1572-1631) wrote: “No Man is an *Iland*, intire of it selfe; every man is a peece of the *Continent*, a part of the *maine*...” – “No man is an island, entire of itself; every man is a piece of the continent, a part of the main.” Donne, J. *Devotions Upon Emergent Occasions*. [Edited with commentary by A. Raspa.] Montréal: McGill-Queen’s University Press. 1975, p.87. meditation no.17. [italics in original].

¹²⁸ Saul, J.R. *The Unconscious Civilization*. Concord, Ontario: House of Anansi Press Ltd. 1995, p.35.

reduce the individual citizen to a state of ‘passivity’, as a mere subject. While proponents of modern liberalism and Western individualism are quick to recognise the Church and monarchy as authorities that imposed belief systems on the individual, the *shifting of legitimacy in modern society from the citizen to the group* continues to elude many critics. Saul qualifies this in the following way:

“I would argue that our society functions today largely on the relationship between groups. ...There are thousands of hierarchically or pyramidally organized interest and specialist groups in our society. ...The point is not who or what they are. The point is that society is seen as a sum of all the groups. Nothing more. And that the primary loyalty of the individual is not to the society but to her group.

Serious, important decisions are made not through democratic discussion or participation but through negotiation between the relevant groups based upon expertise, interest and the ability to exercise power.”¹²⁹

Yet, the ‘groups’ that constitute modern society are not of the same organic structure as the ‘natural groups’ of ritual-based cultures.¹³⁰ These new groups are ‘artificial’ in the sense that qualitative variety is eliminated: modern groups are truly homogeneous phenomena. Whereas a synergy between the diverse participants in the ritual creates a ‘communicating community’¹³¹ where the societal whole is more than the sum of individuals, the artificial groups of modernity each appear as an extension of the individual resulting in a multiplicity of ‘communities of interest’.¹³² Plurality becomes a guise for pluralism; diversity is replaced by numerality. M. Scott Peck, in his examination of ‘group evil’, offers a striking observation of group behaviour:

¹²⁹ *ibid.* pp.33-34. [emphasis added.]

¹³⁰ Mumford refers to linear hierarchical organisations, such as military operations, as ‘*mono-technics*’. He claims that they directly challenge and deliberately undermine the ‘organic’ nature of community-based ‘*poly-technics*’ (diversity created over generations of handicraft workers). Mumford explains: “These separate components of the power system derive from the far richer ecological complex – ‘ecosystem’ in scientific parlance – in which all organisms, including man, live and move and have their being. Within that ecosystem, which includes human culture, all of these components of the power complex originally had their place and performed their indispensable functions. What the power complex did was to wrench these separate components from their organic matrix and enclose them in an isolated subsystem centered not on the support and intensification of life but on the expansion of power and personal aggrandizement.” Mumford, L. *The Myth of the Machine: The Pentagon of Power*. *op. cit.* pp.166-167. Refer to fn.58, p.55, above for discussion on ‘holistic’ and ‘power’ hierarchies.

¹³¹ See: Hall, D.L. and Ames, R.T. *The Democracy of the Dead*. *op. cit.*, especially Chapter Ten; “The Role of Ritual in a Communicating Community,” pp.204-220.

¹³² Peck illuminates: “...the ‘group mind’ is ultimately determined by the minds of individuals who make up the group. ...This is why the individual is sacred. For it is in the solitary mind and soul of the individual that the battle between good and evil is waged and ultimately won or lost.” Peck, M.S. *People of the Lie*. London: Arrow Books. 1983, p.290. Individuals are attracted to groups that represent their interests and, in turn, those self-similar groups reinforce and further shape the beliefs and behavioural patterns of their individual members.

“...human groups tend to behave in much the same ways as human individuals – except at a level that is more primitive and immature than one might expect. Why this is so – why they are, from a psychological standpoint, less than the sum of their parts – is a question beyond my capacity to answer.”¹³³

One response to Peck’s statement is that when the modern group acts as a ‘specialised unit’, immaturity results because specialisation allows the fragmentation of conscience.¹³⁴ This is exemplified in the break-down of traditional channels of communication – the glue holding the community in communion – which is narrowed and controlled through specialisation.¹³⁵ Because specialists develop their own coded set of languages, the common basis for interaction between people, and therefore growth, inspiration and stimulation of the community as a whole, is destroyed.¹³⁶ Living language is murdered. A disturbing trend is noted in modern scientific ‘language’ whereby ‘words’ are replaced by ‘terms’; ‘things’ are reduced to ‘objects’; and the subjective world is distorted by an objective impartiality.¹³⁷

¹³³ *ibid.* p.248. [emphasis added].

¹³⁴ Peck asks: “Is it realistic to encourage and manipulate human beings into specialized groups and simultaneously expect them, without any significant training, to maintain a breadth of vision much beyond their speciality?” Ultimately, we are all responsible for the evil of the specialised group – we insulate ourselves from our own deeds: “For evil arises in the refusal to acknowledge our own sins.” *ibid.* pp.264, 267.

¹³⁵ ‘Communication’, ‘communion’ and ‘community’ are all related, etymologically, to the word ‘common’, from the Latin roots: *cum*, meaning “with” (together), and *miinis*, meaning “ready to serve”. Walter W. Skeat adds: “as if ‘serving each other.’” Skeat, W.W. *An Etymological Dictionary of the English Language*. London: Oxford University Press. 1961 [1879-82], p.124. This implies a “coming together”, which may be seen as the opposite of specialisation, where to ‘specialise’ means to: “make specific or individual; modify, limit; be differentiated, become individual in character; be(come) a specialist.” Concise Oxford Dictionary. Saul expands: “To *specialize*, for example, was an old verb which had traditionally been used in the way we now use *to highlight*. Only in 1855 did it come to rest on its modern meaning – to make narrower and more intensive. As part of this change, the word *specialization* had been coined in 1843 by John Stuart Mill and *specialist* by Herbert Spencer in 1856.” Saul, J.R. *Voltaire’s Bastards: The Dictatorship of Reason in the West*. New York: Vintage Books. 1992, p.473. [italics in original]. See especially, Chapter 19; “Life in a Box – Specialization and the Individual,” pp.466-498.

¹³⁶ The ‘darker side’ of specialisation is reported by Mumford, who explains: “Now the secret of every totalitarian system is secrecy itself. The key to exercising arbitrary power is to restrict the communications of individuals and groups by subdividing information, so that only a small portion of the whole truth will be known to any single person. ...” “...each department of science had already become, in effect, a secret agency in its own right. The sciences are now so specialized in their vocabulary, so esoteric in their concepts, so refined in their techniques, and so limited in their capacity to communicate new knowledge to non-specialists even in closely related fields, that non-communication has become almost a badge of vocational superiority among scientists.” Mumford, L. *The Pentagon of Power: The Myth of the Machine*. *op. cit.* p.264. [emphasis added].

¹³⁷ Language is murdered; no longer do words carry meaning, but they are limited to terms (scientific labels), rhetoric (managerial newspeak) or the words are given new meanings which render the original word speechless. Panikkar comments: “The impact of the scientific outlook is so powerful in the Modern, especially the Western world, that there is a shift in the *primum analogatum* of the metaphor, so much so that the so-called educated person generally handles and uses terms and no longer speaks words. All too often education amounts to supplanting words with terms.” The implications of this shift from words to terms may be more significant than contemporary society is willing to admit: “Now, the confusion between terms and words is at the root of the fall of any culture. It shows that the particular culture is no

Narcissism is one of the characteristics of the specialised group.¹³⁸ When beliefs and value systems becoming self-confirming, each group member accepts his or her own group's formulaic outlook often without question or challenge. But the resistance of 'outside' challenges forecloses the possibility for growth within the group. When the group becomes 'closed', its integrity may be weakened to the point that what holds it together is an artificial internal coherence (or 'group pride') through inciting a common hatred of the out-group (as in the modern sports game).¹³⁹ Erich Fromm confirms:

"From the standpoint of any organized group which wants to survive, it is important that the group be invested by its members with narcissistic energy. The survival of a group depends to some extent on the fact that its members consider its importance as great as or greater than that of their own lives, and furthermore that they believe in the righteousness, or even superiority, of their group as compared with others. Without such narcissistic cathexis of the group, the energy necessary for serving the group, or even making severe sacrifices for it, would be greatly diminished."¹⁴⁰

Modern sport requires the existence of permanent teams with at least two groups that play against each other. This fixed organisation is deliberately avoided in the ever-changing moieties of the Xavante log race, where the division is arbitrary and the players are not

longer alive. The culture has fossilized. The means have become the ends and the ends have been forgotten. Language has then ceased to be a mediator and has become an intermediary..." Panikkar, R. "Words and Terms," *Archivio di Filosofia. op. cit.* Rome: Istituto di Studi Filosofici. 1980, pp.120, 130.

¹³⁸ Peck notes three general principles of the specialised group, including: a group character that is *self-reinforcing*; being prone to *narcissism*; and the employment of *specific types of people* to perform its specialized roles (for instance, it employs aggressive, conventional men to perform its police functions). See: Peck, M.S. *People of the Lie. op. cit.* p.261.

¹³⁹ Deficiencies within the group can be easily and painlessly overlooked by focusing attention on the deficiencies or 'sins' of its enemy out-group (e.g., anti-Semitism during WWII – Germans under Hitler could ignore their domestic problems by scapegoating the Jews). Peck observes: "...evil individuals will flee self-examination and guilt by blaming and attempting to destroy whatever or whoever highlights their deficiencies. The same narcissistic behaviour comes naturally to groups." *ibid.* p.259. From this condition of threatened narcissism, evil is born.

¹⁴⁰ Fromm, E. *The Heart of Man: Its Genius for Good and Evil.* London: Routledge & Kegan Paul Ltd. 1964, p.78. Koestler asserts: "The basic fallacy consists in putting all the blame on man's selfishness, greed and alleged destructiveness; that is to say, on the *self-assertive tendency* of the individual. Nothing could be further from the truth, as both the historical and psychological evidence indicate." "...throughout human history, the ravages caused by excesses of individual self-assertion are quantitatively negligible compared to the numbers slain *ad majorem gloriam* out of a self-transcending [integrative tendency] devotion to a flag, a leader, a religious faith or political conviction. Man has always been prepared not only to kill, but also to die for good, bad, or completely hare-brained causes. ... Thus the historical record confronts us with the paradox that the tragedy of man originates not in his aggressiveness but in his devotion to transpersonal ideals; not in an excess of individual self-assertiveness but in a malfunction of the integrative tendencies in our species." Koestler, A. *Janus. op. cit.* pp.77, 78. [italics in original, underline added.]

selected on the basis of any perceived advantage over others.¹⁴¹ The presence of fixed teams shifts the focus from the symbolic representation of the forces of ‘good’ and ‘evil’ to the attachment of those values with the actual teams. The verdict of the competition is that the team that wins is associated with superior values of goodness. As a motivation for winning and in order to promote team commitment and loyalty, hatred of the out-group is encouraged.¹⁴² One may even observe that allegiance to one’s sports team becomes more important than the playing of the game itself.¹⁴³

Returning to Huizinga’s observations on modern games that have lost their (historical) connection to the ritual play element, what now appears is the contamination of play and serious activity: “Instead of playing with the freedom and intensity of children, they [the modern masses] play with the ‘blend of adolescence and barbarity’ that Huizinga calls puerilism, investing games with patriotic and martial fervor while treating serious pursuits like games.”¹⁴⁴ In this way, business has taken on an increasingly game-like character, such that the ‘global market’ seems like a game to the super-rich.¹⁴⁵ The modern economic arena

¹⁴¹ The arbitrary division symbolises opposing forces of cosmic relevance that require constant negotiation to balance them in the human realm (refer above to the creation story of the Ganienghehaga). Because the ritual ‘game’ is played out with greater significance than mere secular competition of the sports game, ‘individuals’ are not distinguished according to favourable sports qualities (e.g., strength, height, endurance, etc.) because they represent more than their physical *self*.

¹⁴² Noam Chomsky comments on the role of competitive sports in modern society as “...a way of building up irrational attitudes of submission to authority and group cohesion behind leadership elements – in fact, it’s training in irrational jingoism...” Achbar, M. and Wintonick, P. (Directors/Producers). *Manufacturing Consent: Noam Chomsky and the Media. Part One: Thought Control in a Democratic Society*. [Video.] Montréal, Canada: Necessary Illusions in co-production with the National Film Board of Canada [A. Symansky; producer for NFB]. 1992. Christopher Lasch confirms this view: “The cult of victory ... has made savages of the players and rabid chauvinists of their followers. The violence and partisanship of modern sports lead some critics to insist that athletics impart militaristic values to the young, irrationally inculcate local and national pride in the spectator, and serve as one of the strongest bastions of male chauvinism.” Lasch, C. *The Culture of Narcissism. op. cit.* p.103.

¹⁴³ A form of discrimination based on one’s allegiance to a sports team has escalated into almost war-like demonstrations by the supporters of those various teams as, for example, with soccer hooligans in the United Kingdom. Lasch provides an interesting explanation: “The rising violence of crowds, routinely blamed on the violence of modern sports and the habit of taking them too seriously, arises, on the contrary, out of a failure to take them seriously enough – to abide by the conventions that should bind spectators as well as players.” He states further: “The crisis of athletic competition today derives not from the persistence of a martial ethic, the cult of victory, or the obsession with achievement..., but from the collapse of conventions that formerly restrained rivalry even as they glorified it.” *ibid.* pp.109-110, 116-117. [emphasis added.]

¹⁴⁴ *ibid.* p.103. [emphasis added.] See especially Chapter Five; “The Degradation of Sport,” pp.100-124. Huizinga explains: “Sport and athletics showed us play stiffening into seriousness but still being felt as play; now we come to serious business degenerating into play but still being called serious.” Huizinga, J. *Homo Ludens: A study of the play element in culture. op. cit.* p.199.

¹⁴⁵ Bill Gates who, as CEO of Microsoft, is the richest person in the world (earning in 1996 an estimated \$30 million a day!), treats the business world as an all-out competitive game. In an interview with *Time* magazine, the reporter Walter Isaacson paraphrases Gates: “Intellectual challenges are fun. Games are fun. Puzzles are fun. Working with smart people is superfun. Others may see him as ruthless, cold or

is one large 'game' in which business groups, bureaucracies and corporations compete with each other as 'contestants' to increase their own personal (that is, economic) stakes. Huizinga observes:

"...there is now a sporting side to almost every triumph of commerce or technology: the highest turnover, the biggest tonnage, the fastest crossing, the greatest altitude, etc. ... Business becomes play. This process goes so far that some of the great business concerns deliberately instil the play-spirit into their workers so as to step up production. The trend is now reversed: play becomes business."¹⁴⁶

Dependency and the Modern Institution

The institution is one such group that retains legitimacy in modern society. How the modern institution survives and the modern corporation thrives is through the creation of 'needs'.¹⁴⁷ Ivan Illich explains that first a 'lack' is discerned or created and then the institution develops or defines a corresponding 'need' to fill that lack. People are coerced into the belief that they *need* what they now lack, but had formerly existed happily without. 'Need' is now a noun (not simply a verb). The need-creator (the modern professional) develops a niche in which only the professional can service that need and specialise in its administration. In reality, however, the servicer is more needy than the serviced, although this is carefully disguised otherwise.¹⁴⁸ Similarly, 'development' is more a 'need' of modern industrial societies than of self-sufficient pre-industrial cultures. Without those raw

brutal; but for him the competition is like a sport, a blood sport perhaps, but one played with the same relish as the summer games of [his childhood]." Reflecting back on memories of the organised competitive games that the family played, Bill Gates' father recalls: "The play was serious. Winning mattered." Isaacson, W. "In Search of the Real Bill Gates," *Time*. No.2. 13 January 1997, pp.42, 35.

¹⁴⁶ Huizinga, J. *Homo Ludens: A study of the play element in culture. op. cit.* p.200.

¹⁴⁷ Ivan Illich explains: "Professions could not become dominant and disabling unless people were already experiencing as a lack that which the expert imputes to them as a need." "Need, used as a noun, became the fodder on which professions were fattened into dominance. Poverty was modernized. The poor became the 'needy'. During the second half of my life, to be 'needy' became respectable." Illich, I.D. "Disabling Professions," pp.11-39, in: Illich, I.D.; Zola, I.K.; McKnight, J.; Caplan, J. and Shaiken, H. *Disabling Professions*. London: Marion Boyars. 1977, pp.22, 22-23. See especially 'Imputable Needs', pp.22-27.

¹⁴⁸ One of the clever devices employed in that disguise is the co-option of basic human values, values that are at the heart of all 'natural groups', all communities. John McKnight provides the example of the word 'care' that is used by modern corporates in their service-provision. With its strong symbolic links to 'love', the word care is no longer a non-monetary and intangible expression of one's unconditional love, but is a service that a professional can provide better than one's own relations, albeit with a price tag attached. McKnight states: "...the word 'care' is a potent political symbol. What is not so clear is that its use masks the political interests of services. ...The result is that the politico-economic issues of service are hidden behind the mask of love." McKnight, J. "Professionalized Service and Disabling Help," pp.69-91, in: Illich, I.D. *et al. Disabling Professions. op. cit.* p.73. [emphasis added.]

materials and markets, the 'First World' would collapse.¹⁴⁹ When the institution or system starts to exist for its own sake and not for the original intention in which it first developed, it becomes paradoxically *counter-productive*.¹⁵⁰

Institutions create dependency. This is partly reinforced through the illusion that 'professional experts' are better equipped with the winning techniques than 'convivial communities'.¹⁵¹ However, dependency is not limited to the institution alone, but has a numbing effect of societal magnitude. Illich asserts: "In any area where a human need can be imagined these new professions, dominant, authoritative, monopolistic, legalized – and, at the same time, debilitating and effectively disabling the individual – have become exclusive experts of the public good."¹⁵² And thus the heteronomous order of authority, which the Renaissance libertarians revolted against, reappears today in a more abstruse and insidious form. Institutional groups, based on the linear model of hierarchy typified in military groups (but also prevalent in bureaucracies and corporations), actually produce individuals who 'follow' and are psychologically dependent on authority.¹⁵³ Peck states:

"Indeed, for its purpose the military has developed and fostered a style of group leadership that is essentially the opposite of a therapy group. It is an old maxim that soldiers are not supposed to think. Leaders are not elected from within the group

¹⁴⁹ Refer below to section in Chapter Five; "Development and the Stigma of 'Underdevelopment'."

¹⁵⁰ Institutions, as Illich explains, go through two 'watersheds'. The first watershed brings immediate improvements for the general public, such as basic sanitation hygiene and clean water supplies for the medical profession. The presence of iatrogenic (doctor-induced) diseases marks the passing to the second watershed. Illich points out: "After this second turning point, the unwanted hygienic by-products of medicine began to affect entire populations rather than just individual men." (p.4). He continues: "The crisis of medicine lies on a much deeper level than its symptoms reveal and is consistent with the present crisis of all industrial institutions. It results from the development of a professional complex supported and exhorted by society to provide increasingly 'better' health, and from the willingness of clients to serve as guinea pigs in this vain experiment. People have lost the right to declare themselves sick; society now accepts their claims to sickness only after certification by medical bureaucrats." Illich, I.D. *Tools for Conviviality*. New York: Harper & Row. 1973, p.6. See especially Chapter One; "Two Watersheds," pp.1-9. The 'second watershed' is also the label Illich gives to the *paradoxical counter-productivity* of that institution or system; when the system starts to exist for its own sake and not for the original intention in which it first developed. Illich defines: "I will use this term [counterproductivity] whenever the impotence resulting from the substitution of a commodity for a value in use turns this very commodity into a disvalue in the pursuit of the satisfaction it was meant to provide." Illich, I.D. "Useful Unemployment and Its Professional Enemies," pp.1-62, *Toward a History of Needs*. New York: Random House. 1980, p.45.

¹⁵¹ Refer to: *ibid.* and Illich, I.D. "Convivial Reconstruction," pp.10-48, *Tools for Conviviality. op. cit.*

¹⁵² Illich, I.D. "Disabling Professions," *Disabling Professions. op. cit.* pp.19-20.

¹⁵³ "The problem is that the role of follower is the role of child. The individual adult as individual is master of his own ship, director of his destiny. But when he assumes the role of follower he hands over to the leader his power: his authority over himself and his maturity as decision-maker. He becomes psychologically dependent on the leader as a child is dependent on its parents. In this way there is a profound tendency for the average individual to emotionally regress as soon as he becomes a group member." Peck, M.S. *People of the Lie. op. cit.* p.256.

but are designated from above and deliberately cloaked in the symbols of authority. Obedience is the number-one military discipline. The dependency of the soldier on his leader is not simply encouraged, it is mandated.”¹⁵⁴

Subverted within the institutional group, the individual is again faceless. The modern game betrays its original ideal of autonomous individuality, for *the group renders the person as a mere function of the system*, a cog that once wearied is replaced by another ‘qualified monad’. The average employee of a large company or organisation often feels acutely isolated and lonely. Seldom is the technician, the operator, the worker requested input into the system’s design or management. As a functionary, the ‘person’ becomes obsolete: “The human is thus reduced to a measurable value, like a machine or a piece of property.”¹⁵⁵ In such a meaningless environment, the modern bureaucrat is born. The code of professionalism further requires that personal emotions (and conscience) be restrained, such that the bureaucrat appears almost pre-programmed to repeat a monologue of technocratic jargon/babble. In these ways, the bureaucrat acts as the mindless, yet predictably ‘infallible’, extension of the modern game.

The bureaucrat commits ‘evil’ without even knowing it. Witness Adolf Eichmann in Hannah Arendt’s “Report on the Banality of Evil.”¹⁵⁶ Eichmann, a Nazi officer tried in Jerusalem in 1961, claimed that indeed *he* was a victim of the Nazi regime, that is, *victim of being a law-abiding citizen*. No special qualities were required of his function in the Nazi bureaucracy (he had been a vacuum cleaner salesman), but characteristically he was a ‘nobody’ – not particularly vindictive, but a follower; a thoughtless (he could only repeat mindless clichés) bureaucrat with a ‘part-time conscience’ (limited to whether or not he met his ‘quotas’).¹⁵⁷ Such narcissism and passivity, resulting in (and from) a loss of self-respect

¹⁵⁴ *ibid.* pp.256-257.

¹⁵⁵ Saul adds: “I would argue that the Western individual, from the top to the bottom of what is now defined as the elite, acts first as a group member. As a result, they, we, exist primarily as a function, not as a citizen, not as an individual.” Saul, J.R. *The Unconscious Civilization. op. cit.* p.34. [emphasis added].

¹⁵⁶ Arendt, H. *Eichmann in Jerusalem: A Report on the Banality of Evil*. Middlesex, England: Penguin Books. 1963.

¹⁵⁷ Dependency on leaders is a result of laziness; it is easier to follow: “There is no need to agonize over complex decisions, plan ahead, exercise initiative, risk unpopularity, or exert much courage.” Peck, M.S. *People of the Lie. op. cit.* p.256. This was exemplified by Eichmann who claimed that he was simply carrying out orders to the best of his ability: “Eichmann ... had steadfastly insisted that he was guilty only of ‘aiding and abetting’ in the commission of the crimes with which he was charged, that he himself had never committed an overt act.” In his defence, Eichmann argued that: “...he had never been a Jew-hater, and he had never willed the murder of human beings. His guilt came from his obedience, and obedience is praised as a virtue. His virtue had been abused by the Nazi leaders. But he was not one of the ruling

and self-loathing, contribute to a weakness for ideology and a dependency on the group. In modern society, ideology acts as the cohering factor; it is now so powerful that it demands of its believers total conformity and uniformity.¹⁵⁸ A weakness for ideology, the need to believe in cure-all solutions, a taste for the intolerance that grew hand-in-hand with conformity – all translate into a debilitating passivity when faced by crises; moderns have difficulty perceiving their own weaknesses.

Mass Man and Totalitarianism

The modern monad, stripped of its ties to society as a citizen, without recourse to traditional ways or even to political or religious or cultural affiliations, becomes the ‘mass man’.¹⁵⁹ The systematic disassembly of natural groups into isolated individuals renders each monad vulnerable and easily manipulable. Hence individuals may be ‘re-programmed’ through a standardised system of education (delivered by ‘professionals’), whereby self-learning is replaced by delivered teachings.¹⁶⁰ It is important to point out that the ‘mass’ differs from the ‘mob’: the latter still retains values and ideals that are motivations for protest, whereas the mass is reduced to a collection of malleable monads.¹⁶¹ Arendt cites the dislocation of individuals from society; the classless mass, as one pre-requisite to totalitarian regimes:

clique, he was a victim, and only the leaders deserved punishment.” Arendt, H. *Eichmann in Jerusalem*. *op. cit.* pp.246, 247.

¹⁵⁸ Saul claims that moderns have an inability to deal with reality which stems from a fear of reality. He asserts: “We suffer from an addictive weakness for large illusions. A weakness for ideology. Power in our civilization is repeatedly tied to the pursuit of all-inclusive truths and utopias. At the time of each obsession we are incapable of recognizing our attitude as either a flight from reality or an embracing of ideology. The unshakeable belief that we are on the trail to truth – and therefore to the solution to our problems – prevents us from identifying this obsession as an ideology.” Saul, J.R. *The Unconscious Civilization*. *op. cit.* p.19. [emphasis added]. See also p.23.

¹⁵⁹ Arendt states: “The truth is that the masses grew out of the fragments of a highly atomized society whose competitive structure and concomitant loneliness of the individual had been held in check only through membership in a class. The chief characteristic of the mass man is not brutality and backwardness, but his isolation and lack of normal social relationships.” Arendt, H. *The Origins of Totalitarianism*. New York: Harcourt Brace Jovanovich. 1951, p.317.

¹⁶⁰ Illich explains that modern schooling systems of education are an example of ‘counterproductivity’: “The longer each person is in the grip of education, the less time and inclination he has for browsing and exploration.” Illich, I.D. “Useful Unemployment and Its Professional Enemies,” *op. cit.* p.45. See: Illich, I.D. *Deschooling Society*. New York: Harper & Row. 1971. Refer to Derek Rasmussen’s examination of the devastating impact of European colonisation on Inuit culture in northern Canada: Rasmussen, D. “Dissolving Inuit Society Through Education and Money: The Myth of Educating Inuit out of ‘Primitive Childhood’ and into Economic Adulthood,” *INTERculture*. Issue No.139. October 2000, pp.1-64.

¹⁶¹ Arendt explains: “The masses share with the mob only one characteristic, namely, that both stand outside all social ramifications and normal political representation. The masses do not inherit, as the mob does – albeit in a perverted form – the standards and attitudes of the dominating class, but reflect and

“It has frequently been pointed out that totalitarian movements use and abuse democratic freedoms in order to abolish them. This is not just devilish cleverness on the part of the leaders or childish stupidity on the part of the masses. Democratic freedoms may be based on the equality of all citizens before the law; yet they acquire their meaning and function organically only where the citizens belong to and are represented by groups or forms a social and political hierarchy. ...Conditions in pre-Hitler Germany are indicative of the dangers implicit in the development of the Western part of the world since, with the end of the second World War, the same dramatic event of a breakdown of the class system repeated itself in almost all European countries, while events in Russia clearly indicate the direction which the inevitable revolutionary changes in Asia may take. Practically speaking, it will make little difference whether totalitarian movements adopt the pattern of Nazism or Bolshevism, organize the masses in the name of race or class, pretend to follow the laws of life and nature or of dialectics and economics.”¹⁶²

Today, most modems fail to recognise that the modem globalisation game is in fact ‘latent totalitarianism’¹⁶³; ‘latent’ because there is no one figure – no modem Hitler or Stalin or similar ‘father-figure’ to identify with the movement.¹⁶⁴ Powerful multinational corporate business monopolies now dictate the international economic and political arena, propped up by global media as their propoganda tool.¹⁶⁵ Saul refers to so-called Western democracy as the ‘unconscious civilisation’; those who still believe in capitalism and have not yet realised that they are in fact dictated to by ‘corporatism’. Saul claims:

“To be precise: we live in a corporatist society with soft pretensions to democracy. More power is slipping every day over towards the groups. That is the meaning of the marketplace ideology and of our passive acceptance of whatever form globalization happens to take.”¹⁶⁶

somehow pervert the standards and attitudes toward public affairs of all classes.” Arendt, H. *The Origins of Totalitarianism. op. cit.* p.314.

¹⁶² *ibid.* pp.312-313. [emphasis added.] For further discussion on totalitarianism, see: *ibid.*, especially Part Three: “Totalitarianism,” pp.303-479. Also: Talmon, J.L. *The Origins of Totalitarian Democracy.* London: Mercury Books. 1952.

¹⁶³ Panikkar refers to the present political system as one of “latent totalitarianism”. Panikkar, R. “The Discovery of the Metapolitical,” *INTERculture.* Issue No.136. April 1999, p.37.

¹⁶⁴ Perhaps Bill Gates, CEO of Microsoft, stands out as one such figure. A reporter on the court case between U.S. Department of Justice and Microsoft corporation observes: “...Microsoft still plans to argue that it is not a monopoly – even though it controls more than 90% of the PC operating-system market.” Taylor, C. “Grounds for Appeal,” *Time.* No.24. 19 June 2000, p.49.

¹⁶⁵ Propaganda is a technique employed not only by totalitarian states and movements, but by all ‘modern’ societies utilising mass media. See: Ellul, J. *Propaganda: The Formation of Men’s Attitudes.* [Translated from French by Konrad Kellen and Jean Lerner. With an Introduction by K. Kellen.] New York: Vintage Books. 1973 [1965]. Also, see: Herman, E.S. and Chomsky, N. *Manufacturing Consent: The Political Economy of the Mass Media.* New York: Pantheon Books. 1988. The authors comment: “In effect, the large bureaucracies of the powerful subsidize the mass media, and gain special access by their contribution to reducing the media’s costs of acquiring the raw materials of, and producing, news. The large entities that provide this subsidy become ‘routine’ news sources and have privileged access to the gates.” p.22. [italics in original].

¹⁶⁶ Saul, J.R. *The Unconscious Civilization. op. cit.* pp.34-35.

Loss of Limits: Loss of Roots

Whereas the parochial ritual village can stifle life inwardly, the game's global village is expanding outwardly at an ever-accelerating pace of life. In the former, the individual may feel burdened by societal expectations and suffocated under top-down heteronomous authority. In the latter, if one stops moving and stands still he or she will be crushed under the steamroller of history. Just as much as a closed society was stifling for the role-bound societal member, a limitless and open system is paradoxically debilitating for the modern individual. That individual may feel stretched to the breaking-point; all reserves are at their limit and the continual turmoil leaves one helplessly uprooted both mentally and physically.

While moderns may retain a pretence of 'freedom', they are bound more than ever to the "turbulent whirlpool of continual motion."¹⁶⁷ This turbulence, where indeed change is the only constant, never allows people to settle, to collect their thoughts or contemplate alternatives. Rather, change takes on a frightening rapidity that destroys natural rhythms.¹⁶⁸ This frenzy of change leaves communities reeling in helpless frustration at a 'progress' they have no ability to control, or even to comprehend. But, as Lao Tzu put it plainly: "Many pursuits in different directions only bring about exhaustion."¹⁶⁹ For many moderns, their transience is culturally inherited from their forebears, whose emigration effectively disconnected them from their historical cultural roots.¹⁷⁰

The order that moderns are subjected to today is not the ritual act of ceremony in which all willingly participate and contribute in the creative ordering of the cosmos. Rather, the order of the game is today a ritualism projected onto moderns, imposed like a uniform template,

¹⁶⁷ Berman, M. *All That Is Solids Melts Into Thin Air*. *op. cit.* See: pp.15-36.

¹⁶⁸ Mumford explains: "...the object of human life, and therefore of the entire productive mechanism, is to remove limits, to hasten the pace of change, to smooth out seasonal rhythms and reduce regional contrasts – in fine, to promote mechanical novelty and destroy organic continuity. Cultural accumulation and stability thus become stigmatized as signs of human backwardness and insufficiency." Mumford, L. *The Myth of the Machine: The Pentagon of Power*. *op. cit.* p.173.

¹⁶⁹ Tzu, L. *The Complete Works of Lao Tzu: Tao Teh Ching and Hua Hu Ching*. [Translated by Hua-Ching Ni.] California: College of Tao and Traditional Chinese Healing. 1979, Five, p.6.

¹⁷⁰ Moderns are characterised by a transience and rootlessness (with respect to both place and family origins). The adversity to 'staying home' may be explained somewhat by the word "dwell" (from Old English, *dwellan*), meaning to "pull away"; "lead astray"; "linger". To dwell is often associated with laziness. 'Rediscovering place' is now one of the most important challenges of the environmental movement in modern, Western countries as, for example, the promotion of 'bioregionalism'. See: Sale, K. *Dwellers In The Land: The Bioregional Vision*. Philadelphia, U.S.A.: New Society Publishers. 1991. Also: Berry, T. *The Dream of the Earth*. San Francisco: Sierra Club Books. 1988, especially Chapter 12; "Bioregions: The Context for Reinhabiting the Earth," pp.163-170.

with corresponding legal imperatives to conform to institutionalised societal standards. Yet order of a heteronomous nature, when pushed to its extreme, turns dangerously into over-order, over-organisation – indeed, evil may be justified. The legal system of abstract standards (standardised norms) works best in a society that is no longer a community of natural groupings or familial kinship networks. Ellul continues: “Communities break up into their component parts. But no new communities form. The individual in contact with technique loses his social and community sense as the frameworks in which he operated disintegrate under the influence of techniques.”¹⁷¹

A community guided by ‘morals’ does not have to enforce its values through prescribed and strict codes of behaviour, but expresses an inner understanding of what the community (and tradition) as a whole decides is appropriate for different situations. When individuals are isolated, the moral binding of society is less convincing. When the competitive game takes effect, legal standards create benchmarks whereby the individual (divorced from moral ties to his or her wider societal context) is forced to submit to a law that he or she does not necessarily agree with. Therefore, the intent of those who rebel against an over-ordered, over-legalistic society may in fact be highly ethical even when it is cast as the opposite by the society whose laws they rebel against. Unfortunately the heavy hand of the law acts swiftly to condemn any who revolt, for the law justifies itself: no society can retain members who flout its principles.

If moderns are truly ‘free’ individuals participating in egalitarian, democratic societies, how is it that corporate groups have come to dominate not just nations, but (almost) the entire world as a universal force now commonly termed ‘globalisation’? Again, the authorities wield power (although modern authorities are disguised more ingeniously than ‘traditional’ authorities; religious and monarchic). The individual’s power to oppose those authorities is correspondingly diminished, because he or she must fight against multinationals whose real identity is unknown or easily changed (the multinational corporation changes its marketing label/name and relocates¹⁷²), and whose propaganda now dominates every channel of the mass media: everywhere the voice of the ‘person’ is suppressed.

¹⁷¹ Ellul, J. *The Technological Society*. *op. cit.* p.126. [emphasis added].

¹⁷² For example, due to increasingly bad press over its ‘bully tactics’ in the genetic engineering debate, Monsanto corporation has changed its name to Aventis. See: Goldsmith, E. and Goldsmith, Z. (eds.) “The Monsanto Files: Can we survive genetic engineering?” [Special Issue.] *The Ecologist*. Vol.28, No.5. September/October 1998.

Revisiting 'Individualism': Reinstating the 'Person'

Modern individualism has not brought the wonders of 'freedom' that it promised. Neither the servile mass of modern collectivist society, nor the self-serving and selfish ego of the 'emancipated individual' truly expresses the uniqueness of the 'person'.¹⁷³ Modern individualism leads eventually to solipsism and an isolating separation that is also ultimately debilitating and unhealthy.¹⁷⁴ Individualism does not amount to positive acceptance of the individual as a 'person' with all traits of the personality appreciated. Rather, individualism amounts to numerical difference between two or more 'things' – a multiplicity which, objectified and reduced further, becomes the statistic figure for bureaucrats. In pure quantity the 'units' are only distinguished numerically: pure quantity is really beneath all manifested existence.¹⁷⁵ And when all qualitative distinctions between people are wiped out, they compete ever more aggressively for the quantitative criteria – dollars, votes, stock options, etc. – that will distinguish them from others.

In modern democracies, the supposed opposition of the individual and society is apparent in the rift between private interests and the public realm.¹⁷⁶ At its political extremes, this

¹⁷³ Panikkar explains: "The alternative to individualism is not the collectivity but the person – which is itself a knot of relationships (blood, clan, caste, peoplehood, language, etc., right up to the very limits of the universe." Panikkar, R. "The Foundations of Democracy (Strength, Weakness, Limit)," *INTERculture*. Issue No.136. April 1999, p.14.

¹⁷⁴ 'Health', meaning "soundness of body, or of mind." Skeat, W.W. *An Etymological Dictionary of the English Language*. *op. cit.* p.265. Formed from *hāl*, meaning "whole"; and *-thā*, denoting "condition". Related to 'heal', meaning "to make whole". Scott Eastham summarises: "To heal is to make whole, and the common Anglo-Saxon root *hāl* reminds us that this hale and hearty healing that makes whole is precisely the work of the holy." Eastham, S.T. *Nucleus: Reconnecting Science and Religion in the Nuclear Age*. [Foreword by R. Panikkar.] Sante Fe, New Mexico: Bear and Company. 1987, p.37. See also fn.26. [italics in original].

¹⁷⁵ Refer to: Guénon, R. *The Reign of Quantity*. *op. cit.* especially p.65 for a discussion of Leibniz's 'principle of indiscernables'. In summary: there cannot exist anywhere two identical beings, i.e., two beings alike in every respect. If they did not differ qualitatively 'they would not even be beings', but something like divisions; such divisions have no real existence. Following the trend of the 'reign of quantity', as Guénon puts it, it is held that beings only differ numerically. See also: Panikkar, R. "Singularity and Individuality, The Double Principle of Individuation," *op. cit.*

¹⁷⁶ "This form of individualism results from the presumption that the most fundamental forms of life are associated with the private sphere in which the individual relates to a transcendent Being or principle. The private self is the true self and the public self is in fact only a *persona*." Hall, D.L. and Ames, R.T. *Thinking Through Confucius*. *op. cit.* p.148. [italics in original.] Here religion is rendered to a 'privatised' interest within the dominant secularised modern economic system that increasingly (re)defines the 'public' sphere of interaction. Religious ideals that were formerly publicly accepted and espoused throughout communities, are now often left to individuals or class groups as a willed choice of faith, as Johann Baptist Metz points out: "Under the cloak of bourgeois religion, there is a widening split within the church between the messianic virtues of Christianity which are publicly proclaimed, prescribed, and believed in by the church (conversion and discipleship, love and acceptance of suffering) and the actual value-structures and goals of the bourgeois way of life (autonomy, property, stability, success). Underneath the priorities of the gospel, the priorities of bourgeois life are being practiced." Metz, J.B. *The*

opposition underpins the dialectical alternation between capitalist and socialist/communist agendas, as clearly evidenced during the Cold War. To oppose individualism with collectivism, however, would be a grave error. This is because the schism between individual and society is artificial and problematic, restricting the discussion to a 'dialectical dilemma' of monistic (collectivist) or dualistic (*individualistic*) extremes. This dialectic blocks out a third, alternative perspective, whereby the human being may be appreciated for both his or her unique qualities as well as the contribution to and expression through one's social being (hence, Panikkar's 'person' is neither individualistic nor collectivist, yet does not exclude either). Panikkar explains:

“...It is understandable that, in reaction to the individualistic attitude adopted to many problems, contemporary writers tend to stress the sociological factors involved. But this dichotomy between individual and society is unnecessary if we start from an integral anthropology, which does not consider man as an individual but as a person and sees society not as a sum of individuals but as the natural, personal field of human interaction.”¹⁷⁷

A distinction may therefore be reached between the quantitative aspect of an 'individual' and the qualitative nature of a 'person'.¹⁷⁸ This may be better understood with respect to the 'double principle of individuation', defined as: “...a *principle of singularity* based on external factors in order to distinguish one thing from another, and a *principle of individuality* grounded in the internal constitution of beings capable of self-identity.”¹⁷⁹ As an expression of the former principle, the *individual as a singular entity* is differentiated numerically from society as a collective, while the *individuality of a person* distinguishes that person as a unique identity not necessarily antagonistic to society.¹⁸⁰ Panikkar explains further:

“The individual as opposite to the *many* (individuals) gives the quantitative aspect of individuality: the single thing in its isolation, the number. The individual as opposite to the *other* (individual) gives the qualitative aspect of individuality: the individual

Emergent Church: The Future of Christianity in a Postbourgeois World. [Translated by P. Mann]. New York: Crossroad. 1981, pp.4-5. See especially Chapter One, “Messianic or Bourgeois Religion?” pp.1-16.

¹⁷⁷ Panikkar, R. *Worship and Secular Man. op. cit.* p.4.

¹⁷⁸ Panikkar elaborates: “A person... does not finish at his finger-nails and cannot be reduced to his gross-matter. A person is real, present and alive wherever that person is loved, is heard, is seen, is influential, is effective. A person is a bundle of relationships, which cross at a certain centre which we may call personality... An individual can have a number and even a weight, but a person cannot. An individual can be selfish for selfishness can, perhaps, be advantageous to him; for a person selfishness is unthinkable.” Panikkar, R. *Worship and Secular Man. op. cit.* p.5.

¹⁷⁹ Panikkar, R. “Singularity and Individuality, The Double Principle of Individuation,” *op. cit.* p.161. [italics in original].

¹⁸⁰ “Whereas an 'individual' is the opposite of 'society', a 'person' is not.” Panikkar, R. *Worship and Secular Man. op. cit.* p.4.

thing in its solitude... Now these two differences do not coalesce. A difference in number does not imply a difference in quality and a difference in quality does not necessarily imply a difference in quantity.”¹⁸¹

In indigenous culture, emphasis is placed on the group as a whole rather than on the individual's 'rights'. However, this does not imply that the individuality of each person is not highly regarded and desired in indigenous cultures. Cohesion to one's native group does not necessarily imply that the uniqueness of the person be forfeited, but crucially requires that diversity as it appears naturally in each person is nurtured and allowed to blossom to its full potential.¹⁸² As J. Donald Hughes points out: “The Indian [indigenous person of North America] did not define himself or herself as primarily an autonomous individual, but as part of a whole; a member of the tribe, a living being like other living beings, a part of nature.”¹⁸³ The indigenous sense of belonging extends beyond the limited definitions of an individualistic human 'self' to a much wider (and wiser) acceptance of each being as more fully oneself because of relationships with others, including non-human species and the so-called inanimate phenomena (rocks, mountains, rivers, etc.). As Hughes explains, *individuality* is not the same as *individualism*.

“Among Indians, cooperation and group interests predominated, particularly where ecological conditions meant subsistence living in a difficult environment. They were tolerant of individual desires, appreciative of individual contributions to the group, and slow to use sanctions against individuals, but they were not individualists. An Indian felt himself or herself primarily as part of the family, clan or tribe, and the world of life. Most ceremonies and economic activities were done by cooperative groups. A competitive attitude was regarded as antisocial or malevolent.”¹⁸⁴

¹⁸¹ Panikkar continues: “We may then say that a thing has singularity when it is indivisible in itself, undivided, atomic (*in se indistinctum*), and that it has individuality when besides this it is different from others (*ab aliis distinctum*). ... Singularity is the particular case of plurality. There is no singularity except over against a plurality. ... Individuality, on the other hand, does not need to be quantitative and stands for the internal constitution of those beings which have a certain possession of their being. Singularity has quantitative overtones, whereas individuality presents a qualitative character. ... Ultimately, individuality does not designate a quality but a person.” Panikkar, R. “Singularity and Individuality, The Double Principle of Individuation.” *op. cit.* pp.159, 160. [italics in original.]

¹⁸² Natural talents and skills are enhanced by the mentoring system, whereby a young person is aligned with a more experienced and knowledgeable person who has excelled as an artisan in the skills they recognise in the mentored. Mentoring is an important part of retaining the continuity of diverse skills and talents in the group and of nurturing 'freedom' in the expression of the Way as it is presented from within each unique individual.

¹⁸³ Hughes continues: “Because of this deep kinship, Indians accorded to every form of life the right to live, perpetuate its species, and follow the way of its own being as a conscious fellow creature. Animals were treated with the same consideration and respect as human beings.” Hughes, J.D. *North American Indian Ecology. op. cit.* pp.16-17. [emphasis added.]

¹⁸⁴ *ibid.* p.61. [emphasis added.]

The key concepts discussed throughout the present chapter (“Ritual and Game”) are brought together in Table 1. The table presents one schema of the relationship of these concepts to the three methods introduced in Chapter Two: “Monism, Dualism and Nondualism”, and indicates tendencies, not hard-and-fast categories.

Summary – Table 1: Monism, Dualism and Nondualism in Ritual and Game

Monism	Dualism	Nondualism
the One	the Many	neither the one nor the many
One Way	A-Way	The Way
whole as absolute	reductionist parts	holism, Janus-faced holon
uniformity (oneness; assimilation)	plurality (multiplicity; ‘tolerance’)	pluralism (diversity; acceptance)
<i>heteronomy</i>	<i>autonomy</i>	<i>ontonomy</i>
‘ritualism’	game	ritual
competitive games	business as a game	game as spirit of play
ritual as repetition	ritual privatised/restricted	ritual as symbolic act
past/traditions repeated	progress towards future	creation unfolding : life
change resisted	unconstrained expansion	organic growth and renewal
closed system	open system	system bounded but grows
coercion	competition	cooperation
social duties and role-bound expectations	individual rights without restrictions	individuality with social responsibilities, reciprocity
identity; sameness	difference; relativism	uniqueness; relatedness
dependence	independence	interdependence
collectivity	individualism	person, citizen, community

CONCLUSION: The Ecological Concern

What is not being advised here is a return to tribal society, as if time could be reversed along the same linear path and pre-technocratic civilisation reinstated. That position, often taken by ‘romantics’, is both unrealistic and perhaps fraudulent. Reinstating the ‘person’ does not necessarily imply that tribal hierarchies be re-established, but instead presents an important challenge for modern societies to re-appraise their own ideals of ‘equality’ and ‘freedom’ with respect to the expression of those ideals by a significantly different ‘other’ (indigenous ritual cultures). Given that the nature of the modern world is characterised by interdependency of global magnitude, a return to isolated geographical boxes is simply untenable. However, globalisation has not allowed for equality (or freedom of expression) among all cultures. In fact, globalisation often amounts to *universalism*: all forms of technology, politics (decision-making), the arts, economics, entertainment, and so on, are being reduced to one particular cultural expression; namely that of Western orientation.

Not only are human cultural expressions being reduced to the ‘reign of quantity’ (and eventually to the ‘one’), but the effects of unlimited, universal expansion and development are reducing natural diversity to a single monocultural landscape. What is at threat is not only cultural diversity, but the uniqueness of Nature. Ceaseless development is eliminating the basis for renewal in Nature: This may be the single-most important issue that unites all cultures if life is to be sustained on planet Earth. The ‘environmental crisis’ is a global concern, requiring an appreciation of social, cultural and natural complex systems. And yet modern scientists (of Western, dualistic training) have monopolised the ‘environmental debate’, continuing to treat environmental degradation as if it were only of secular concern (mere tinkering with the technocratic system may only slow down ecological disaster, but will never address the true kosmological nature of the problem).¹⁸⁵

¹⁸⁵ For an interesting discussion on the changing nature of ecology and environmentalism in terms of objective and subjective imperatives, see: Evernden, N. *The Natural Alien: Humankind and the Environment*. Toronto: University of Toronto Press. 1985, especially; “The Environmentalists’ Dilemma,” pp.3-34. See also: Panikkar, R. *The Cosmotheandric Experience. op. cit.*, pp.38-46, where Panikkar refers to the current environmental debate and praxis as ‘The Ecological Interlude’. He states: “We are learning that the being of the Earth is finite. Ecological consciousness arises when Man begins to discover that Nature is not just infinite passivity and that this planet is a limited vessel. So Man decides to be a more humane manager of Mother Earth and tries to deal more rationally with Nature, but this really amounts to only a tactical change: ‘Now our exploitation must be milder and more reasonable.’” p.43. See discussion in Chapter Five section below: “‘Sustainable Development’: Sustaining Communities *Not* Development.”

Responses to the ecological crisis, however, may not be found by forcing limits on modern society. Computer modelling projections of planetary ‘ecological collapse’, such as The Club of Rome’s *The Limits to Growth*, may have worsened the problem; backfiring because consumer-driven societies fear scarcity and increase their short-term consumption in the hope of long-term personal survival.¹⁸⁶ Rather, supporting community-driven processes that seek to establish and enforce limits from within may be one of the most effective methods of curbing ecological disasters.¹⁸⁷ One thing is sure: These processes require participation and acceptance by all peoples, not ecologists (or other scientists) alone.

Attention is now turned to the ‘culture of ecology’, recognising that ecology has evolved from reductionist to generalist and systems-based expressions. In turn, ecology is also an expression of a changing worldview within modern Western culture (experienced as a ‘paradigm-shift’¹⁸⁸ within science), hence attention will also be given to the ‘ecology of culture’.

¹⁸⁶ Marie Jahoda confirms this observation in her criticism of *The Limits to Growth* world model: “As an effort to make propaganda for action, its virtual hopelessness in outlook may well backfire in two ways. First, there is some psychological evidence to show that overwhelming threat leads to looking away from a problem rather than tackling it; and second, a call to action which cannot be implemented may inadvertently undermine the credibility of scientists to help in solving the problems of the world.” Jahoda, M. “Postscript on Social Change,” pp.209-215, in: Cole, H.S.D.; Freeman, C.; Jahoda, M. and Pavitt, K.L.R. *Models of Doom: A Critique of The Limits to Growth*. New York: Universe Books. 1973, p.213. See: Meadows, D.H.; Meadows, D.L.; Randers, J. and Behrens, W.W. *The Limits to Growth: A Report for the Club of Rome’s Project on the Predicament of Mankind*. New York: Signet. 1972.

¹⁸⁷ Illich states emphatically: “People must learn to live within bounds. This cannot be *taught*. Survival depends on people *learning* fast what they *cannot* do. They must *learn* to abstain from unlimited progeny, consumption, and use. It is impossible to *educate* people for voluntary poverty or to manipulate them into self-control. It is impossible to *teach* joyful renunciation in a world totally structured for higher output and the illusion of declining costs.” Illich, I.D. *Tools for Conviviality. op. cit.* pp.70-71. [italics in original.]

¹⁸⁸ Kuhn, T. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press. 1962.

CHAPTER FOUR – THE CULTURE OF ECOLOGY AND THE ECOLOGY OF CULTURE

INTRODUCTION: The ‘Culture of Ecology’ and the ‘Ecology of Culture’

The intent of the dual-themed title is to highlight the inseparability of culture and ecology. ‘Culture’ is used in the title in at least two senses. In the first, the “culture of ecology” refers to philosophical ‘cultures’ that underpin scientific enquiry and influence different schools of thought in ecology. In that sense, ecology as a science must be acknowledged as embedded within a cultural context. Erwin Schrödinger, quantum physicist and Nobel prize-winner, observed: “...there is a tendency to forget that all science is bound up with human culture in general, and that scientific findings, even those which at the moment appear the most advanced and esoteric and difficult to grasp, are meaningless outside their cultural context.”¹ That cultural context is continuously changing; influenced by social movements, political ideologies, and economic forces. Furthermore, the direction of ecology as a science is shaped by cultural receptivity to dominant ideas.²

If it can be said that ecology cannot be divorced from cultural contexts, then it seems equally true that cultures are inseparable from their ecological contexts. That ecological ‘context’ is the home (*oikos*) in which human cultures belong and of which they form part. Ecology provides a scientific basis for attempting to understand human surroundings, or what modern culture now refers to, along Cartesian lines, as ‘the environment’. However, not all cultures have drawn such sharp distinctions between humans and the environment. The challenge now facing modern societies is to relearn (and revitalise) the values that enable culture and ecology to co-exist. To this end, the science of ecology offers vital insights into the dependence of humans, as ‘ecological beings’, on Nature. Given that the ‘environmental crisis’ is a global concern, the direction needed is clear – to embrace an “ecology of culture”.

¹ Schrödinger, E. *What Is Life? and Other Scientific Essays*. New York: Doubleday. 1956, pp.132-133.

² Alvin Toffler affirms this relationship of science to culture: “Some scholars picture science as driven by its own internal logic, developing according to its own laws in splendid isolation from the world around it. Yet many scientific hypotheses, theories, metaphors, and models (not to mention the choices made by scientists either to study or to ignore various problems) are shaped by economic, cultural, and political forces operating outside the laboratory.” Toffler, A. “Foreword: Science and Change,” pp.xi-xxvi, in: Prigogine, I. and Stengers, I. *Order Out of Chaos: Man’s New Dialogue With Nature*. Toronto: Bantam Books. 1984, pp.xii-xiii.

PART ONE – COMMUNITY AND ECOSYSTEM ECOLOGY

Part One explores the ‘culture of ecology’ in community and ecosystem ecology, outlining key ecological ideas and theorists. While the discussion commences with succession theory and follows a chronological order, it must be acknowledged that ‘ecology’ has older roots and a richer discourse than will be covered in this chapter.³ However, ecological roots in natural history studies of the seventeenth and eighteenth centuries were mainly concerned with descriptive observations of natural phenomena (i.e., collecting facts and systematically classifying them). In the late eighteenth century, plant geographers extended descriptions to the formulation of general patterns in distribution of major plant formations according to macroclimatic factors.⁴ Yet, it wasn’t until the turn of the twentieth century that the dynamic aspect of ecology was seriously considered, and ecological theories of succession began to supersede floristic studies of vegetation. As Robert O’Neill *et al.* explain: “The introduction of the concept of succession was extremely important to the development of ecology and helped broaden the ecologist’s perception of time.”⁵

SEMINAL PAPERS IN COMMUNITY ECOLOGY

Clements’ Superorganism Concept

Frederic Clements (1874-1945) is best known in community ecology for his concept of the plant community as a ‘fundamental unit’ comprising interdependent organisms (nowadays commonly referred to as the ‘superorganism’ concept). Clements proposed an ecological model of succession whereby a plant community (or “formation”) mirrors the growth process of an individual plant organism (hence the rational physiological perspective in

³ Well before the word ‘ecology’ was coined by Ernst Haeckel in 1866, naturalists, theologians, and philosophers commonly agreed that there is order in Nature based on a divinely created harmony. Clarence Glacken reviews ecological theory in Western thought: “I am convinced that modern ecological theory, so important in our attitudes towards nature and man’s interference with it, owes its origins to the design argument. The wisdom of the creator is self-evident, everything in the creation is interrelated, no living thing is useless, and all are related one to the other.” Glacken, C.J. *Traces on the Rhodian Shore: Nature and Culture in Western Thought From Ancient Times to the End of the Eighteenth Century*. Berkeley, California: University of California Press. 1967, p.243. Haeckel, E. *Generelle Morphologie der Organismen: Allgemeine Grundzüge der organischen Formen-wissenschaft, mechanisch begründet durch die Charles Darwin reformirte Descendenz-Theorie*. Two volumes. Berlin: Reimer. 1866.

⁴ See: Humboldt, A. von. *Ideenzu einer Geographie der Pflangen nebat einem Naturgemalde der Tropenlander*. Tübingen. 1807. Warming, E. *Plantesaamfund Grundtrak of den okologiska Plantegeographi*. Copenhagen. 1895.

ecology).⁶ In contrast to the (simple) individual plant, the climax formation was described by adherents to Clementsian successional theory as a “complex organism”. As the plant community advances from its embryonic stage of development, Clements claimed that it gradually progresses through an almost predictable series of stages (or “seres”) to culminate in a ‘climax state’. Therefore, for Clements, plant succession was always progressive, unidirectional and linear.⁷

According to the organism analogy (or, literally, homology), the ‘pioneer’ stage reflects that of childhood while the climax formation is equivalent to that of adulthood.⁸ The early, primary stage of succession is characterised by a dynamic state of flux and instability, with individual plants actively competing to establish themselves in a new (or recently disturbed) environment. In contrast, the climax state is considered the most mature (hence, ‘ideal’) because, Clements argued, it is stabilised through the controlling influence of a “dominant” species over its “subdominants”.⁹ Clements outlined his organismic concept of plant succession in his comprehensive 1916 book *Plant Succession*:

“The developmental study of vegetation necessarily rests upon the assumption that the unit or climax formation is an organic entity (Research Methods, 199). As an organism the formation arises, grows, matures, and dies. Its response to the habitat is shown in processes or functions and in structures which are the record as well as the result of these functions. Furthermore, each climax formation is able to reproduce itself, repeating with essential fidelity the stages of its development. The life-history of a formation is a complex but definite process, comparable in its chief features with the life-history of an individual plant.”¹⁰

⁵ O’Neill, R.V.; DeAngelis, D.L.; Waide, J.B. and Allen, T.F.H. *A Hierarchical Concept of Ecosystems*. Princeton, New Jersey: Princeton University Press. 1986, p.23.

⁶ Clements criticised botanical studies as vague and descriptive and sought instead to assert ecology as a rigorous, experimental science: “nothing but a rational field physiology.” Clements, F.R. *Research Methods in Ecology*. Lincoln: University Printing Company. 1906, p.10. For a historical outline of contributors to the concept of succession (from 1685 to 1914), see: Clements, F.E. “General History Summary,” pp.8-33, *Plant Succession: An Analysis of the Development of Vegetation*. Washington: Carnegie Institution of Washington. Publication No.242. 1916.

⁷ Clements likened the progression of ‘seres’ to a ball suspended on a string, slowly pushed along the linear continuum as the ball (association) advanced from lower (simple) state to a more orderly and integrated (complex) state of maturity. Cowles similarly insisted that sand dune succession displayed a definite spatial-temporal record, and concluded that “...by visiting the parts of a river from its source to its mouth, we can imagine what its history at a given point has been or is to be.” Cowles, H.C. “The Causes of Vegetative Cycles,” *Botanical Gazette*. Vol.51. 1911, p.181.

⁸ Refer to Henry Cowles (1869-1939), whose studies of sand dune succession were much admired by Clements and others. Cowles also applied the analogy of youth (vigorous development and rapid change), maturity, and old age (stability, equilibrium) to descriptions of ‘cycles of vegetation’. See: *ibid.* p.161.

⁹ “Hence, the essential unity of a climax is to be sought in its dominant species, since these embody not only the life-form and the genus, but also denote in themselves a definite relation to the climate.” Clements, F.E. “Nature and Structure of the Climax,” *Journal of Ecology*. Vol.24. 1936, p.255.

¹⁰ Clements, F.E. *Plant Succession. op. cit.* p.3. [underline added.]

Because the plant formation was defined as a discrete entity (or ‘fundamental unit’), it was treated as a closed system. It was held that only successional change is ‘natural’ because it is internal to the plant formation.¹¹ In contrast, all abiotic factors were designated ‘outside’ influences; either enhancing progression (e.g., the climax formation stabilised to the climate)¹² or detrimental to development (e.g., fire, erosion, human modifications¹³ including introduction of grazing animals). In the absence of external changes, Clementsian theory held that the climax state would persist, seemingly indefinitely, with very little structural change.¹⁴ Yet, as Clements explained, the developing equilibrium between the plant community and its physical environment was not necessarily static. Clements preferred to characterise the climax state as a ‘dynamic equilibrium’ to account for the constant adjustments the community made in response to environmental fluctuations.

Throughout this seminal period, there was active debate among community ecologists on various aspects of succession theory. Although Clements’ position was generally regarded as extreme and was under continual challenge from his peers, very few ecologists in the early twentieth century diverged radically from the underlying equilibrium-centred paradigm of Clementsian succession. Clements’ ‘superorganism’ concept was controversial, even in his time, and it was finally dismissed completely in the USA by the 1940s. However, the assumptions of equilibrium that underpinned Clementsian logic still hold, at

¹¹ “In brief, the changes due to aspection, annuation, or natural coaction are superficial, fleeting or periodic and leave no permanent impress, while those of succession are an intrinsic part of the stabilizing process.” Clements, F.E. “Nature and Structure of the Climax,” *op. cit.* p.256.

¹² According to Clementsian theory, community organisation is primarily directed by biotic factors, but ultimately dictated by climate (which Clements stressed was *the* overriding abiotic control agent). He further claimed that climatic zones formed global bands of equivalent “panclimax” formations (given similarities also in key abiotic factors such as topography, soil and water). This claim enabled him to propose universally-applicable general laws of succession.

¹³ Clements was more sympathetic to the Plains Indians who he regarded as part of the ecological community, whereas “...the white man was another matter, a complicating presence that overturned or disobeyed natural laws, and it proved far easier to leave him out of the theory of ecological dynamics. ...Indeed he was responsible for the destruction of the natural pattern of successional development, and gave the idea of a stable climax, even in Clements’ time, a certain academic unreality.” Worster, D. *Nature’s Economy: A History of Ecological Ideas*. [Second Edition.] Cambridge: Cambridge University Press. 1994 [1977], p.218. See Chapter Eleven; “Clements and the Climax Community,” pp.205-220. Later in his career, Clements reflected on the enormous impact of European-American settlers on the prairies where he had developed his succession theory. He claimed that, through agriculture and settlement, European man had artificially restrained the land in its primary, simple state of succession. In contrast, prior to settler colonisation he believed that the Plains Indians had maintained a ‘Balance of Nature’ relationship with the original mature climax.

¹⁴ As Clements explained: “Such a climax is permanent because of its entire harmony with a stable habitat. It will persist just as long as the climate remains unchanged, always providing that migration does not bring in a new dominant from another region.” Clements, F.E. *Plant Succession. op. cit.* p.99.

least implicitly, in plant community ecology. They also form the often unstated presumptions in Western environmentalism and other movements for social change.¹⁵

Gleason's Individualistic Concept

A notable exception to Clements' succession theory was Henry Gleason's (1882-1975) 'individualistic concept' of the plant community. Gleason vehemently opposed the theory that plants in a particular area form an organic entity or overriding deterministic whole (i.e., Clements' superorganism concept). In fact, he openly dismissed any notion of the 'whole' as existing only as a theoretical construction in the minds of certain ecologists.¹⁶ Gleason further disregarded the "association" as simply an 'assemblage' of individual plants, and argued that: "The phenomena of vegetation depend completely upon the phenomena of the individual."¹⁷ Gleason justified his opposing stance partly on the basis that boundaries of communities were arbitrary and poorly defined (given that dominant species changed continuously) whereas individuals could be clearly identified and counted.¹⁸ Gleason explained:

"A community is frequently so heterogeneous as to lead observers to conflicting ideas as to its associational identity, its boundaries may be so poorly marked that they can not be located with any degree of accuracy, its origin and disappearance may be so gradual that its time-boundaries can not be located; small fragments of associations with only a small proportion of their normal components of species are often observed; the duration of a community may be so short that it fails to show a period of equilibrium in its structure."¹⁹

¹⁵ Refer to: Russett, C.E. *The Concept of Equilibrium in American Social Thought*. New Haven: Yale University Press. 1966.

¹⁶ Gleason criticised the use of descriptive theories in ecology (an obvious dig at Clements), alleging that theories "...represent merely abstract extrapolations of the ecologist's mind. They are not based on a pure and rigid logic, and suffer regularly from the vagaries and errors of human reason." Gleason, H.A. "The Individualistic Concept of the Plant Association," *Bulletin of the Torrey Botanical Club*. Vol.53. 1926, p.9.

¹⁷ Gleason, H.A. "The Structure of Development of the Plant Association," *Bulletin of the Torrey Botanical Club*. Vol.44, No.10. 1917, p.464. While Gleason did not deny that changes in vegetation and the environment could contribute to the process of succession, nor the theoretical possibility that plant associations culminate in the establishment of a climax, he differed from Clements' views in almost every other respect. see: *ibid.*, especially pp.474, 479.

¹⁸ Gleason did not deny the existence of plant associations, acknowledging that they could be mapped, surveyed, photographed and measured. Note, however, that these are all external descriptions and bias quantitative analysis. Gleason stressed: "...the duty of the plant ecologist to furnish clear and accurate descriptions of these plant communities... whether it enters into far greater detail by use of the quadrat method, statistical analysis, or exact environometry, it nevertheless contributes in every case to the advancement of our understanding of each association in detail..." Gleason, H.A. "The Individualistic Concept of the Plant Association," *Bulletin of the Torrey Botanical Club*. *op. cit.* p.9.

¹⁹ *ibid.* p.13.

Gleason considered the plant ‘community’ as subject to random events, with individual plants (both members and species) distributed independently on the basis of environmental selection and the “accidents of immigration”. He argued that each species responds uniquely to environmental factors: “...the environment selects those species which may live and dooms the others.”²⁰ The occurrence of two species together was chance and not the consequence of some ‘mutual dependency’. Gleason went so far as to query: “...an association is not an organism, scarcely even a vegetational unit, but merely a *coincidence*?”²¹ In direct contrast to Clements, Gleason dismissed biotic factors (i.e., interactions between plant individuals/species), and claimed that: “In this migration each migrating body acts for itself and moves by itself, almost always completely independent of other species.”²² The bias underpinning Gleason’s individualistic concept is evident in his allusion to the ‘survival of the fittest’ ideology, as exemplified in his concluding statement that “...every species of plant is a law unto itself...”²³

Clearly, Gleason’s position represents an individualistic and quantitative approach to the ecological sciences. When first outlined in the early twentieth century, his ideas were largely ignored. In contemporary ecological education, however, population-community ecologists have a similar focus on individual species populations and deemphasise the properties that emerge from interactions.²⁴ It could be argued that Gleason’s approach isn’t an ‘ecological’ one, as it downplays the interaction of species and denies the existence of a ‘community’ which is the very essence of *ecology*. This raises interesting questions with respect to the

²⁰ Gleason, H.A. “The Individualistic Concept of the Plant Association,” *American Midland Naturalist*. Vol.21. 1939, p.107. The migrating individual plant initially depends totally on favourable environmental conditions for its survival. Once established, it manipulates environmental conditions in ways that enhance its own survival prospects and favours its progeny.

²¹ Gleason, H.A. “The Individualistic Concept of the Plant Association,” *op. cit.* 1926, p.16. [italics in original.]

²² Gleason, H.A. “The Individualistic Concept of the Plant Association,” *op. cit.* 1939, p.107. Competitive behaviour was the ‘survival instinct’ of the individual, given that the environment was in continual flux and plant associations were bombarded by uninvited immigrants.

²³ Gleason, H.A. “The Individualistic Concept of the Plant Association,” *op. cit.* 1926, p.26. The connection between Gleason’s private life and his individualistic ecological views is interesting. Gleason described his childhood in an unpublished autobiography (1944) as follows: “As a small boy, brought up on a farm with no other boys near by, I had never learned how to get along easily and smoothly with numbers of youngsters of my own age. ...I was involved in a continuous warfare with other boys. ...I turned to the woods for recreation...” Maguire, B. “Henry Allan Gleason,” *Bulletin of the Torrey Botanical Club*. Vol.102, No.5. 1975, p.274. Furthermore, Gleason was known to refer to himself as “an ecological outlaw” or “a good man gone wrong.” See: McIntosh, R.P. “H.A. Gleason – Individualistic Ecologist 1882-1975: His Contributions to Ecological Theory,” *Bulletin of the Torrey Botanical Club*. Vol.102, No.5. 1975, p.254.

²⁴ O’Neill, R.V. *et al.* *A Hierarchical Concept of Ecosystems*. *op. cit.*, see pp.25-27.

continued dominance of individualistic concepts and quantitative techniques in reductionist ecological theory and practice.

The Dialectical Division in Community Ecology

The seminal period of plant community ecology was characterised by a dialectical division between opposing theories – Frederic Clements’ superorganism theory versus Henry Gleason’s individualistic concept.²⁵ Reviewing this dialectic as a contrast of monistic and dualistic perspectives may help to highlight some of the underlying competing themes that remain as divisions within ecology today. Robert McIntosh confirms: “As usual in ecology, a simple polarity is an inadequate representation of the state of things; but the contrasting positions [in theoretical ecology] are well marked and efforts to bridge the gap have been limited and ineffectual to the present.”²⁶ Whereas Clements’ theory may be seen in monistic terms (the plant association as a deterministic whole progressing toward a stable climax steady state; “complex organism”), Gleason may be characterised as expounding dualistic notions (the plant assembly as a random collection of competing individual plants subject to turbulent changes from an environment in continual flux).

The following questions raised in the Clements–Gleason controversy remain relevant to community ecology: Are plant communities individualistic assemblages or are they best characterised as a superorganism/‘fundamental unit’? Do the ‘parts’ (individuals) dominate or does the ‘whole’ (community) override? Are plant communities the random result of chance immigration or do they progress through predictable stages of succession? Are they ‘open’ to random fluctuations in the wider environment (abiotic factors) or are they ‘closed’ to external disturbance and driven solely by internal (biotic factors) change? These were the competing claims that divided plant ecology in the early decades of the twentieth century and faced Arthur Tansley when he coined the concept of an “ecosystem”.

²⁵ That Gleason was such an ardent critic of Clements is indicative of the dialectical antagonism that separated their ecological views. Refer to Malcolm Nicholson’s review of Gleason’s career in botany, in particular the sub-section, “Early Differences With Clements”, pp.106-109. Nicholson, M. “Henry Allan Gleason and the Individualistic Hypothesis: The Structure of a Botanist’s Career,” *The Botanical Review*. Vol.56, No.2. April-June 1990, pp.91-161.

²⁶ McIntosh, R.P. “The Background and Some Current Problems of Theoretical Ecology,” pp.1-61, in: Saarinen, E. (ed.) *Conceptual Issues in Ecology*. Dordrecht: D. Reidel. 1982, p.47.

INVESTIGATING ECOSYSTEMS

Tansley and the Ecosystem Concept

At a time when endeavours to establish ecology as a scientific discipline in its own right were still tentative, the dialectical tension between organismic and individualistic concepts of plant associations greatly hindered the credibility of such attempts. Sir Arthur Tansley (1871-1955), the then (founding) president of the British Ecological Society, was acutely aware of this division. While he largely dismissed Gleason's ideas (at the time, most community ecologists did not take the individualistic concept seriously), the extreme views that Clements asserted almost dogmatically were the subject of much controversy and contention.²⁷ It was in a festschrift to Henry Cowles and in reaction to a three-part series of articles written by John Phillips²⁸ (an ardent proponent of Clements' monistic views) that Tansley published his most famous article ("The Use and Abuse of Vegetational Concepts and Terms," 1935) in which he coined the term "ecosystem" (see his definition below).²⁹

In his 1935 article, Tansley attempted to tone down the extreme views that Clements and Phillips held on a number of ecological issues. In place of the "monoclimax dogma" (of Clements), Tansley referred to "polyclimax theories". Rather than the strictly progressive nature of 'development' of the 'complex organism' (as a parallel to the ontogeny of a plant or animal), Tansley advocated the acceptance of retrogressive behaviour in succession and provided the alternative term "quasi-organism". While Tansley conceded that the analogy of the ecological system to an organism was heuristically useful (he promoted the term "quasi-organism" and even acknowledged its association to human communities³⁰), he was

²⁷ Plant ecology suffered criticism from the empirical sciences for being too theoretical. This reputation was not helped by the extreme position advocated by Clements in his superorganism concept. Frank Golley notes Tansley's concern with "...establishing ecology as a respectable discipline." Part of the motivation for Tansley's 1935 article was to "...defend ecology from a too extreme philosophizing and to maintain its connection with mechanistic, reductionistic science and therefore its reputation within biology." Golley, F.B. *A History of the Ecosystem Concept in Ecology: More Than the Sum of the Parts*. New Haven: Yale University Press. 1993, p.15.

²⁸ John Phillips attempted to draw together the major themes of plant succession (1934, Part I); the biotic community (1935, Part II); development (1935, Part II); the climax (1935, Part II); and the complex organism (1935, Part III). Phillips related Clements' ecological and philosophical concepts with those of Jan Smuts' holism (see Chapter Two).

²⁹ Tansley, A.G. "The Use and Abuse of Vegetational Concepts and Terms," *Ecology*. Vol.16, No.3. 1935, pp.284-307.

³⁰ Tansley, A.G. "The Classification of Vegetation and the Concept of Development," *Journal of Ecology*. Vol.8. 1920, especially pp.123-125. Tansley initially advocated 'synecology' (i.e., 'plant sociology'). In his later years, however, Tansley grew increasingly scathing of the use of the word

highly critical of Phillips' stance that a plant association actually *is* an organism. Phillips, however, made his preference quite clear:

“I have recorded (Phillips, 1931; 1931*a*, p.20) elsewhere that I at one time looked, with General Smuts (1926, pp.339-43), upon groups, societies, nations and Nature as *organic without being organisms*, and applied this, too, to biotic communities. Since then (Phillips, 1932, p.16; 1934, p.566) I have definitely gone further: I have accepted the biotic community as a complex organism, thus agreeing entirely with the concept of Clements.”³¹

Phillips associated Clements' 'complex organism' with Jan Smuts' 'holism' and Henri Bergson's concepts of 'emergence' and 'creative evolution'.³² In attempting this synthetic overview, I believe that Phillips misappropriated Smuts' original (1926) concept of holism to add credibility to the extreme monistic position advocated by Clements and himself.³³ Although Clements rarely explored political or philosophical issues in his early writings, during the 1930s he began to espouse a collectivist view of society. In contrast, Tansley readily drew analogies between Nature and human society.³⁴ His philosophical and political stance stems from a deep commitment to individualism (cf. Herbert Spencer) and opposition to Marxist totalitarianism.³⁵ Others confirm that holism also carries the

“community” in ecology due to what he perceived to be misleading anthropomorphic associations. Worster comments: “Plants and animals in a locale cannot constitute a genuine community, he [Tansley] argued, for no psychic bond can exist between them, and thus they can have no true social order.” Worster, D. *Nature's Economy. op. cit.* p.301. [emphasis added.]

³¹ Phillips, J. “Succession, Development, the Climax, and the Complex Organism: An Analysis of Concepts. Part III: The Complex Organism: Conclusions,” *Journal of Ecology*. Vol.23. 1935, p.497. [emphasis added.]

³² *ibid.* Holism is often associated with vitalism and 'organistic' philosophy, e.g., Gestalt psychology. Bergson, H. *Creative Evolution*. New York: H. Holt. 1911. Smuts, J.C. *Holism and Evolution. op. cit.*

³³ I argue (as do others) that there are essential differences between Clements' and Phillips' 'philosophical holism' and Smuts' definition of holism in *Holism and Evolution* (refer to my Chapter Two). Joel Hagen makes the important distinction: “Late in his career, Clements dabbled in philosophical holism, but his physiological perspective actually reflected an extreme form of mechanistic reductionism.” Hagen further observes that “...on the face of it, Clement's mechanical-organic theory of succession fit uncomfortably with Smut's passionately antimechanistic defense of emergent evolution.” Hagen, J.B. *An Entangled Bank: The Origins of Ecosystem Ecology*. New Brunswick, New Jersey: Rutgers University Press. 1992, pp.23, 84. [emphasis added.]

³⁴ Tansley, A.G. *The Values of Science to Humanity*. London: Allen & Unwin. 1942. This may be speculative, but one wonders about the extent to which the differing cultural contexts of Tansley and Clements determined the philosophical ideas underpinning their ecological theories. Tansley was born in 1871 into upper middle-class Victorian society and, throughout his career in biology, maintained an active interest in political philosophy. In contrast, the American Clements was parochial in his outlook and his main interests were limited to biology. There are, however, obvious parallels between the developmental model (see Chapter Five) exemplified in the pioneering of human settlement on the prairie frontiers of America and Clements' concept of succession leading to a climax state.

³⁵ As a young man, Tansley assisted Herbert Spencer in revising his *Principles of Biology*. Later in his life, Tansley was involved in the Society for Freedom in Science and made public statements against Marxist totalitarianism during World War Two. Joel Hagen observes: “There may have been no direct cause-and-effect relationship, but it seems reasonable that the ecosystem concept developed partly as a

unfortunate connotation with Nazi totalitarianism, given its associated popularity among ‘organic biologists’ in Germany and Europe during that time.³⁶ Today, confusion remains over the meaning of ‘holism’, in part because it is too facilely conflated with political associations of the whole as an absolute and overbearing totality. As a result, in ecology (and generally), ‘holism’ continues to carry the stigma of ‘whole-ism’. In this way, the prevailing political culture has had a direct bearing on the ‘culture of ecology’.

Tansley also objected to Phillips’ and Clements’ phrase “biotic community” on the grounds that the word “community” implied “members” of equal status (whereas animals and plants differ and are unique).³⁷ Furthermore, Tansley took exception to the qualifier of community as “biotic” only, which ignored the abiotic (or inorganic) factors. Tansley had previously distinguished between *autogenic* and *allogenic* successive changes (i.e., brought about by plants and by external factors, respectively), but went further than this dialectic to assert that “...[both] autogenic and allogenic factors are present in all successions...”³⁸ Tansley sought to overcome this division in community ecology and his definition of the ecosystem concept included *both* the organism-complex and the physical-environment complex: the so-called living and non-living ‘components’ of Nature. The establishment of Tansley’s term “ecosystem” came to be understood as the “basic unit” of Nature that applied to a hierarchy of physical systems from the largest ecological level (the universe) to the smallest ‘unit’ (the atom).³⁹ In Tansley’s words:

result of Tansley’s impatience with the social implications of holistic organicism.” *ibid.* p.86. Refer also, pp.79-87.

³⁶ Frank Golley observes that “...in Germany there was active hostility toward holistic thinking, which had provided a scientific base for national socialism.” Golley, F.B. *A History of the Ecosystem Concept in Ecology.* *op. cit.* p.75.

³⁷ Fritjof Capra explains: “The components of an organism exist for the organism’s functioning, but human social systems exist also *for their components*, the individual human beings.” He adds: “Organisms and human societies are therefore very different types of living systems. Totalitarian political regimes have often severely restricted the autonomy of their members and, in doing so, have depersonalized and dehumanized them. Thus fascist societies function more like organisms, and it is not a coincidence that dictatorships have often been fond of using the metaphor of society as a living organism.” Capra, F. *The Web of Life: A New Scientific Understanding of Living Systems.* New York: Anchor Books, Doubleday. 1996, pp. 210, 211. [emphasis in original.]

³⁸ Tansley, A.G. “The Use and Abuse of Vegetational Concepts and Terms,” *op. cit.* p.287.

³⁹ As early as the 1950s, Francis Evans suggested: “[Tansley] applied the term [ecosystem] specifically to that level of biological organization represented by such units as the community and the biome. I here suggest that it is logically appropriate and desirable to extend the application of the concept and the term to include organization levels other than that of the community.” Evans, F.C. “Ecosystem as the Basic Unit in Ecology,” *Science.* Vol.123. 1956, p.1127. In recent ecological theory there has been a movement away from the ecosystem as simply a ‘unit’ in an ecological organisation (often based on size criteria, e.g. from the cell to the biosphere) to an understanding of the ecosystem based on spatiotemporal scale and type criteria. See discussion below and also in Part Two, “Hierarchy Theory and Emergence”.

“But the more fundamental conception is, as it seems to me, the whole *system* (in the sense of physics), including not only the organism-complex, but also the whole complex of physical factors forming what we call the environment of the biome – the habitat factors in the widest sense.

It is the systems so formed which, from the point of view of the ecologist, are the basic units of nature on the face of the earth. ... These *ecosystems*, as we may call them, are of the most various kinds and sizes. They form one category of the multitudinous physical systems of the universe, which range from the universe as a whole down to the atom.”⁴⁰

Lindeman's Trophic-Dynamic Aspect of Ecosystems

Raymond Lindeman (1915-1942) was one of the first ecologists to implement (and extend) Tansley's concept of the ecosystem as a fundamental unit in ecology (to the study of a lake). While Lindeman had already been developing his own concepts in terms of a network idea in ecology, Tansley's definition of the ecosystem concept provided important theoretical and professional support for Lindeman's (and others) research.⁴¹ Lindeman, however, was not satisfied with characterising an ecosystem simply as a “basic unit of nature”. Rather, he wanted to show that ecosystems are structured networks of feeding relationships. Lindeman grouped populations into ‘trophic levels’, according to their food habits: producers (plants); primary consumers (herbivores); and secondary consumers (carnivores). In doing so, he was instrumental in shifting the focus in ecology from a strictly *structural* perspective (previously, ecologists had focused discussions principally on (static) community organisation and species composition) to incorporate an awareness of ecosystem behaviour, or *function* (i.e., the interactions between populations and between them and their environments).

In his famous and widely influential 1942 article, “The Trophic-Dynamic Aspect of Ecology”⁴², Lindeman integrated the theoretical ideas of Clements, Tansley, Elton, Juday (see discussions below) and Hutchinson, among others, with thermodynamic principles

⁴⁰ Tansley, A.G. “The Use and Abuse of Vegetational Concepts and Terns,” *op. cit.* 1935, p.299. [italics in original.] Tansley's definition of the ecosystem concept still informs ecology today, although, as Golley observes: “Probably Tansley's use of equilibrium would be most problematic to today's ecologist.” Golley, F.B. *A History of the Ecosystem Concept in Ecology. op. cit.* p.16.

⁴¹ Golley confirms: “...Tansley's emphasis on the interaction of the biota and the environment in the ecosystem was an important conceptual advance and opened the door for the wider use of energy theory and matter cycling in ecology.” *ibid.* p.24.

⁴² Lindeman, R.L. “The Trophic-Dynamic Aspect of Ecology,” *Ecology*. Vol.23, No.4.1942, pp.399-418.

adopted from physics.⁴³ In this monumental paper, Lindeman defined a lake ecosystem in terms of its dynamic behaviour; the energy flows and nutrients cycling between species populations and between them and the nonliving parts of the ecosystem. While the interactions he studied were principally based on food relationships (hence the *trophic-dynamic* aspect of ecology), food was converted into ‘energy units’ which allowed for the mathematical expression of flows of energy and materials (e.g, nutrient cycles) between various populations. Thus he produced a comprehensive account of the “energy-based economics of nature.”⁴⁴ Furthermore, Lindeman used the trophic-dynamic approach to understand ecological succession, as Golley explains:

“...he [Lindeman] made clear the idea that ecosystems develop through ecological succession and are tied to the energy dynamics of the system and the concept that nutrient cycling, as food cycling, is linked to the wider biogeochemical cycles coupling one ecosystem with another.”⁴⁵

Lindeman was influenced by Charles Elton who had described communities in terms of ‘food-chains’ or ‘food-cycles’ (still a central idea in modern ecology, cf. ‘food webs’). Elton had also emphasised a hierarchical organisation of community structure as a ‘pyramid of numbers’.⁴⁶ Lindeman extended the ‘Eltonian Pyramid’ to a pyramid of energy transformation whereby efficiencies in transfers of biological energy between trophic levels could be studied (i.e., how much energy organisms use up in metabolism). Lindeman concluded that less energy is available to each higher level, but that organisms become progressively more efficient in their extraction of energy from lower levels (his term for this was ‘progressive efficiency’).

One of Lindeman’s goals was to quantify losses of energy in transfers between trophic levels and therefore ascertain the ‘productivity’ of each level in the food chain. The

⁴³ It is important to note previous attempts to link ecology and thermodynamics, in particular those of chemist Alfred Lotka (1880-1949). In his *Elements of Physical Biology* (1925), Lotka had anticipated the study of food chains, producers and consumers, cycles of water, nitrogen, carbon and other elements, as well as the mathematics of trophic transfer. However, this book was not widely consulted (or at least not acknowledged in references), until it was re-published in 1956 as *Elements in Mathematical Biology*. This second edition became an ‘ecological classic’ in the 1960s and ’70s and appears to have been a precursor to ecosystem ecology (Howard Odum, in particular, was influenced by Lotka’s mathematical approach). Refer to discussion in: Golley, F.B. *A History of the Ecosystem Concept. op. cit.* p.58. Lotka, A.J. *Elements of Physical Biology*. Baltimore: Williams and Wilkins. 1925. [Republished: *Elements in Mathematical Biology*. New York: Dover. 1956.]

⁴⁴ Worster, D. *Nature’s Economy. op. cit.* p.306.

⁴⁵ Golley, F.B. *A History of the Ecosystem Concept. op. cit.* p.60.

⁴⁶ Elton, C. *Animal Ecology*. London: Sidgwick and Jackson. 1927.

approach he adopted was influenced by the theoretical ideas of limnologist Chancey Juday, who had studied a lake as a closed system with an ‘energy balance’ such that “...the annual income and outgo substantially balance each other”⁴⁷, much as one might balance books in economic accounting.⁴⁸ In this way, Juday’s ‘energy balance’ was an illustration of the first law of thermodynamics. Lindeman’s use of energy to express the relations between trophic levels again linked thermodynamic theory in physics, as had others before him such as Lotka and Juday. Lindeman’s contributions are summarised:

“Thus, the cycling of matter and the associated flux of energy through the ecosystem provided a basis for characterising its structure and function. Currencies of energy and the masses of such elements as carbon allowed direct comparison of plants, animals, microbes, and abiotic sources of energy and elements in the ecosystem. Taxonomic lists of species and the numbers of individuals in populations gave way to measurements of energy assimilation and energetic efficiencies in this new thermodynamic concept of the ecosystem.”⁴⁹

The Odum Brothers and Systems Ecology

Influenced by Lindeman’s emphasis of energy flows and Elton’s earlier work on food webs and pyramids, the study of ecosystem energetics came to dominate systems ecology. Eugene and Howard Odum were instrumental figures in advocating this approach. In 1953, Eugene Pleasants Odum (1913-2002) published *Fundamentals of Ecology* which gave one of the first comprehensive overviews of ecosystem ecology, with clear definitions of key ecological concepts and principles with supporting examples.⁵⁰ He wrote the textbook in collaboration with his brother Howard Thomas Odum (1924-2002), who contributed substantially to the sections on systems energetics. The book made critical links between ecology and the impact of human activities on major ecosystems and complex biogeochemical cycles (and specifically acknowledged that humans are part of these

⁴⁷ Juday, C. “The annual budget of an inland lake,” *Ecology*. Vol.21, No.4. 1940, p.439. Worster explains that Juday “...attempted to derive what he called the ‘annual energy budget’ of that natural lake: how much energy was spent and how much was invested in the form of biomass at each level in the system.” Worster, D. *Nature’s Economy. op. cit.* p.305. [emphases added.]

⁴⁸ Note that the idea of equilibrium (‘balancing’ of countervailing forces) was well established in physics before it was adopted by analogy in economics. Indeed, there are strong parallels between early ecosystem studies and economics, which are similarly based on equilibrium-centred theory. For further discussion, see: Mirowski, P. *More Heat Than Light: Economics as Social Physics, Physics as Nature’s Economics*. Cambridge: Cambridge University Press. 1989.

⁴⁹ Ricklefs, R.E. *Ecology*. [Third Edition.] New York: W.H. Freeman and Company. 1990 [1973], p.180.

⁵⁰ Odum, E.P. *Fundamentals of Ecology*. Philadelphia: W.B. Saunders Company. [Third Edition.] 1971 [1953]. Note that in the subsequent editions (1957, 1971), important additions and amendments were made. The various editions were translated into twenty languages.

systems and cycles). The textbook was widely read and contributed greatly to the direction of ecology and environmentalism in the decades that followed.

Both Odums viewed the Earth in its entirety as an ecosystem and described the biosphere as a closed system.⁵¹ Eugene Odum referred often to the near-disaster of the spacecraft Apollo 13 venture into outer space in 1970 as a warning for the impending environmental disasters on “Spaceship Earth”, given the human-induced stresses placed on global life-support systems.⁵² While Eugene sometimes drew upon organic metaphors, his tendency was to describe ecosystems in mechanistic and ‘closed system’ terms (e.g., the “self-contained spacecraft as an ecosystem”).⁵³ However, unlike a machine, he explained that the Earth ecosystem maintains itself as a “bioregenerative system” through homeostatic, self-maintaining processes and feedback mechanisms (refer below to discussion of cybernetics).

Eugene Odum asserted that ecosystems have life-histories, otherwise expressed as “The Strategy of Ecosystem Development” in his 1969 landmark article in *Science*.⁵⁴ He explained the ecological succession process in terms of twenty-four ecosystem attributes which visualised ecosystem development as progressing through smooth, predictable stages from the ‘developmental stage’ to the ‘mature stage’ at climax. Every ecosystem, he argued, was self-maintaining and moved with a clear ‘strategy’ toward a healthy, stable state (at maximum biomass).⁵⁵ The connections to Clementsian succession are obvious, but were unstated.⁵⁶ For example, strong parallels exist between Clements’ ‘climax’ and Odum’s ‘mature ecosystem’ and final ‘steady state’.⁵⁷ Furthermore, both used direct analogies with

⁵¹ A closed system is one where there is circulation of matter within the system, but not across the system’s boundary. There are, however, inputs and outputs of energy across the system’s boundary.

⁵² See “Prologue: The Flight of Apollo 13,” pp.1-6, in: Odum, E.P. *Ecology and Our Endangered Life-Support Systems*. [Second Edition.] Sunderland, Massachusetts: Sinauer Associates. 1993 [1989]. The metaphor of “Spaceship Earth” was used by Kenneth Boulding in his 1966 essay, “The Economics of the Coming Spaceship Earth”. The metaphor of the Earth as a machine/‘spacecraft’ (cf. ‘Mother Earth’) has been criticised as human-centred and for evoking hi-tech imagery. Odum’s message, however, is simply that the Earth is the only spaceship we have and we must protect its ‘intrinsic machinery’. For a review and discussion of the ‘Spaceship Earth’ metaphor, see: Lockwood, L.G. “Book Review: Eugene P. Odum, *Ecology and Our Endangered Life-Support Systems*,” *Environmental Ethics*. Vol.12. 1990, pp.375-378.

⁵³ Odum, E.P. *Ecology*. New York: Holt, Reinhart and Winston. 1963, especially pp.10-11.

⁵⁴ Odum, E.P. “The Strategy of Ecosystem Development,” *Science*. Vol.164, No.3877. 1969, pp.262-270.

⁵⁵ E.P. Odum explained ecological succession as “...an orderly process of community development that is reasonably directional and, therefore, predictable” and “culminates in a stabilized ecosystem.” *ibid.* p.262.

⁵⁶ One obvious connection is through Victor Shelford, under whom Eugene Odum completed his PhD. Shelford, an animal ecologist, was an advocate of Clementsian successional theory and was his associate in the book *Bio-Ecology*, published in 1940.

⁵⁷ Although Eugene Odum avoided directly mentioning Clements, his concepts are emphasised throughout Odum’s writings (and, at times, are specific to Clements’ terminology). For example, Odum

the development of organisms, as Odum explained: “As viewed here, ecological succession involves the development of ecosystems; it has many parallels in the developmental biology of organisms, and also in the development of human society.”⁵⁸ Eugene Odum’s ecological thinking during this period (perhaps best summarised in his 1969 *Science* paper) was strongly equilibrium-centred. Later, he modified this focus, eventually acknowledging (1992) that ecosystems are thermodynamically open, far from equilibrium systems.⁵⁹

In systems ecology, energy was used as the ‘common currency’ for describing ecosystem structure and function. H.T. Odum, in particular, promoted ‘energy language’ in his application of energy analysis across a variety of systems, including both natural and human systems (e.g., economics, law, and religion), and range of hierarchical scales.⁶⁰ He was motivated and deeply concerned with the question of human survival, given radical changes in “man’s energetic relation to the environment” and the dependence of the industrialised system on fossil fuels, coal, and oil resources. H.T. Odum constructed systems energy flow diagrams (also referred to as “electric analog circuits”) to model and predict the consequences of changes in the ratio of the system’s primary production (P) to total consumption (R).⁶¹ This enabled him to contrast the agrarian system (where the P/R ratio

explains: “In ecological terminology the developmental stages are known as *seral stages*, and the final steady state as the *climax*.” Odum, E.P. *Ecology*. *op. cit.* p.78. [emphases in original.]

⁵⁸ Odum, E.P. “The Strategy of Ecosystem Development,” *op. cit.* p.262. For a critique of ‘economic development’ see Chapter Five: “‘Sustainable Development’ or ‘Sustained Development?’”

⁵⁹ Odum, E.P. “Great Ideas in Ecology for the 1990s,” *BioScience*. Vol.42, No.7. 1992, pp.542-545. Howard Odum also revised his views and, in the 1990s, began to promote the idea of the ‘pulsing paradigm’ (i.e., ecosystems moving through ‘growth-climax-descent’ oscillations). He explains: “If hierarchical concepts are correct, the biosphere is exposed to pulsing rhythms that have time periods increasing with size.” Odum, H.T. *Ecological and General Systems: An Introduction to Systems Ecology*. [Revised Edition.] Colorado: University Press of Colorado. 1994 [1983], p.555. Small scale systems are considered to pulsate more frequently than large scale systems, and oscillating cycles could range from decades to centuries. Odum states: “The older ecological paradigm of successional growth to a steady state and sustainable climax has to be replaced with the concept of recurring pulses in which production and consumption alternate.” Arguably, however, in spite of this claim, Odum’s theory is still fundamentally equilibrium-centred, as the system in the long run tends to a ‘baseline of thermodynamically maximum empower’ (i.e., they tend to a thermodynamically defined equilibrium point). Odum, H.T. “Energy Over Time,” pp.242-259, *Environmental Accounting: Energy and Environmental Decision Making*. New York: John Wiley and Sons. 1996, p.242.

⁶⁰ See: Odum, H.T. *Environment, Power, and Society*. New York: John Wiley & Sons. 1971, which includes a chapter on the “Energetic Basis for Religion,” pp.236-253. Faced with the question of modern Man’s survival in partnership with Nature, H.T. Odum asserts: “The key program of a surviving pattern of nature and man is a subsystem of religious teaching which follows the laws of the energy ethic.” p.253. He provides a list of ‘Ten Commandments of the Energy Ethic for Survival of Man in Nature,’ (p.244). Also: Odum, H.T. and Odum, E.C. *Energy Basis for Man and Nature*. New York: McGraw-Hill. 1976.

⁶¹ Howard Odum was influenced by Alfred Lotka. In applying the first law of thermodynamics to studies of systems, H.T. Odum employed the ratio of production to respiration (input/outputs: P/R ratio), but reached the important conclusion that clearly *not all systems are in balance*. Odum and Pinkerton reported that all the natural systems (they had studied) performed at ‘optimal’ efficiency for maximum power output and not at the highest possible efficiency. This is linked to Lotka’s ‘maximum power

is balanced) with the industrialised system in which “The system of man has consumption in excess of production.”⁶² To avoid the dire consequences of this imbalance, H.T. Odum urged that public and political affairs (including world economics) must be limited to fit into “...the overall energetic budget for a successful system of nature.”⁶³

Together the Odum brothers challenged the public to think in broad, systemic terms – to conceive of the Earth as a whole ecosystem. In attempting this, perhaps their collective efforts were exemplified in their shared aim to establish a ‘unified field of ecology’.⁶⁴ In his 1977 article, “The Emergence of Ecology as a New Integrative Discipline”⁶⁵, Eugene Odum advocated that ecology must combine reductionism (the detailed study of ever-smaller parts) with a synthetic (or ‘holistic’) approach (seeking to understand large components as functional wholes).⁶⁶ H.T. Odum similarly supported this “macroscopic perspective” of systems science as “...learning how to build from parts into larger wholes and patterns...”⁶⁷ To achieve this synthetic type of thinking at a societal scale, he argued that the ‘intellectual elite’ (society’s future leaders) be educated with university degrees that prepared them for the role of ‘environmental generalist’.⁶⁸

principle’. Odum, H.T. and Pinkerton, R.C. “Time’s speed regulator: The optimum efficiency for maximum power output in physical and biological systems,” *American Scientist*. Vol.43. 1955, pp.331-343.

⁶² Odum, H.T. *Environment, Power, and Society*. *op. cit.* p.17. In ecological terms, the prognosis is ultimately self-destructive: “Man’s role in the environment is becoming so enormous that his energetic capacity to hurt himself by upsetting the environmental system is increasing.” p.6.

⁶³ *ibid.* p.7. [underline added.] In their most recent book, Howard and Elisabeth Odum recommend policies, based on systems principles, for preparing (Western) civilisation for a future that is prosperous *because* it is based on ‘descent’ rather than the currently unsustainable patterns that promote unlimited economic growth. Odum, H.T. and Odum, E.C. *A Prosperous Way Down: Principles and Policies*. Boulder, Colorado: University Press of Colorado. 2001.

⁶⁴ The Odums were strong advocates of general systems theory (see section below).

⁶⁵ Odum, E.P. “The Emergence of Ecology as a New Integrative Discipline,” *Science*. Vol.195. 1977, pp.1289-1293.

⁶⁶ Both Odums refer to the holistic approach as ‘synthetic’ in direct opposition to the reductionist, analytical approach (a division they wished to overcome in systems ecology by embracing parts and processes within larger wholes). For example, H.T. Odum points out that his energy circuit language is “...both synthetic (holistic) and analytic (relationships of parts) at the same time.” And: “The energy systems approach synthesizes parts and processes by representing them in network designs...” Odum, H.T. “Energy systems concepts and self-organization: a rebuttal,” *Oecologia*. Vol.104. 1995, pp.520, 518.

⁶⁷ Odum, H.T. *Environment, Power, and Society*. *op. cit.* p.10.

⁶⁸ According to H.T. Odum, the education of an ‘environmental generalist’ should involve a general core course in general systems concepts, concepts of energy, information, and systems mathematics and include all the ‘synthetic tools’, such as programming and statistics. From the specialised disciplinary focus of most science-based education, Odum’s list may be considered ‘generalist’. However, from other perspectives, this ‘environmental generalist’ degree appears severely limiting, for it ignores philosophy, social theories and cultural studies which are also essential to understanding and addressing complex environmental issues. Furthermore, it is completely biased to the Western scientific education system and therefore ignores the potential for pluralism arising from cross-cultural educational experiences. Odum, H.T. “The Environmental Generalist,” *Acta Cientifica*. Vol.6, No.1-3. 1992, pp.159-164.

Holism and Reductionism in Ecosystem Ecology

The Odums' hoped-for integration has not come about and the dialectic between so-called holism and reductionism remains a deep conceptual divide in ecology. However, what Eugene Odum referred to as 'holistic' is criticised by some as simply a modern update on Clements' superorganism theme (i.e., the ecosystem as a 'fundamental unit' in Nature).⁶⁹ Howard Odum's systems modelling was also harshly criticised – as a form of “large-scale reductionism”.⁷⁰ Others, however, acknowledged H.T. Odum as contributing to a more 'holistic ecology'.⁷¹ What is clear is that much confusion abounds in ecological theory and research over the meaning of 'holism'.⁷²

One common assumption among ecologists is that holism is the attempt to seek explanations by invoking *larger scales* than those at which observations are made (in contrast to small-scale reductionist studies).⁷³ This size-dependent interpretation of the 'holistic whole' is further confounded by the Odums' contrasts between reductionism-as-analytical and holism-as-synthetic. Where reductionism is described as the construction of the whole from mechanistic explanations of the parts, holism is considered to be the reverse (a

⁶⁹ David Simberloff is among those who accuse Eugene Odum (and others) of Clementsian idealism: “Odum (1964) views the ecosystem as bearing the same relation to ecology as the cell does to molecular biology, a clearly superorganismic conception. Patten (1975) sees the ecosystem as a 'holistic unit of coevolution,'...” I agree with Simberloff's criticism insofar as Eugene Odum and Bernard Patten assert the ecosystem in monistic terms as a 'unit' in Nature (for a different interpretation of the ecological system, see Part Two discussion of the 'complex adaptive ecosystem'). Simberloff, D. “A Succession of Paradigms in Ecology: Essentialism to Materialism and Probabilism,” pp.63-99, in: Saarinen, E. (ed.) *Conceptual Issues in Ecology. op. cit.* p.87.

⁷⁰ In direct retort to Simberloff (above), Richard Levins and Richard Lewontin observe: “But the large-scale computer models of systems ecology do not fit under the heading of 'holism' at all. Rather they are forms of large-scale reductionism: the objects of study are the naively given 'parts' – abundances or biomasses of populations.” Levins, R. and Lewontin, R. “Dialectics and Reductionism in Ecology,” pp.107-138, in: *ibid.* p.110. [emphases added.]

⁷¹ Patten, B.C. “Toward a more holistic ecology, and science: the contribution of H.T. Odum,” *Oecologia*. Vol.93. 1993, pp.597-602.

⁷² Refer to an interesting series of papers from a symposium on “Holism and Reductionism in Ecology” at the Fourth International Congress of Ecology held at Syracuse, New York, in August 1986. Five articles based on those presentations were published in: *Oikos*. Vol.53, No.2. September 1988, pp.267-281.

⁷³ From a survey of twenty seven ecologists on their use of holism or reductionism in ecological research, Garth Redfield summarises: “To one group of ecologists, holistic research explains phenomena in the context of the appropriate ecosystem, i.e., the use of larger scales for explanation, the traditional view. Another group of about equal size view holism more as a process of synthesizing general patterns, dropping detail, accepting some uncertainty and looking for the consequences of lower level mechanisms.” Redfield, G.W. “Holism and reductionism in community ecology,” *Oikos*. Vol.53, No.2. 1988, p.276. Refer also to David Wilson's distinction between mechanistic, descriptive, and metaphysical holism. Wilson, D.S. “Holism and reductionism in evolutionary ecology,” *Oikos*. Vol.53, No.2. 1988, pp.269-273.

macroscopic, whole→part determination).⁷⁴ However, this interpretation of holism suffers many shortcomings associated with monistic overtones of the whole.

A nondual approach might regard the ecosystem as a ‘whole’ in terms of a ‘holistic’ process of whole-making, pattern-forming (wholes within wholes, etc.), and synergistic interactions among parts within a whole that grows and adapts to its parts and its greater context. This holistic understanding of the whole is *not* the same as monistic definitions of the whole as the “monoclimax community” (Clements) or as the “basic unit in Nature” (Tansley). The misassociation of ‘holism’ with monistic ‘whole-ism’ (refer to Chapter Two) is evident in the reactions of scientists who favour reductionist analyses to those who support the ecosystem concept in ecology. Ecosystem ecologists are confronted with philosophical baggage that is reinforced in a dialectical opposition between dualistic and monistic interpretations: parts versus the whole; Gleason’s individualistic concept versus Clements’ superorganism or ‘fundamental unit’; population ecology versus ecosystem-centred studies; reductionism versus ‘holism’.

An emerging complex systems perspective (see Part Two) moves beyond E.P. Odum’s explanation of an ecosystem as a specific level of biological organisation (albeit large-scale ‘whole systems’). In contrast to the parts-versus-whole dialectic, the complex systems descriptions of the ecosystem concept propose a ‘holistic’, hierarchical perspective with emergent properties characterising each ecological system of organisation. William Lidicker, Jr., summarises:

“In my view Odum’s intuition was correct that a level of organization above that of the community is intellectually defensible. It is only unfortunate that the word ecosystem got used for this purpose, since it is etymologically, philosophically, and logically more sensible to use this term as equivalent to ‘ecological system’. As such, the ecosystem concept could play a critical role in making ecologists think like ecologists, that is, to view the world in terms of a hierarchy of systems. It takes biological entities (organisms, populations, communities) and contemplates them in an environmental perspective. The ecosystem concept thus does not add a new level of biological complexity; it simply puts whatever level we are investigating into

⁷⁴ Bernard Patten describes holistic determination: “Science is reductionistic in its overarching premise that parts determine wholes (part→whole determination), and mechanistic in recognizing the explanatory power of internal details (part→part determination). Only systems science is concerned mostly with holistic (whole→part) determination.” Patten, B.C. “Toward a more holistic ecology, and science...” *op. cit.* p.598. See also: Odum, H.T. *Environment, Power, and Society. op. cit.* p.10.

a holistic framework. The importance of this seemingly elementary task should not be underestimated.”⁷⁵

EQUILIBRIUM ECOLOGY

Cybernetics and Feedback Loops

Underpinning much of the systems ecology of the Odums during the 1950s and 1960s, at least conceptually, was the theory of cybernetics. The term “cybernetics” was coined in 1948 by mathematician Norbert Wiener, and referred to control and communication in animals and machines.⁷⁶ The concept of cybernetics (from the Greek, *kybernetes*, for “steersmanship”), however, had origins much earlier than Wiener.⁷⁷ The etymological allusion to the sailing of a ship drew attention to the steering *process* whereby deviations either side of the ship’s intended (linear) course require continual adjustment (deviation-counteracting measures) by the helmsman. Deviations from the course are then ‘fed back’ (i.e., feedback loops) as information inputs to ‘correct’ the ship’s path.⁷⁸ Further examples of cybernetic behaviour include the thermostat which is set at an *a priori* desired temperature and activates heating sources in reaction to detected changes in the room’s temperature. As a result, the room temperature remains relatively constant, within defined upper and lower limits.

Cybernetic principles such as ‘feedback’ were applied to effect during World War Two, in particular to the use of anti-aircraft artillery where the velocities of the aeroplane (target) and missile had to be anticipated in advance.⁷⁹ Cybernetics thus found tangible expression

⁷⁵ Lidicker, W.Z., Jr. “The synergistic effects of reductionist and holistic approaches in animal ecology,” *Oikos*. Vol.53, No.2. 1988, p.279. [emphasis added.]

⁷⁶ Wiener, N. *Cybernetics: or Control and Communication in the Animal and the Machine*. [Second Edition.] Cambridge, Massachusetts: The M.I.T. Press. 1961 [1948].

⁷⁷ Norbert Wiener acknowledges Clerk Maxwell’s significant paper published in 1868 on feedback mechanisms in a governor. In addition, the term “governor” has a similar etymological root, derived from a Latin corruption of ‘steersman’.

⁷⁸ This is not to say that swaying either side of a line is necessarily ‘incorrect’. To the contrary, it is wholly natural (for humans and ecosystems)! Buckminster Fuller stresses this point: “Human beings were given a left foot and a right foot to make a mistake first to the left, then to the right, left again, and repeat. Between the over-controlled steering impulses, humans inadvertently attain the between-the-two desired direction of advance. This is not only the way humans work – it is the way the universe works. This is why physics has found no straight lines; it has found a physical universe consisting only of waves.” Fuller goes on to discuss Wiener’s ‘cybernetics’ and ‘feedback’. Fuller, R.B. *Intuition. op. cit.* p.94.

⁷⁹ Wiener explains: “...unlike all previously encountered targets, an airplane has a velocity which is a very appreciable part of the velocity of the missile used to bring it down. Accordingly, it is exceedingly important to shoot the missile, not at the target, but in such a way that missile and target may come

in operations research and, in the era following the war, was popularised by the field of ‘control engineering’.⁸⁰ Cybernetic control systems promoted the use of ‘higher machines’ (e.g., the increasingly-sophisticated computer) for all sorts of decision-making arenas. The ecosystem as a cybernetic system was one such area of focus (see below). Similarly, human communities (i.e., ‘social systems’) were also coined in cybernetic terms, especially in light of associated theories such as ‘information theory’ proposed by Shannon and Weaver (and Wiener) and ‘game theory’ by von Neumann and Morgenstern.⁸¹ Wiener was an outspoken advocate of the application of cybernetic principles (in particular, communication as a ‘feedback’ mechanism) in the humanities (e.g., the Macy meetings).⁸²

The ship, anti-aircraft artillery, and the thermostat are all human-made machines, dependent upon the continual input and ongoing maintenance of the human operator. Yet, Wiener’s cybernetics was to apply to both machines *and* animals; the latter being ‘living systems’. An essential difference is that with a machine, the human operator can program an equilibrium state (as desired for human purposes) and then tweak the system to ensure that equilibrium is more-or-less maintained. *With living systems, however, a pre-established equilibrium position is not negotiable* (although human ‘management’ aims to control outcomes as, for example, with the ‘artificial equilibrium’ imposed on the agricultural, production-focused ecosystem).⁸³ Furthermore, a machine is a ‘closed system’ and, while it may react to

together in space at some time in the future. We must hence find some method of predicting the future position of the plane. The simplest method is to extrapolate the present course of the plane along a straight line.” Wiener, N. *Cybernetics. op. cit.* p.5. [emphasis added.] In this example, Wiener restricts his studies to linear relationships, and elsewhere (e.g., in the Preface to the second edition of *Cybernetics* in 1961, p.viii) acknowledges that “...the study of non-linear circuits ... did not fit easily into this frame.”

⁸⁰ Howard Odum’s ‘ecological engineering’ perspective can be linked to his experiences during World War Two in engineering and operations research (although he was formally trained as an ecologist).

⁸¹ The theory of information is an important part of cybernetics. It was developed by Norbert Wiener and Claude Shannon in the late 1940s, although Warren Weaver is often credited as well. Information theory is concerned mainly with the problem of getting a message, coded as a signal (although cyberneticists are careful to link their theory with ‘information’ rather than ‘signals’), through a noisy channel. Capra explains: “However, Norbert Wiener also emphasized the fact that such a coded message is essentially a pattern of organization, and by drawing an analogy between such patterns of communication and the patterns of organization in organisms, he further prepared the ground for thinking about living systems in terms of patterns.” Capra, F. *The Web of Life. op. cit.* p.65. See also: Neumann, J. von. and Morgenstern, O. *Theory of Games and Economic Behavior*. Princeton, New Jersey: Princeton University Press. 1944.

⁸² The Macy Conferences (the first one was held in New York in 1946) brought together a unique group of highly creative people from a wide range of disciplinary backgrounds. The ‘original cyberneticists’ consisted of mathematicians, engineers and neuroscientists. Cybernetics was extended to the humanities, particularly through the work of anthropologists Gregory Bateson and Margaret Mead. The Macy Conferences allowed for interdisciplinary dialogues that explored new ways of thinking with various disciplinary applications and implications. For further discussion, see: Heims, S.J. *The Cybernetics Group*. Cambridge, Massachusetts: MIT Press. 1991.

⁸³ The thermostat is a goal-directed (teleological) system. One could be led to question what (if anything) determines an ‘equilibrium position’ in living systems?

inputs from its environment, it cannot perpetually maintain (or initiate) those relationships without ongoing human intervention. Without a continual supply of 'input energy', the machine will eventually stop working. In contrast to 'closed system' machines, organisms are 'open systems' that interact dynamically with their wider environment.

Homeostasis and the Steady State

In studying the 'wisdom of the human body', the physiologist Walter Cannon coined the term "homeostasis" in 1932.⁸⁴ Homeostasis refers to the ability of living beings to maintain their own constancy, despite being subjected to an influx of continual changes in their environments.⁸⁵ Cannon noted that the human body responds to changing environmental conditions with "self-regulatory" physiological mechanisms. Change in temperature is a useful example. The human body remains healthy within a narrow range of conditions: a deviation of plus or minus one-half a degree centigrade may be tolerated.⁸⁶ Beyond those limits, the body is put under severe stress and this may lead to permanent damage or to death.⁸⁷ The body reacts to counteract the stress of severe temperature change by either shivering, or perspiring and breathing faster. Most homeostatic self-righting adjustments go unnoticed, for they are instinctive everyday behaviour. If one had to consciously think about (i.e., premeditate) the closing of one's eyelids to divert penetration by a foreign object, surely we would all be blinded by our own thought processes by now.

⁸⁴ Cannon, W.B. *The Wisdom of the Body*. London: Kegan Paul. 1932, p.20.

⁸⁵ Homeostasis is: "Tendency towards relatively stable equilibrium between interdependent elements, esp. as maintained by physiological processes." Concise Oxford Dictionary. [emphasis added.] Walter Cannon explains 'homeostasis' etymologically: "Objection might be offered to the use of the term *stasis*, as implying something set and immobile, a stagnation. Stasis means, however, not only that, but also a condition; it is in this sense that the term is employed. *Homeo*, the abbreviated form of *homoio*, is prefixed instead of *homo*, because the former indicates 'like' or 'similar' and admits some variation, whereas the latter, meaning the 'same,' indicates a fixed and rigid constancy." Cannon, W.B. "Organization for Physiological Homeostasis," *American Physiological Society*. Vol.9. 1929, pp.399-431. Reproduced in: Langley, L.L. (ed.) *Homeostasis: Origins of the Concept*. Stroudsburg, Pennsylvania: Dowden, Hutchinson & Ross. 1973, pp.251-252. [italics in original, underline added.]

⁸⁶ Lawrence Henderson observed in 1913: "Extreme constancy of the body temperature is, of course, a matter of vital importance, at least for all highly organized beings, and it is hardly conceivable that it should be otherwise." Henderson, L.J. *The Fitness of the Environment: An Inquiry into the Biological Significance of the Properties of Matter*. Beacon Hill, Boston: Beacon Press. [Introduction by G. Wald, 1958.] 1913, p.89.

⁸⁷ "A variation of one-half degree centigrade in the body temperature is generally a sign of illness, and a permanent variation of five degrees is scarcely consistent with life. The osmotic pressure of the blood and its hydrogen-ion concentration must be held within strict limits." Wiener, N. *Cybernetics. op. cit.* p.114. [emphasis added.]

Cannon introduced the concept of homeostasis at the level of an individual organism. However, he did not consider the organism as closed to the environment, but as open and “...engaging in free exchange with the outer world...”⁸⁸ In fact, the healthy status of an individual depends on continuous physiological restructuring in open exchange with its environment (and other organisms). In a layman’s interpretation, ‘health’ is a measure of *internal stability* within an organism over time and in the face of inevitable (and indeed necessary) environmental change. In reference to the stability of living beings, Cannon recalls the comments of the French physiologist, Charles Richet, who in 1900 emphasised:

“‘The living being is stable,’ he wrote. ‘It must be so in order not to be destroyed, dissolved or disintegrated by the colossal forces, often adverse, which surround it. By an apparent contradiction it maintains its stability only if it is excitable and capable of modifying itself according to external stimuli and adjusting its response to the stimulation. In a sense it is stable because it is modifiable – the slight instability is the necessary condition for the true stability of the organism.’”⁸⁹

Unfortunately, however, ‘stability’ within an organism is often inappropriately associated with ‘balance’ in static terms (see Holling’s views on ‘stability’). Rather, what Cannon wished to engender in his concept of homeostasis is more the maintaining of a dynamic equilibrium or ‘steady state’, rather than a static or fixed equilibrium point. He expressly acknowledged living beings as “open systems” and, in justifying his concept of homeostasis, wished to convey a different meaning to that which was commonly associated with the term “equilibria”. Cannon explained:

“The constant conditions which are maintained in the body might be termed *equilibria*. That word, however, has come to have fairly exact meaning as applied to relatively simple physico-chemical states, in closed systems, where known forces are balanced. The coördinated physiological processes which maintain most of the steady states in the organism are so complex and so peculiar to living beings – involving, as they may, the brain and nerves, the heart, lungs, kidneys and spleen, all working coöperatively – that I have suggested a special designation for these states, *homeostasis*. The word does not imply something set and immobile, a stagnation. It means a condition – a condition which may vary, but which is relatively constant.”⁹⁰

⁸⁸ “The wonder increases when we realize that the system [our bodily structure] is open, engaging in free exchange with the outer world, and that the structure itself is not permanent but is being continuously broken down by the wear and tear of action, and as continuously built up again by processes of repair.” Cannon, W.B. *The Wisdom of the Body*. *op. cit.* p.20.

⁸⁹ Quoted in: *ibid.* p.21. [emphasis added.]

⁹⁰ *ibid.* p.24. [italics in original, underline added.]

Ecosystems as Cybernetic Systems

Seen as a cybernetic system, an ecosystem is an integrated whole or ‘information network’ with internal feedback loops that connect parts within the system.⁹¹ Feedback loops function to steer or regulate the system toward increased stability. In equilibrium-centred ecology, negative feedback counteracts any deviation from equilibrium and is therefore *self-righting*. Lotka and Volterra’s predator-prey relationship was cited as a simple example of negative feedback where two interacting populations regulate each other to maintain a reasonable constancy in numbers: An initial population overshoot of prey leads to an excessive number of offspring which is then, in turn, reduced by predation.⁹² Time lags in the responses of the two populations generate a series of oscillations (a dynamic steady state) which are gradually reduced to a constant value for each population. Eventually, when all oscillations are dampened, the system reaches a stable equilibrium.

Equilibrium-centred ecologists favour deviation-counteracting negative feedback because it is “stabilising”, whereas positive feedback is viewed as “disruptive”.⁹³ A movement away from equilibrium is positive if it *amplifies* deviations as a result of *self-reinforcing* processes. If left unchecked, however, it was claimed that a positive feedback can only be disastrous to the ecosystem’s long-term stability (e.g., a pest or epidemic outbreak). The term ‘stability’ may be understood as the constancy of numbers between interacting populations (as in the predator-prey example). However, stability is also used to refer to the system’s ability to remain reasonably similar to itself when faced by ‘external’ changes (such as climatic events and fires). Ramón Margalef summarises: “...in the first case the system is achieving a steady

⁹¹ In response to Engelberg and Boyarsky, “The noncybernetic nature of ecosystems,” Patten and Odum summarised their dialectical positions: “What the issue of the cybernetic versus noncybernetic nature of ecosystems reduces to at this point is philosophical acceptance or rejection, respectively, of a systems point of view. Either the ecosystem is orderly in the way we have described, or its lack of chaos just happened to develop from unregulated Darwinian struggles between competing populations, all alone and uninfluenced except by each other, on a neutral stage of life. The latter seems implausible to us.” Patten, B.C. and Odum, E.P. “The Cybernetic Nature of Ecosystems,” *The American Naturalist*. Vol.118, No.6. 1981, pp.890-891. Engelberg, J. and Boyarsky, L.L. “The Noncybernetic Nature of Ecosystems,” *The American Naturalist*. Vol.114, No.3. 1979, p.324.

⁹² Lotka, A.J. *Elements of Physical Biology*. *op. cit.* Volterra, V. “Variazioni e fluttuazioni del numero d’individui in specie animali conviventi,” *Mem. Acad. Lincei*. Vol.2. 1926, pp.31-113. [Translated in: Chapman, R.N. *Animal Ecology*. New York: McGraw-Hill. 1931.]

⁹³ Margalef, R. *Perspectives in Ecological Theory*. Chicago: The University of Chicago Press. 1968, p.2. Refer to Chapter One, “The Ecosystem as a Cybernetic System,” pp.1-25.

state under constant conditions; in the second case, however, the system has a greater resistance to changes that are external to the system in their origin.”⁹⁴

In conjunction with cybernetic principles, the concept of homeostasis was extended beyond the physiological condition of an individual living being to illustrate the behaviour of complex systems (such as ecosystems).⁹⁵ James Lovelock’s Gaia hypothesis suggested that the whole Earth can be regarded as a homeostatic entity.⁹⁶ Ecologists such as Bernard Patten and Eugene Odum strongly supported the analogy of ecosystems as cybernetic systems that are self-controlling and maintain their own ‘homeostatic balance’ (this being an indication of a ‘healthy’ ecosystem).⁹⁷ Odum defined ‘homeostasis’ in equilibrium-centred terms: “*Homeostasis* (*homeo* = same; *stasis* = standing) is the term generally applied to the tendency for biological systems to resist change and to remain in a state of equilibrium.”⁹⁸ Note that this static definition of homeostasis was precisely what Cannon wished to avoid when he originally introduced the term and defined the concept.

⁹⁴ *ibid.* p.11.

⁹⁵ Cannon hinted at the extension of his homeostasis concept to form general principles for the establishment, regulation and control of steady states in other kinds of organisation which suffer from distressing perturbations (even social and industrial forms of organisation). See: Cannon, W.B. *The Wisdom of the Body. op. cit.* pp.24-25. However, Przemyslaw Trojan warns against the direct analogy of homeostasis in an organism with ‘ecosystem homeostasis’: “If the thermoregulatory mechanism functions properly, the organism is fit and sound; if it fails, the organisms runs a temperature which is evidence of both an upset internal balance and an illness. There is no ground for an unequivocal recognition of this approach in relation to ecosystems. ...It would be ... more appropriate to assume that ecosystems possess homeostatic mechanisms varying in their precision and efficiency and, hence, that ecological systems in nature may have different degrees of equilibrium.” Trojan, P. *Ecosystem Homeostasis*. [Translated from Polish by I. Bagaeva.] The Hague: Dr W. Junk Publishers. 1984, p.20. [emphasis added.]

⁹⁶ “We have since defined Gaia as a complex entity involving the Earth’s biosphere, atmosphere, oceans, and soils; the totality constituting a feedback or cybernetic system which seeks an optimal physical and chemical environment for life on this planet. The maintenance of relatively constant conditions by active control may be conveniently described by the term ‘homoeostasis’ [sic].” Lovelock, J.E. *Gaia: A New Look at Life on Earth*. Oxford: Oxford University Press. 1979, p.11. See also: Lovelock, J.E. and Margulis, L. “Atmospheric homeostasis by and for the biosphere: the Gaia hypothesis,” *Tellus*. Vol.26. 1974, pp.1-10.

⁹⁷ Patten, B.C. and Odum, E.P. “The Cybernetic Nature of Ecosystems,” *op. cit.*

⁹⁸ Odum, E.P. *Fundamentals of Ecology. op. cit.* p.34. [italics in original, underline added.]

QUESTIONING EQUILIBRIUM

Holling's Resilience

In contrast to equilibrium-centred theories that view ecosystems as essentially 'static' (i.e., tending to resist change), C.S. Holling reviewed 'stability' in light of the transient behaviour of systems that are not near equilibrium. Rather than focusing on stability as the ability to resist small perturbations or recover quickly from temporary disturbance and return to an equilibrium state, Holling considered as more important the ecosystem's ability to persist over time – its *resilience*. He defined resilience as the ability of the system to absorb change and disturbance without undergoing 'dramatic alteration'.⁹⁹ The highly fluctuating systems (i.e., those exhibiting behaviour that is not equilibrium-seeking) that are frequently subject to random 'instabilities' actually prove, in the long run, to be immensely stable in that they can persist in the face of major disturbance or an unexpected event (e.g., a forest fire or flash flood).¹⁰⁰ The inverse seems to characterise apparently 'stable' ecosystems: "The more homogeneous the environment in space and time, the more likely is the system to have low fluctuations and low resilience."¹⁰¹ C.S. Holling and William Clark explain:

"Few systems which have persisted for extensive periods exist in a state of delicate balance, poised precariously in some equilibrium state. The ones which are, do not last, for all systems experience unexpected traumas and shocks over their period of existence. The ones which survive are explicitly those which have been able to absorb these stresses. They exhibit an internal resilience. Resilience, in this sense, determines how much disturbance – of kind, rate and intensity – a system can absorb before it shifts into a fundamentally different behavior."¹⁰²

While Holling distinguished his definition of resilience from equilibrium-centred concepts such as stability, he did not diverge altogether from equilibrium views. In acknowledging ecological systems as dynamic and nonlinear, he recognised the possibility that they may

⁹⁹ Resilience is "...a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables." Holling, C.S. "Resilience and Stability of Ecological Systems," *Annual Review of Ecology and Systematics*. Vol.4. 1973, p.14.

¹⁰⁰ "The balance between resilience and stability is clearly a product of the evolutionary history of these systems in the face of the range of random fluctuations they have experienced." *ibid.* p.18.

¹⁰¹ *ibid.*

¹⁰² Holling, C.S. and Clark, W.C. "Notes toward a science of ecological management," pp.247-251, in: Dobben, W.H. van and Lowe-McConnell, R.H. *Unifying Concepts in Ecology*. [Report of the plenary sessions of the First international congress of ecology, The Hague, the Netherlands, September 8-14, 1974.] The Hague: Dr. W. Junk B.V. Publishers. 1975, p.249.

move between “multiple equilibria states” (or “multiequilibrium structures”).¹⁰³ That is, there may be more than one ‘stability region’ or ‘domain’ for ecosystems: “A useful image is that of a landscape of hills and valleys with the ball journeying among them, in part because of internal processes and in part because exogenous events can flip the ball from one stability domain to another.”¹⁰⁴ Further, Holling reviewed classical succession theories and introduced a ‘figure-eight’ (∞) model of ecosystem functions ‘re-cycling’ through four stages: ‘exploitation’ and ‘conservation’ (i.e., Clements’ pioneer and climax states, respectively), followed by ‘creative destruction’ and ‘renewal’.¹⁰⁵ The figure presented a set pattern of change and implied ‘limited predictability’: ecosystems are predictable within a given domain (space and time), but, in the event of that domain changing (i.e., discontinuous change giving rise to ‘local surprise’), a new pattern will emerge.¹⁰⁶

May’s Chaotic Dynamics

A major blow was struck against classical equilibrium models in ecology during the 1970s. The increasing sophistication of computers greatly enhanced mathematical modelling of ecological systems; in particular, nonlinear dynamics. Robert May, the physicist-turned-ecologist, modelled the dynamics of two populations, which led him to surprising conclusions. When he modelled ‘simple’ nonlinear equations, he found they were capable of yielding chaotic behaviour. His 1974 publication in *Science* confirmed the existence of biotic instability in even the simplest nonlinear difference equations.¹⁰⁷ This suggested that in natural communities apparently random or ‘chaotic’ fluctuations (those considered anomalies in the equilibrium-centred view) may be the result of ‘deterministic chaos’.¹⁰⁸ This further suggested that chaotic systems are inherently unpredictable. Therefore, for

¹⁰³ Holling, C.S. “The resilience of terrestrial ecosystems: local surprise and global change,” pp.292-320, in: Clark, W.C. and Munn, R.E. (eds.) *Sustainable Development of the Biosphere*. Cambridge: Cambridge University Press. 1986.

¹⁰⁴ *ibid.* p.295.

¹⁰⁵ Figure 10.5: ‘The four ecosystem functions and their relationship to the amount of stored capital and the degree of connectedness.’ *ibid.* p.307. Cf. H.T. Odum’s ‘pulsing paradigm’ of ecosystems moving through stages of growth, succession, then decline.

¹⁰⁶ Refer below to Part Two discussion of “Ecosystems as Complex Systems”.

¹⁰⁷ May, R.M. “Biological Populations with Non-overlapping Generations: Stable Points, Stable Cycles and Chaos,” *Science*. Vol.186, No.4164. 1974, pp.645-647.

¹⁰⁸ Although chaos theory was discovered independently by several mathematicians at about the same period of time (see section below on Chaos Theory), it was Robert May’s research, beginning with his article published in *Nature* in 1976, that can be credited with creating the new field of ‘chaotic dynamics’ in biology. However, May’s contributions to ecology encompass far more than chaos theory; they include significant contributions to the diversity/stability controversy, predator-prey dynamics, and epidemiology. May, R.M. “Simple Mathematical Models with Chaotic Dynamics,” *Nature*. Vol.261. 1976, pp.459-467.

nonlinear systems, general laws could not be derived and simple principles in ecology were now considered an exception.

There are two main factors that may prevent a system from reaching a stable equilibrium.¹⁰⁹ Firstly, they are characterised by *biotic instabilities* of the sort that May discussed; e.g. length of food chain connections, intrinsic instability of behavioural patterns. Such instability is due to the inherent structural characteristics of a population/community (May's models measured the number of individuals and their interactions as defined by food webs).¹¹⁰ Secondly, even if natural systems are 'internally stable', they may be subjected to *stochastic events*; e.g. a flood, drought, earthquake, or invasive species. These are essentially unpredictable events that originate from 'outside' the system and cause 'disturbances' to the biotic population.

Equilibrium or Non-Equilibrium? Implications for Human-Nature Relationships

Proponents of equilibrium-centred views in ecology assert that an ecosystem (if it is not interrupted by 'external' changes) follows a reasonably deterministic path of successional development to culminate in a 'climax' or steady state, dynamic equilibrium. In that ideal end-state, it is claimed that the ecosystem is most stable. The notion of stability as a preferential condition of the natural environment has ancient roots in Western thinking, traced back to antiquity and the idea of a 'Balance of Nature'.¹¹¹ Cybernetic concepts extended the equilibrium paradigm to infer that any disturbance is a movement away from equilibrium which the ecosystem will then counteract through its network of feedback

¹⁰⁹ The following conditions for chaos in population models apply: "To display chaos, population models must contain time lags and strong density dependence: the time lags may be explicit as in discrete generation models, or implicit as in systems of species interacting with overlapping generations. Strong, overcompensating density dependence is necessary to prevent the system from achieving a stable equilibrium." Godfray, H.C.J.; Cook, L.M. and Hassell, M.P. "Population Dynamics, Natural Selection and Chaos," pp.55-86, in: Berry, R.J.; Crawford, T.J. and Hewitt, G.M. (eds.) *Genes in Ecology: The 33rd Symposium of the British Ecological Society 1991*. Oxford: Blackwell. 1992, p.56.

¹¹⁰ Note, however, that May's models are narrow (based on mathematical equations) and limited to numbers of organisms in one species (two populations). Furthermore, his pristine food chains are idealised abstractions, whereas real populations now face a range of biotic instabilities that are external to their original systems; i.e., invasive species, including humans.

¹¹¹ Egerton, F.N. "Changing Concepts of the Balance of Nature," *The Quarterly Review of Biology*. Vol.48, No.1. 1973, pp.322-350. This idea is related to equilibrium-centred ecology: "A mechanical system is at equilibrium if the forces acting on it are in balance. For example, when a body floats, the force of gravity is balanced by the buoyant force due to displacement of the liquid. The 'balance of nature' (Pimm 1991) is an extension of this idea to the natural world. The concept usually refers to steady flows of energy and materials, rather than to a system whose components do not change." Ludwig, D.;

loops. It is expected that a healthy ecosystem will tend to maintain itself in a homeostatic state, with negative feedback returning it to a stable condition (this being 'desirable' from an 'ecosystem health' perspective).¹¹² Advocates of equilibrium-centred ecology also assert that if positive feedback is not counteracted, an 'unhealthy imbalance' in the ecosystem will result as it grows 'out-of-control'. For example, invasive species will result in out-of-control growth dynamics if they are not 'managed' appropriately.

However, seen in this light, it is not only so-called 'pests' and 'weed' species that disrupt Nature's 'fragile ecological balance'; the major 'pathological species' is in fact Modern Man (the industrialised exploiter).¹¹³ Thus, the environmental crisis can be attributed to human-induced positive feedback: exponential population growth (Paul Ehrlich's *The Population Bomb*) and exploitation of natural resources to the extent that planetary 'carrying capacity' limits are rapidly being approached (The Club of Rome report *The Limits to Growth*).¹¹⁴ In some cases, the direct and sustained over-use of a natural resource, in spite of fore-warnings, has resulted in the collapse of that population (e.g., Atlantic fisheries off the eastern coast of Canada). In cybernetic terms, modern industrialised society behaves as an unconstrained positive feedback, destroying a *quality* of life (with built-in controls) through seemingly limitless *quantitative* expansion.¹¹⁵ The role of humans with respect to ecosystems appears two-fold: as the environmentally-destructive species (i.e., the inducer of positive feedback) who must, therefore, learn to become the wise 'manager' of the environment and so restore balance and stability into ecosystems (i.e., the generator of negative feedback):

Walker, B. and Holling, C.S. "Sustainability, Stability, and Resilience," *Conservation Ecology*. Vol.1, No.1. 1997. Internet site: <http://www.consecol.org/Journal/vol1/iss1/art7/index.html> (2/1/01)

¹¹² Robert Costanza summarises definitions of the concept of 'ecosystem health' in terms of health as: homeostasis; the absence of disease; diversity or complexity; stability or resilience; vigor or scope for growth; balance between system components. As measures of ecosystem health, stability and resilience refer to the ability of a healthy ecosystem to recover from a perturbation or stress. Costanza, R. "Toward an Operational Definition of Ecosystem Health," pp.239-256, in: Costanza, R.; Norton, B.G. and Haskell, B.D. (eds.) *Ecosystem Health: New Goals for Environmental Management*. Washington, D.C.: Island Press. 1992. This interpretation has cybernetic overtones (see above).

¹¹³ Eugene Odum comments: "*It is man the geological agent, not so much as man the animal, that is too much under the influence of positive feedback, and, therefore, must be subjected to negative feedback.*" Odum, E.P. *Fundamentals of Ecology*. *op. cit.* p.36. [italics in original.]

¹¹⁴ Ehrlich, P. *The Population Bomb*. New York: Ballantine. 1968. Meadows, D.H. *et al.* *The Limits to Growth*. *op. cit.*, "The State of Global Equilibrium," pp.161-188.

¹¹⁵ Mumford, L. "Quality in the Control of Quantity," pp.7-18, in: Ciriacy-Wantrup, S.V. and Parsons, J.J. (eds.) *Natural Resources: Quality and Quantity*. [Papers presented before a Faculty seminar at the University of California, Berkeley, 1961-1965.] Berkeley, Los Angeles: University of California Press. 1967.

“An ecologist must study the relationships between Man and the ecosystems, and the place of the human population in the economy of communities, both natural and man-made. He should also verify the justice of the accusation that Man’s interference is the chief force devastating otherwise well-functioning communities (Odum, 1959) or of the contrary belief that the human population can be regarded as the carrier of equilibrium in ecosystems.”¹¹⁶

Equilibrium-centred theories in ecology have been associated with the view that ecosystems are locally static (maintained by homeostatic self-regulation) and change only slowly at a ‘global’ scale of evolution. This view tends to treat instabilities and fluctuations as ‘accidents’ that any healthy ecosystem naturally ‘bounces back’ from. For example, a healthy forest ecosystem is considered to be one which quickly recovers its climax canopy structure following a major disturbance such as a storm, fire, or pest outbreak. The accepted resource management practice was to suppress perturbations (e.g., fight fires, eradicate pest species). In the long-term, however, suppression of internal instabilities and agents of environmental change may be ultimately pathological for the ecosystem’s ability to persist in the face of change. The results are seemingly paradoxical, as Holling (and others) observe: resource management regimes that attempt to ‘smooth out’ disturbances actually undermine the resilience of that ecosystem to cope with larger, unexpected events.

For example, the imposition of a regulated flow regime on a naturally-fluctuating river ecosystem undermines that system’s ability to absorb stresses in the event of a sudden change in water flow level (in addition to the more predictable seasonal variations in rainfall and snowmelt, rivers may be subject to unexpected, short-term events brought about by a sharp change in climatic conditions; e.g., resulting in a flood). If river flow levels are managed to a minimum flow regime all year round, over time the river ecosystem adjusts itself to an artificially-created equilibrium. In the event of high rainfall over a short period of time, when the dams can no longer cope with a certain volume of water, the excess water is then released down the natural channel of the river course. The ‘flow-on’ effects, however, may then prove to be disastrous for the river ecosystem: when it has adjusted itself to a more homogeneous state, its resilience to stress may have been weakened to the extent that it can no longer absorb major fluctuations from its regulated equilibrium.¹¹⁷ As a result, the ecosystem may be pushed beyond its limits of resilience and undergo a dramatic

¹¹⁶ Trojan, P. *Ecosystem Homeostasis. op. cit.* p.5.

¹¹⁷ There may be noticeable changes in the river ecosystem: riverbanks dry out and shingle fans become exposed; the natural habitats of birds, fish and molluscs are altered; this leads to systemic effects throughout the food-web.

upheaval of its structure and function (e.g. river fish and bird populations may collapse and become locally extinct).

The implication for resource management approaches based on resilience is that a certain amount of instability and environmental change is necessary for an ecosystem to persist.¹¹⁸ Yet, just which instabilities are 'good' for the ecosystem in the long-term cannot always be predicted (and are, ultimately, social judgements). Although Holling and others are critical of resource management attempts to counteract perturbations, some distinctions need to be made. His example of a pest outbreak (the spruce budworm in fir/spruce forest in Canada) refers to a species that has evolved and adapted to the ecosystem in question. In contrast, pest and weed control programmes dominate conservation management in New Zealand. However, the pests and weeds that those eradication programmes target are introduced species. Their successful invasion has rendered many indigenous (and endemic) species to the status of endangered species, such that the future survival of New Zealand indigenous ecosystems is now highly dependent on human intervention.

The question of whether an equilibrium state even exists for ecosystems or whether they are best described in non-equilibrium terms, continues as a controversial debate among ecologists.¹¹⁹ Associated with equilibrium-centred views is the ideal of a more-or-less predictable state of stability in Nature. In contrast, non-equilibrium concepts propose that Nature is inherently unpredictable, and that the dynamical behaviour of ecological systems is random and sometimes chaotic. This implies that one of the greatest challenges for Human-Nature relationships is to expect change (and learn to adapt with it) while remaining open to the unexpected. Yet, which changes are human societies to accept and adapt to? How do resource managers distinguish between 'instabilities' that may be necessary for strengthening an ecosystem's resilience to stress, and which fluctuations are

¹¹⁸ For example, in Yellowstone and Yosemite National Parks, 'controlled burning' has been introduced in park management practices. In those forest ecosystems, fire is a naturally-occurring 'biotic instability' critical to creating a heterogeneity among forest-growth stages. When fires were previously suppressed, the forest was held in a homogeneous, even stand of old-growth (i.e., Clements' 'monoclimax'). It was therefore vulnerable to any disturbance, and rather than fire being naturally restricted as a result of forest 'patchiness', fire spread quickly and with an intensity throughout the dry, mature trees.

¹¹⁹ See: Berryman, A.A. "Equilibrium or Nonequilibrium: Is that the Question?" *Bulletin of the Ecological Society of America*. Vol.68, No.4. 1987, pp.500-502. Koetsier, P.; Dey, P.; Mladenka, G. and Check, J. "Rejecting Equilibrium Theory – A Cautionary Note," *Bulletin of the Ecological Society of America*. Vol.71, No.4. 1990, pp.229-230. Murdoch, W.W. "Equilibrium and Non-Equilibrium Paradigms," *Bulletin of the Ecological Society of America*. Vol.72, No.1. 1991, pp.49-51.

the result of human-induced ‘engineered chaos’ that might engender ecosystem collapse?¹²⁰
Can either equilibrium or non-equilibrium perspectives provide clarity on these issues?

May’s models do not necessarily exclude the possibility of stable equilibrium points or stable cycles between two or more populations. However, he stresses the *unpredictability of dynamical behaviour* that might just as much result in “...totally aperiodic but bounded population fluctuations.”¹²¹ The implication of May’s “aperiodic but bounded” result is that in many situations humans cannot hope to manage a system in a way that maintains it close to a constant state. Rather, the challenge of resource management approaches is to enhance ecosystem processes that enable those natural systems to persist and change within certain limits (bounds). Within those bounded upper and lower limits, populations in an ecosystem may fluctuate randomly, almost ‘chaotically’. The implication is that ecosystems are not equilibrium-seeking, but may at times appear to reach stable or unstable equilibria.¹²²

O’Neill *et al.*’s review of the ecosystem concept provides illumination on the controversy between equilibrium versus non-equilibrium theory. The authors arrive at a non-dialectical conclusion. They point out that the *hierarchical scale* at which an ecosystem is defined determines whether an ecosystem may be seen as tending to equilibrium or more appropriately described as non-equilibrium (or even far from equilibrium). For example, a river is part of a landscape that is continuously changing and, when viewed over a long geologic time scale, the river must be considered as far from equilibrium. However, when the scale is reduced to a period of years, the river might be interpreted in equilibrium terms: self-regulating, negative feedback loops keep the drainage system in relative constancy. The controversy appears, therefore, as a problem of scale: “The ecological system can be in equilibrium at a lower level in the dynamic hierarchy while remaining far from equilibrium at a higher level.”¹²³ This points to a different way of looking at ecosystems with explicit awareness of the spatiotemporal scale at which systems are defined. Questions of hierarchy,

¹²⁰ “In the context of hierarchy theory, ecosystem organization appears as a system of constraints. We have identified incorporation as a mechanism by which ecosystems escape limitations imposed by a fluctuating environment. We have shown that the ecosystem shows instability whenever the constraint system is broken down. ...Environmental managers must be careful never to introduce a perturbation that will disturb the system’s natural constraint system.” O’Neill, R.V. *et. al. A Hierarchical Concept of Ecosystems. op. cit.* p.211.

¹²¹ May, R. “Biological Populations with Nonoverlapping Generations: Stable Points, Stable Cycles, and Chaos,” *op. cit.* p.645.

¹²² DeAngelis, D.L. and Waterhouse, J.C. “Equilibrium and Nonequilibrium Concepts in Ecological Models,” *Ecological Monographs*. Vol.57, No.1. 1987, pp.1-21.

¹²³ O’Neill, R.V. *et. al. A Hierarchical Concept of Ecosystems. op. cit.* p.202.

PART TWO – SYSTEMS SCIENCES AND COMPLEX ECOSYSTEMS

SYSTEMS PHILOSOPHY

The ‘culture of ecology’ has also been greatly influenced by the systems sciences and, of particular interest to Part Two of this chapter, the emerging perspective of ecosystems as complex systems. Although ‘systems’ thinking is certainly not a new way of thinking (that is, the recognition of organic wholes and their interacting parts is not limited to scientific enquiry or to these times), the rise of systems thinking in Western science can be traced to ‘organismic biologists’ in the 1920s.¹²⁴ Those biologists considered living organisms as integrated wholes and, in taking that holistic stance, encountered hostile opposition from reductionist scientists who viewed Nature in mechanistic terms. The mechanistic model reduces complex wholes to their component parts and attempts to analyse each part in isolation. That logic is firmly entrenched in Newtonian physics; the belief that Nature is essentially materialistic and obeys deterministic laws of motion. However, in the early twentieth century the revolutionary insights of quantum physics were to change all that. At the subatomic level, ‘things’ are not solid material objects but are webs of *relationships*.

Thinking in terms of relationships is the essence of systems philosophy. Complex systems are networks of autonomous parts interacting with each other in the context of integrated wholes. The complexity resulting from the richness of interactions has as a characteristic the emergence of properties that are not readily predicted or understood by analytical methods (no matter how sophisticated the technology). In part, this is because systems as a whole may undergo spontaneous self-organisation in adaptive response to changes in their wider contexts. Part Two explores the related theories of chaos, complexity and self-organisation that contribute to a new way of looking at the world in terms of systems of organised complexity. As a consequence of these discoveries, many of the dualities of Newtonian mechanics have been reassessed – order arising out of chaos, natural selection and self-organisation form counterparts, chance and necessity are complementary. Systems

¹²⁴ Capra highlights the tension between substance (matter, structure, quantity) and form (pattern, order, quality) as a dichotomy with ancient roots in Western philosophy and science. Opposing emphases on mechanistic versus systems-type thinking are evident in dialectical movements throughout Western history: Aristotlean philosophy, the Scientific Revolution and Cartesian mechanism, the Romantic movement, nineteenth-century mechanism, vitalism, organismic biology, systems thinking in science, quantum physics, Gestalt psychology, and ecology. See Capra’s *The Web of Life. op. cit.* especially pp.17-50, “The Rise of Systems Thinking.”

thinking supports a vision of humans reconnecting with place as ecological beings and in the hope that what may be revitalised is an ‘ecology of culture’.

Time in Perspective: The Second Law of Thermodynamics

In the ‘dynamics’ of Newtonian physics (which dominated Western scientific perceptions of Nature since the scientific revolution of the sixteenth and seventeenth centuries), time was of little concern since objects were conceived as travelling on linear trajectories. The motion of planets, the frictionless pendulum, simple machines; all were predictable with futures directly derivable from their initial conditions. By analogy, Nature was reckoned to work like ‘clockwork’; obeying laws of motion that, in principle, could be reversed – ‘unwound’ and ‘rewound’ by the clock-technician. Devised in this way, *time was reversible*. Yet the physics of the nineteenth century (i.e., classical thermodynamics) was to change this notion of time in quite a revolutionary way.

Thermodynamics introduced the notion of *time as irreversible*. The second law, in particular, was of grave concern for humans in the cosmological scheme of things. According to the second law of thermodynamics, entropy (as a measure of disorder) is always increasing in closed systems, until eventually a chemical equilibrium is reached: i.e., the state of maximum probability where ‘useful work’ can no longer be performed.¹²⁵ This is the case with nonrenewable energy resources such as fossil fuels (e.g., once a lump of coal is burned, it no longer has useful properties because ash cannot be converted into a source of heat). This illustration is apt, given that the second law of thermodynamics was formulated by French physicist Sadi Carnot in 1824 after studying efficiency in the steam engine. By extrapolation, the universe ‘as a giant steam engine’ (hence, closed system) will eventually reach maximal entropy: a uniform state of chemical and physical equilibrium.¹²⁶ While some

¹²⁵ “The second law of thermodynamics is concerned with the conversion of other forms of energy to heat and states ‘processes involving energy transformations will not occur spontaneously unless there is a degradation of energy from a non-random to a random form’. The conversion of energy from more ordered to more disordered form is often referred to as the production of entropy.” Calow, P. (ed.) *The Encyclopedia of Ecology and Environmental Management*. Oxford: Blackwell Science. 1998, p.238.

¹²⁶ It is important to note that the term ‘equilibrium’ is used in this section in reference to thermodynamic equilibrium, rather than the stability sense used in Part One (cybernetics, etc.). Unfortunately, the two very different meanings are often confused in ecological literature: “Equilibrium in a stability sense is different from equilibrium in a thermodynamic sense. The former refers to a balance of the forces acting on a system and has its origin in classical mechanics. *Thermodynamic equilibrium* refers to a system state that is uniform throughout and undistinguishable from its surroundings. For a biological system this represents death.” Kay, J.J. “A Nonequilibrium Thermodynamic Framework for Discussing Ecosystem Integrity,” *Environmental Management*. Vol.15, No.4. 1991, p.491. [italics in original.]

exceptions to the entropic trend were accepted, on a whole the dismal prediction of the universe heading toward 'heat death' held.¹²⁷

The classical laws of thermodynamics, however, were challenged (albeit indirectly) by Charles Darwin's theory of evolution, which took shape in the nineteenth century. Darwinian evolution also proposed a version of time as irreversible, but with natural selection favouring evolution toward increasing complexity and organisation.¹²⁸ This seemed to imply that things improve as time goes on. What was it to be: the implied eschatology of the second law as the 'entropic death of the universe' or Darwinian advancement up the ladder of hierarchical evolution toward the ever-evasive 'utopian paradise' of perfectly adapted natural forms? While time is irreversible for both theories, the 'arrow of time' clearly points in the opposite direction for each. Was time an indicator of progressive disorganisation or increasing organisation? The two philosophies appeared at once conflicting but, in themselves, both were convincing theories.

Bertalanffy's Theory of Open Systems

The biologist-cum-generalist Ludwig von Bertalanffy contended that the conventional laws of thermodynamics were concerned only with closed systems.¹²⁹ However, he observed that living organisms are 'open systems': "The organism is not a static system closed to the outside and always containing the identical components; it is an open system in a (quasi-) steady state ... in which material continually enters from, and leaves into, the outside environment."¹³⁰ Bertalanffy, among others, asserted that the 'apparent exception' to the

¹²⁷ "Probably the most fearsome result ever produced in the history of science was first announced by the German physicist Hermann von Helmholtz in 1854. The universe, claimed Helmholtz, is doomed. This apocalyptic prediction was based on the second law of thermodynamics. ...the entire cosmos slides irreversibly into a state of thermodynamic equilibrium. ...This gloomy prognosis is known as the 'heat death' of the universe, and it has strongly influenced science and philosophy over the last century." Davies, P. *The Cosmic Blueprint. op. cit.* p.19.

¹²⁸ Charles Darwin was not alone in proposing this line of thought. The vitalist, Henri Bergson described the biological concept of evolution as the "...creation of forms, continuous elaboration of what is absolutely new." Herbert Spencer argued the principle of the 'instability of the homogeneous'. For discussion of the philosophical implications of these aspects of evolution with respect to time, see: Prigogine, I. "Unity of Physical Laws and Levels of Description," pp.1-13, in: Grene, M. (ed.) *Interpretations of Life and Mind: Essays around the Problem of Reduction*. London: Routledge & Kegan Paul. 1971, especially p.2.

¹²⁹ Bertalanffy, L. von. *General System Theory: Foundations, Development, Applications*. New York: George Braziller. 1968, p.26.

¹³⁰ *ibid.* p.121.

second law of thermodynamics is *life* itself.¹³¹ Living, open systems take in ‘free energy’ from their environments and use this to continually renew their orderly structures in increasingly ‘complex organisations’. In this sense, open systems display a tendency toward ‘negative entropic’ behaviour – they are “islands of increasing order within a sea of entropy.”¹³² In fact, open systems rely on the continual throughput of free energy and materials in order to ‘perform work’. Bertalanffy’s ‘theory of open systems’ necessitated a major extension of the laws of physics.¹³³

Bertalanffy, however, is perhaps better known for his ‘general systems theory’.¹³⁴ He proposed a general theory of systems to highlight relationships and interconnectedness across a diversity of systems at varying scales (e.g., biological, ecological, social, psychological, and technological). Not surprisingly, general systems thinking was often met with criticism by defenders of traditional scientific disciplines that regarded the new interdiscipline of general systems theory as a threat to specialised knowledge.¹³⁵ In light of such criticism, systems philosopher Ervin Laszlo called for semantic clarification in interpretations of ‘general systems theory’ (i.e., with reference to a ‘*general theory* of systems’ and not a ‘theory of *general systems*’).¹³⁶ General systems thinkers sought a ‘general theory’

¹³¹ Note that while life is an ‘apparent exception’ to the second law of thermodynamics, this does not mean that the entropy law is reversed or does not apply. Within the environment as a whole system, entropy is still the overriding tendency. However, “...there can be subsidiary systems *within* the whole system, and these subsystems can get more organized as time goes on, rather than less. ...The system as a whole gets disorganized, whereas some of its parts become increasingly organized at the expense of the rest.” Laszlo, E. *The Systems View of the World: A Holistic Vision for Our Time*. New Jersey: Hampton Press. 1996, p.31. [italics in original.]

¹³² Wiener, N. *The Human Use of Human Being: Cybernetics and Society*. [Afterword by W.A. Rosenblith.] New York: Avon Books. 1967, pp.56-57. Wiener considers both the machine and the living organism to be ‘islands of decreasing entropy’: “The machine, like the living organism, is, ... a device which locally and temporarily seems to resist the general tendency for the increase of entropy. By its ability to make decisions it can produce around it a local zone of organization in world whose general tendency is to run down.” p.49. Likewise, Erwin Schrödinger acknowledged that a living organism “...can only keep aloof from it [maximum entropy], i.e. alive, by continually drawing from its environment negative entropy – which is something very positive...” Schrödinger, E. *What Is Life? op. cit.* p.71.

¹³³ “We need ... an extension and generalization of the principles of physics and physical chemistry, complementing the usual theory of reactions and equilibria in closed systems, and dealing with open systems, their steady states, and the principles governing them.” Bertalanffy, L. von. “The Theory of Open Systems in Physics and Biology,” *Science*. Vol.111. 1950, p.23.

¹³⁴ Bertalanffy is often fondly referred to by systems thinkers as the ‘grandfather of systems thinking’. As a generalist, Bertalanffy readily drew parallels across a variety of systems. See, for example, the range of topics explored by Bertalanffy in a book compiled and published after his death, from files and notes that he made. These include perspectives on art and science, biological and medical thought, cultures as systems, evolution, and a historical portrait of Nicholas of Cusa and his philosophy. Bertalanffy, L. von. *Perspectives on General System Theory: Scientific-Philosophical Studies*. [Edited by E. Taschdjian, with Forewords by M. von Bertalanffy and E. Laszlo.] New York: George Braziller. 1975.

¹³⁵ Lilienfeld, R. *The Rise of Systems Theory: An Ideological Analysis*. New York: John Wiley. 1978.

¹³⁶ The misinterpretation of general systems theory as a ‘theory of *general systems*’ engenders the image of large-scale entities: “The general system model is a general model of certain kinds of systems; and a

with the aim of contributing toward a unity of the sciences and a basis for interdisciplinary scientific education.

Bertalanffy's vision for the formulation of a new thermodynamics of open systems was achieved much later (in the 1970s) by Ilya Prigogine, with the advent of new mathematical techniques. Bertalanffy explained that work can only take place when the system is not at equilibrium although, he was careful to add, *tending toward a 'steady state'* (i.e., dynamic equilibrium). This marks an essential difference from Ilya Prigogine's far-from-equilibrium thermodynamics.

Order Out of Chaos: Prigogine's Dissipative Structures

A central and recurring theme in the work of Nobel prize-winning physicist Ilya Prigogine is that of *time*. Prigogine's 'dissipative structures'¹³⁷ place a new interpretation on the issue of irreversible time and its philosophical/cosmological implications.¹³⁸ In the sciences of the twentieth century, the constructive role of time was 'discovered'. Whereas classical thermodynamics and evolution theory placed alternate emphasis on the so-called opposites of 'chaos' and 'order' (or random disorganisation and increasing organisation, respectively), Prigogine viewed the two tendencies as "...intimately connected – one implies the other."¹³⁹ He explained that far-from-equilibrium, open systems 'feed' on the free or useful energy produced by the entropic processes that constantly break down existing structures. This entropic 'disorder'¹⁴⁰ is used by the system in order to maintain itself far-from-

truly general system theory is a general theory of systems on all levels, insofar as they exhibit invariances in their structure and function. To claim the contrary is simply to push the field into high level but vague generalizations, short-circuiting the potential of a multidisciplinary theory with important cross-level hypotheses." Laszlo, E. *Systems Science & World Order: Selected Studies*. Oxford: Pergamon Press. 1983, p.17.

¹³⁷ "We have called these new structures *dissipative structures* to emphasize the constructive role of dissipative processes in their formation." *ibid.* p.12. [emphasis in original.]

¹³⁸ While Prigogine's far-from-equilibrium thermodynamics asserted time as irreversible, Prigogine and Stengers are careful to point out that "*Irreversibility is not a universal property*", given certain situations where reversible time exists (e.g., a pendulum in the absence of friction). They further urge: "We must accept a pluralistic world in which reversible and irreversible processes coexist." *ibid.* pp.239, 257. [italics in original, underline added.] However, whereas reversibility applies to closed (isolated or artificial) systems tending toward equilibrium, irreversibility applies to the rest of the universe (i.e., open systems; living beings). The Newtonian paradigm, therefore, becomes the exception and not the rule.

¹³⁹ Prigogine, I. "The Philosophy of Instability," *Futures*. Vol.21, Issue No. 4. 1989, p.398.

¹⁴⁰ Note: Prigogine prefers 'disorder' over the word 'chaos' which is often associated with arbitrary randomness and homogeneity of matter in Newtonian terms.

equilibrium.¹⁴¹ Therefore, chaos/disorder is *necessary* to release the energy that is ‘locked up’ in existing structures. In turn, that freed energy becomes available for the evolution of new structures to emerge – sometimes ‘spontaneously’. Thus, what appears is a great universal ‘recycling’ of chaos and order, of destruction and creation, as Prigogine explains:

“...destruction of structures is the situation which occurs in the neighborhood of thermodynamic equilibrium. On the contrary ‘creation of structures’ *may* occur with specific non-linear kinetic laws of far-from-equilibrium conditions. The energy exchanged by the system with the outside world is then really transformed into structure.”¹⁴²

Prigogine co-authored the book *Order Out of Chaos* (with Stengers), adopting the aphorism to illustrate their interpretation of the complementary relation of chaos and order. They claimed that it is the irreversible processes (i.e., those associated with randomness and openness) that are the source of order, leading to higher levels of organisation such as dissipative structures. Thus, the second law of thermodynamics is reinterpreted so that “Under certain conditions, entropy itself becomes the progenitor of order.”¹⁴³ Chaos and order are no longer antagonistic: entropy loses its ‘either/or’ character. Alvin Toffler, in the “Foreword” to Prigogine and Stenger’s book, assures: “While certain systems run down, other systems simultaneously evolve and grow more coherent. This mutualistic, nonexclusive view makes it possible for biology and physics to coexist rather than merely contradict one another.”¹⁴⁴

Not only was the apparent dialectic of chaos and order reviewed in light of Prigogine’s far-from-equilibrium thermodynamic structures, but other key ‘competing opposites’ were also

¹⁴¹ Bertalanffy also attributed ‘negative entropic’ behaviour to open systems (following the lead of Wiener and his concept of cybernetics). However, both Bertalanffy and Wiener, and others, framed their theories within the dominant equilibrium-centred paradigm. Prigogine, however, stressed that self-organisation can take place when far from thermodynamic equilibrium and that open systems do not necessarily remain settled within one steady state equilibrium. In taking nonlinearity and instability seriously, Prigogine concluded that systems may suddenly undergo rapid and unpredictable changes that is not characterised by equilibrium-centred behaviour. Such change, furthermore, is quite ‘normal’ although it may be interpreted as a ‘surprise’ or ‘catastrophic’ event.

¹⁴² Prigogine, I. “Unity of Physical Laws and Levels of Description,” in: Grene, M. (ed.) *Interpretations of Life and Mind. op. cit.* 1971, p.2. [italics in original.]

¹⁴³ Toffler, A. “Foreword: Science and Change,” in: Prigogine, I. and Stengers, I. *Order Out of Chaos. op. cit.* p.xxi. [emphasis added.] “Today, we know that increase in entropy is not an increase in disorder, for order and disorder are created simultaneously.” Prigogine, I. “The Philosophy of Instability,” *Futures. op. cit.* p.398. While the second law is ‘reinterpreted’, it is not dismissed outright, as Capra explains: “In Prigogine’s theory the second law of thermodynamics is still valid, but the relationship between entropy and disorder is seen in a new light.” Capra, F. *The Web of Life. op. cit.* p.185.

¹⁴⁴ Toffler, A. “Foreword: Science and Change,” *op. cit.* pp.xxi-xxii.

redefined. Chance and necessity (or determinism) took on new meaning when seen in the context of dissipative structures and their evolutionary futures. Prigogine concluded that equilibrium (and close-to-equilibrium) and even linear nonequilibrium systems behave in more-or-less deterministic (i.e., predictable) ways.¹⁴⁵ That is, their behaviour is typically regressive and counteracts fluctuations from equilibrium in order to maintain stability (i.e., negative feedback). Cannon's homeostasis, Wiener's cybernetics and even von Bertalanffy's open systems theory all tend to emphasise equilibrium-centred philosophies, claiming that systems return to a favoured ('balanced') steady state following disturbance. A structure in 'true' equilibrium, such as a crystal, is maintained without any exchange of energy or matter. Prigogine's 'dissipative structures' maintain their structures far from thermodynamic equilibrium, through active and ongoing exchange of energy and matter with the 'outside' world.

When far from equilibrium, systems are much more sensitive to fluctuations – even seemingly minor perturbations.¹⁴⁶ If the fluctuation is amplified (i.e., positive feedback) then the system is pushed even further away from any so-called 'equilibrium' state and toward a 'threshold' or 'bifurcation point'. Amplifications may become autocatalytic (or self-accelerating), such as those that characterise self-organisation and self-reproduction of living beings.¹⁴⁷ At this point of instability, the causal relations are fundamentally nonlinear (so that even seemingly minor movements may yield large, unexpected changes). The system may then bifurcate (or 'flip') into a qualitatively different state altogether that is "...a new, more differentiated, higher level of 'order' or organization, which they

¹⁴⁵ Prigogine explains: "...thermodynamic description takes various forms according to the distance from equilibrium." Prigogine, I. *From Being to Becoming: Time and Complexity in the Physical Sciences*. San Francisco: W.H. Freeman. 1980, p.103. Three large fields in thermodynamics may be distinguished, these being viewed as forming three successive stages in its development: (1) 'equilibrium'; (2) 'near equilibrium' and; (3) 'far-from-equilibrium'. In the first stage, entropy production and forces are zero *at equilibrium*. In the second stage, *close-to-equilibrium*, thermodynamic forces are 'weak'. This includes *linear* nonequilibrium thermodynamic systems, expressed by the Onsager reciprocity relations where a steady nonequilibrium state may be reached (which is, importantly, *not* an equilibrium state). Prigogine relates this to the theorem of *minimum* entropy production for linear systems: "When the boundary conditions prevent the system from going to equilibrium it does the next best thing; it goes to a state of minimum entropy production – that is, to a state as close to equilibrium as 'possible.'" Prigogine, I. and Stengers, I. *Order Out of Chaos. op. cit.* p.139. The third thermodynamic stage is far-from-equilibrium, and is characterised by complicated functions of the forces in the *nonlinear* region.

¹⁴⁶ "All flows become turbulent at a 'sufficiently' large distance from equilibrium." *ibid.* p.144. [italics in original.]

¹⁴⁷ Autocatalysis, from the Greek, *autos* meaning "self", and *cata; lysis/luo* meaning "set free". Concise Oxford Dictionary. Grégoire Nicolis and Prigogine explain the significance: "...*self-reproduction*, one of the most characteristic properties of life, is basically the result of an autocatalytic cycle..." Nicolis, G. and Prigogine, I. *Exploring Complexity: An Introduction*. New York: W.H. Freeman. 1989, pp.17-18. [emphasis in original.]

[Prigogine and Stengers] call a 'dissipative structure.'"¹⁴⁸ Thus, those amplifying fluctuations may become sources of innovation and diversification, producing "...*order through fluctuations*".¹⁴⁹ In the worst case, the system may disintegrate into chaos or become extinct.

It is at this point of instability, Prigogine claims, where chance plays a key role. Which direction the system will take at this 'singular moment' is inherently impossible to determine in advance, for it faces multiple choices. "Chance nudges what remains of the system down a new path of development. And once that path is chosen (from among many), determinism takes over again until the next bifurcation point is reached."¹⁵⁰ However, the array of choice is neither infinite nor completely random (i.e., far-from-equilibrium, matter is not 'blind' as it is in equilibrium, but instead is able to 'perceive' and hence 'take into account' differences in the 'external' world).¹⁵¹ While chance alone will decide the new path the system takes, the degree of freedom of choice is affected by the system's 'past'. In this way, the system displays 'memory', as Grégoire Nicolis and Prigogine affirm: "The fact that only one among many possibilities occurred gives the system a *historical dimension*, some sort of 'memory' of a past event that took place at a critical moment and which will affect its further evolution."¹⁵² In this way, the behaviour of the dissipative structure is highly specific, dependent on its historic circumstances and chance factors: "There is no longer any universally valid law..."¹⁵³

¹⁴⁸ Toffler, A. "Foreword: Science and Change," in: Prigogine, I. and Stengers, I. *Order Out of Chaos*. *op. cit.* p.xv.

¹⁴⁹ Prigogine, I. *From Being to Becoming*. *op. cit.* p.132. [emphasis in original.]

¹⁵⁰ Toffler, A. "Foreword: Science and Change," *op. cit.* p.xxiii.

¹⁵¹ In fact, molecules can *communicate* with each another! Prigogine explains: "In equilibrium each molecule can only see its immediate neighbours. Out of equilibrium the system can see the totality of the system. One could almost say that matter in equilibrium is blind, and out of equilibrium it starts to see." Prigogine, I. "The Philosophy of Instability," *Futures*. *op. cit.* p.399.

¹⁵² Nicolis, G. and Prigogine, I. *Exploring Complexity*. *op. cit.* p.14. [italics in original.] Initial conditions are forgotten in classical thermodynamics, but not in far-from-equilibrium thermodynamic systems.

¹⁵³ Prigogine, I. and Stengers, I. *Order Out of Chaos*. *op. cit.* p.145. "The remarkable feature is that when we move from equilibrium to far-from-equilibrium conditions, we move away from the repetitive and the universal to the specific and the unique. Indeed, the laws of equilibrium are universal. Matter near equilibrium behaves in a 'repetitive' way. On the other hand, far from equilibrium there appears a variety of mechanisms corresponding to the possibility of occurrence of various types of dissipative structures." *ibid.* p.13. [underline added.]

CHAOS AND COMPLEXITY

Chaos Theory

Chaos Theory, which took physics by storm in the early 1970s and 1980s, affirmed many of the conclusions previously hinted at by Prigogine and others. With the advancement of computers, nonlinear mathematics (which had been conveniently ignored by most scientists as erroneous exceptions to Newton's laws of motion) was made more accessible. Largely as a result of individuals' experimental forays with early computers, 'chaos' was 'discovered' and, for the first time, taken seriously by scientists. Edward Lorenz, a key instigator in the new field of Chaos, was initially alarmed at the results of his computer print-outs. In attempting to repeat a series of mathematical projections, he had rounded the input data of the second run to a different decimal place. At first, comparison between the two runs showed a close fit. Yet, over time, the seemingly insignificant error (or difference) in the initial inputs quickly magnified such that the two runs became virtually unrecognisable.

Lorenz first published his results in 1963 in the field of meteorology (on atmospheric circulation).¹⁵⁴ The implications for weather forecasting were significant: due to a 'sensitive dependence on initial conditions' it was not possible to forecast future weather patterns beyond a few days.¹⁵⁵ This characteristic became known as the 'Butterfly Effect'; a butterfly flapping its wings in Toronto today can alter the course of a storm in Palmerston North next month. Whereas for linear systems where cause-effect relations are proportional and therefore relatively simple to predict, in nonlinear systems (i.e., most of Nature) even tiny perturbations can have unexpectedly large consequences.¹⁵⁶

¹⁵⁴ Lorenz, E.N. "Deterministic Nonperiodic Flow," *Journal of the Atmospheric Sciences*. Vol.20. 1963, pp.130-141.

¹⁵⁵ Davies points out: "...it is becoming increasingly obvious that dynamical systems generally have regimes where their behaviour is chaotic. In fact, it seems that 'ordinary', i.e., non-chaotic, behaviour is very much the exception: *almost all* dynamical systems are susceptible to chaos. The evolution of such systems is exceedingly sensitive to the initial conditions, so that they behave in an essentially unpredictable and, for practical purposes, random fashion." Davies, P. "Chaos," pp.35-56, *The Cosmic Blueprint. op. cit.* p.53. [emphasis in original.]

¹⁵⁶ It is now generally accepted that linearity is the exception in Nature. Sound and light are examples of linear systems: sound waves intermingle but retain their separate identities and, similarly, light waves operate independently, passing through each other as if nothing was there. Because of this, different colours and sounds can be distinguished (e.g., different instruments and notes in a symphony orchestra). However, most of Nature is not linear, such as the human brain and the economy. Despite the knowledge that ecosystems are fundamentally nonlinear, linear equation models are the most commonly used

Lorenz's insight may have appeared to some to imply a world out of control – the popular misconception of 'chaos' as negative and destructive. Yet dynamic chaotic systems are not completely random nor incoherent messes. Rather, chaotic systems display a *pattern* which is at once intricate and richly complex yet, surprisingly, may be traced to quite simple origins. Such patterns *emerge* from complex phenomena in continually novel ways, rendering it difficult to make predictions even when the initial state is specified, as John Holland explains: "Still, by attending to selected details, we can usually extract recurring patterns, like fronts, in the complex unfolding sequence. When these recurring patterns are regularly associated with events of interest, we call them emergent properties."¹⁵⁷ The Lorenz Attractor (the computer-generated picture representing weather patterns over time) revealed a fine geometrical structure hidden within a disorderly stream of data: "...order *masquerading* as randomness."¹⁵⁸ The pattern that appears, however, is never an exact repetition. Physicist James Gleick confirms this in his description of the Lorenz Attractor:

"...the map [of Lorenz's system] displayed a kind of infinite complexity. It always stayed within certain bounds, never repeating itself, either. It traced a strange, distinctive shape, a kind of double spiral in three dimensions, like a butterfly with its two wings. The shape signaled pure disorder, since no point or pattern of points ever recurred. Yet it also signaled a new kind of order."¹⁵⁹

Fractals: Patterns Without Repetition

A similar emphasis on pattern was displayed in the fractal geometry of mathematician Benoît Mandelbrot.¹⁶⁰ Observing Nature directly, Mandelbrot grew increasingly dissatisfied with Euclidean geometry with its focus on quantities and formulaic smoothness. The world that Mandelbrot took seriously and sought meaning in, however, was characterised by

equations to describe ecosystems, e.g., food web patterns. See the arguments put forward by Bruce Hannon and Bernard Patten who essentially argue that linear equations are just as good as nonlinear equations in describing the structure/dynamics of ecosystems. Hannon, B. "Linear Dynamic Ecosystems," *Journal of Theoretical Biology*. Vol.116. 1985, pp.89-110. Patten, B.C. "Ecosystem Linearization: An Evolutionary Design Problem," *The American Naturalist*. Vol.109, No.969. 1975, pp.529-539. Refer to discussion below.

¹⁵⁷ Holland, J.H. *Emergence: From Chaos to Order*. Reading, Massachusetts: Addison-Wesley. 1998, p.45 [emphasis added.] See below for a discussion of 'perpetual novelty' and 'emergence'.

¹⁵⁸ Gleick, J. *Chaos: Making a New Science*. New York: Penguin Books. 1987, p.22. [italics in original.]

¹⁵⁹ *ibid.* p.30. [emphases added.]

¹⁶⁰ Benoît Mandelbrot coined the term 'fractal' from the adjective *fractus* and the verb *frangere*, from Latin meaning; "to break". 'Fractal' is related etymologically to the words 'fraction' and 'fragment'; meaning "irregular or fragmented."

irregularities and odd shapes: “clouds are not spheres, mountains are not cones.”¹⁶¹ Rather, the roughness of Nature (its *fractal*/fractured quality) displayed a deep richness that could, mathematically, only be approached qualitatively.¹⁶² Mandelbrot considered the irregularity of a coastline, and, in exploring the question of the length of the coast of Britain, he concluded that it was, in a sense, infinitely long: “...a fractal is a way of seeing infinity.”¹⁶³ The coastline had a kind of ‘bounded infinity’, dependent on scale (i.e., the smaller the scale of measurement, the greater the measured length of the coastline).¹⁶⁴ Fractal geometry therefore works in dimensions, rather than the exact quantitative measurements of conventional mathematics.¹⁶⁵

Fractals reveal further startling results: “...fractal meant self-similar. Self-similarity is symmetry across scale. It implies recursion, pattern inside pattern.”¹⁶⁶ Such patterns, however, never exactly repeat themselves and hence are never wholly predictable (as the strange attractors in Chaos Theory affirm). By repeating computerised geometrical operations over a period of time, the continual iterations found expression as beautiful pictorial creations – magnificent whorls and spirals unfolding in ever-surprising intricate detail and complexity.¹⁶⁷ In focusing on any one ‘part’ of the fractal picture, what appeared was a close resemblance of that part with the greater picture from which it was extracted. For example, a sprig plucked from a broccoli plant could easily be mistaken for the whole plant itself, when viewed out of its scale-dependent context. Mandelbrot became aware that this quality of self-similarity was prevalent throughout Nature and it was even suggested

¹⁶¹ Mandelbrot explains: “Most of nature is very, very complicated. How could one describe a cloud? A cloud is not a sphere. ... It is like a ball but very irregular. A mountain? A mountain is not a cone. ... If you want to speak of clouds, of mountains, of rivers, of lightning, the geometric language of school is inadequate.” Mandelbrot, B.B. *The Fractal Geometry of Nature*. New York: Freeman. [Second Edition.] 1983 [First Edition in French, 1975].

¹⁶² “Just as the concept ‘sphere’ unites raindrops, planets, and suns, so we now perceive a unity between such diverse objects as trees, clouds, and coastlines. They are irregular, but with the same kind of irregularities. Before the simplicity ‘fractal’ was introduced, it was not only impossible to express this unity, it was pretty much impossible to notice it.” Cohen, J. and Stewart, I. *The Collapse of Chaos: Discovering Simplicity in a Complex World*. New York: Penguin Books. 1994, p.23.

¹⁶³ Gleick, J. *Chaos. op. cit.* p.98.

¹⁶⁴ Mandelbrot, B.B. “How Long is the Coast of Britain?”, pp.27-79, *Fractals: Form, Chance, and Dimension*. San Francisco: W.H. Freeman and Company. 1977.

¹⁶⁵ The new mathematics represents a shift from quantity to quality, as Capra confirms: “Whereas conventional mathematics deals with quantities and formulas, dynamical systems theory deals with quality and pattern.” Capra, F. *The Web of Life. op. cit.* pp.135-136.

¹⁶⁶ Gleick, J. *Chaos. op. cit.* p.103. [emphasis added.]

¹⁶⁷ For a visual display of fractals in motion, see: Clarke, A.C. and Lesmoir-Gordon, N. (writers) *The Colours of Infinity*. Gordon Films. [Video.] 1995.

that fractal geometry was Nature's own geometry.¹⁶⁸ It is important to emphasise that this quality of self-similarity is not the same as the reductionist methodology (which deals with the part-whole relation through analysing parts), as Gleick confirms:

“At first blush, the idea of consistency on new scales seems to provide less information. In part, that is because a parallel trend in science has been toward reductionism. Scientists break things apart and look at them one at a time. If they want to examine the interaction of subatomic particles, they put two or three together. There is complication enough. The power of self-similarity, though, begins at much greater levels of complexity. It is a matter of looking at the whole.”¹⁶⁹

The Sciences of Complexity

Chaos Theory turned out to be a precursor to an even wider field of enquiry, collectively called the sciences of Complexity. Whereas Chaos highlighted the inherent unpredictability of many living systems, Complexity sought answers to more fundamental principles – those of growth and structure in the universe, of evolution and organisation into complex wholes. To an extent, it could appear that ‘complexity’ was all-encompassing. Indeed, the collection of leading intellectuals in the sciences of Complexity who loosely formed the Sante Fe Institute in New Mexico, came from disparate academic backgrounds but were united through their similar approaches to studying dynamical systems.¹⁷⁰ In essence, they sought to reveal the underlying simplicity that they proclaimed to be evident across many (if not all) living, complex systems, be they ecological or social systems (i.e., political constructions, business organisations, economies).

The usual interpretation of the word ‘complexity’ is to juxtapose it with ‘simplicity’.¹⁷¹ In this sense, complexity would imply a movement toward something ‘better’, i.e., more

¹⁶⁸ “The patterns that people like Robert May and James Yorke discovered in the early 1970s, with their complex boundaries between orderly and chaotic behavior, had unsuspected regularities that could only be described in terms of the relation of large scales to small. The structures that provided the key to nonlinear dynamics proved to be fractal. And on the most immediate practical level, fractal geometry also provided a set of tools that were taken up by physicists, chemists, seismologists, metallurgists, probability theorists and physiologists. These researchers were convinced, and they tried to convince others, that Mandelbrot’s new geometry was nature’s own.” Gleick, J. *Chaos. op. cit.* p.114. Refer to Part One above for discussion of Robert May’s chaotic dynamics.

¹⁶⁹ *ibid.* p.115. [emphasis added.]

¹⁷⁰ For an introduction to the diverse interests and backgrounds of the key intellectuals associated with the Sante Fe Institute from its founding years through to the early 1990s, see: Waldrop, M.M. *Complexity: The Emerging Science at the Edge of Order and Chaos*. London: Penguin Books. 1992.

¹⁷¹ The etymology of the words suggest their distinction: *com-plex*: many folds; *sim-ple(x)*: one fold.

desirable because it is more 'advanced' or 'evolved'.¹⁷² However, proponents of Complexity (as a science) are quick to point out that the dialectic that places complexity–simplicity as opposites is itself an overly simplistic explanation (or misrepresentation).¹⁷³ Whereas classical physics regarded complex systems as requiring complex descriptions, the understanding that is emerging from studies in the sciences of Complexity is very different, as Chris Langton of the Sante Fe Institute explains: “The most surprising lesson we have learned from simulating complex physical systems on computers is that *complex behavior need not have complex roots*.”¹⁷⁴ For nonlinear dynamical systems it is possible that vastly complex patterns arise from surprisingly simple origins (e.g., Chaos Theory).¹⁷⁵ Or, as Nobel prize winning physicist Murray Gell-Mann phrases it: “Surface complexity arising out of deep simplicity.”¹⁷⁶ Conversely, complex causes may produce simple effects: a sort of “antichaos”, as described by Stuart Kauffman (also of the Sante Fe Institute).¹⁷⁷ Jack Cohen and Ian Stewart summarise the complicated relations of complexity and simplicity:

¹⁷² There is much confusion arising from different semantic interpretations of the word ‘complexity’ (i.e., is more complex the same as more ordered? Is that ‘better’?). Often ‘complexity’ is conflated with ‘progress’; the notion that evolution proceeds along a path toward inevitable improvement. Many biologists are uncomfortable with this notion because of its connotations with an external guiding force (e.g., vitalism, teleology, etc.) and with a heteronomic hierarchy of creation (e.g., the Great Chain of Being, Herbert Spencer’s Law of Evolution). Norman Packard’s response is typical of many Complexity scientists: “People don’t like it [progress in evolution] for sociological, not scientific, reasons. I don’t impute a value judgement to computational superiority.” Lewin, R. *Complexity: Life At the Edge of Chaos*. London: JM Dent. 1993, p.139. See especially pp.132-149.

¹⁷³ The recognition that complexity and simplicity are not dialectical opposites is not unique to Complexity scientists. Coming from a very different perspective, Panikkar suggests that: “...*simplicity and complexity are not dialectically opposed*, because the ultimate structure of the universe does not need to be conceived as dialectical. Their relation is dialogical. They have meaning not in opposing and contradicting each other so as to generate some ‘higher’ synthetic amalgam, but as a mutually constitutive relation, so that the one does not make sense without the other and each mutually supports the other.” Panikkar, R. *Blessed Simplicity: The Monk as Universal Archetype*. New York: The Seabury Press. 1982, p.127. [italics in original.]

¹⁷⁴ Waldrop, M.M. *Complexity. op. cit.* p.279. [emphasis in original.]

¹⁷⁵ Note: this applies even to linear systems. Both linear and nonlinear systems may be complicated and display rich interconnections. For example, foodwebs may be modelled as systems of simultaneous linear equations with cumulative cause-effect links between components. The essential difference, however, is that while linear models may be complex they are relatively predictable, whereas nonlinear dynamical systems are fundamentally unpredictable. In theory, linear models may account for a ‘snapshot’ representation of an ecosystem. However, in reality nonlinearity characterises complex systems and, consequently, they are very difficult to model. The application of linear models to complex (nonlinear) ecosystems is an ongoing issue of debate in ecology (e.g., network modelling). For example, Bernard Patten views ecosystems as linear while Dwyer and Perez present evidence for their nonlinearity. Patten, B.C. “Ecosystem Linearization...” *op. cit.*; Dwyer, R.L. and Perez, K.T. “An Experimental Examination of Ecosystem Linearization,” *The American Naturalist*. Vol.121, No.3. 1983, pp.305-323. O’Neill *et al.* address this issue: “It has been argued (Patten 1975) that since ecosystems actually behave as though they were linear, linear models are an appropriate approach to ecosystem dynamics. ... The basic limitation of the linear model is that it emphasizes what the system is allowed to do under the current, undisturbed hierarchical constraints. ...the linear model cannot simulate what the system is capable of doing if the constraints are changed.” O’Neill, R.V. *et al.* *A Hierarchical Concept of Ecosystems. op. cit.* p.162.

¹⁷⁶ Lewin, R. *Complexity. op. cit.* p.14.

¹⁷⁷ Kauffman, S.A. “Antichaos and Adaptation,” *Scientific American*. Vol.265, No.2. 1991, pp.64-70.

“Chaos theory tells us that simple laws can have very complicated – indeed, unpredictable – consequences. Simple causes can produce complex effects. Complexity theory tells us the opposite: Complex causes can produce simple effects. And conventional reductionist science tells us that inside the great simplicities of the universe we find not simplicity but overwhelming complexity.”¹⁷⁸

Organised Complexity: Kauffman’s Self-Organisation

The semantic confusion associated with the word ‘complexity’ could be attributed to two quite different approaches in the sciences.¹⁷⁹ From the biologists’ perspective, complexity may be considered a measurement of structure and physical form. A strictly Darwinian stance of evolutionary progress views ‘natural selection’ as favouring more complex adaptations. Through the study of anatomical structure, however, it is questionable whether ‘morphological complexity’ has changed (for better or worse) over time.¹⁸⁰ However, the kind of complexity that physicists associated with the Sante Fe Institute stressed had to do with the ability to process information and, in this sense, *organisation* was of key concern. In his pioneering study of self-organisation and adaptation in complex systems, Kauffman puts in perspective the major paradigmatic themes in science over the centuries:

“Eighteenth-century science, following the Newtonian revolution, has been characterized as developing the sciences of organized simplicity, nineteenth-century science, via statistical mechanics, as focusing on disorganized complexity, and

¹⁷⁸ Cohen, J. and Stewart, I. *The Collapse of Chaos. op. cit.* p.2. Cohen and Stewart introduce new terminology as a way of dealing with the cross-over of simplicity and complexity. They name their concepts: ‘simplicity’ and ‘complicity’, meaning: “Simplicity is the tendency of simple rules to emerge from underlying disorder and complexity, in systems whose large-scale structure is independent of the fine details of their substructure. Complicity is the tendency of interacting systems to coevolve in a manner that changes both, leading to a growth of complexity from simple beginnings – complexity that is unpredictable in detail, but whose general course is comprehensible and foreseeable.” (p.3.) As an interesting aside, the word ‘complicity’ is defined in the Concise Oxford Dictionary as: “partnership in a crime of wrongdoing” (as in ‘accomplice’), which may be a determining factor in whether Cohen and Stewart’s new word catches on in the scientific community!

¹⁷⁹ See: Lewin, R. *Complexity. op. cit.* p.183, for an explanation of the different way biologists and physicists view of the world.

¹⁸⁰ Dan McShea, a biologist, has measured the vertebral columns of animal ancestors and their descendants as an attempt to form a measure of morphological complexity. He concludes that he sees no evidence of increasing complexity. Refer: *ibid.* pp.132-137. Roger Lewin’s investigations of ‘complexity’ lead him to discussions with biologist Brian Goodwin who explains that the two dominant views of morphology of organisms (of Western origin) are Divine Design with God the Creator of Nature and Darwin’s natural selection. The latter is all-powerful in our scientific culture (see Richard Dawkin’s *The Blind Watchmaker.*) Goodwin, who favours theories of self-organisation in biology, comments: “Both explanations focus on function, one is theological, the other scientific. But, I believe, the second is as wrong as the first – almost.” *ibid.* p.34.

twentieth- and twenty-first-century science as confronting organized complexity. Nowhere is this confrontation so stark as in biology.”¹⁸¹

The biologists and physicists’ differing perspectives do not necessarily need to be seen as contradictory. The biologist looks for changes in the individual animal (or species) which adapts through natural selection to changes in the wider environment. The physicist of Complexity sciences, however, attempts to look at the ‘big picture’; at systemic change. Sante Fe theorists would tend to agree with Norman Packard’s explanation: “...I’m not saying that every organism need itself become more complex; ...[but] the system as a whole undoubtedly becomes more complex...”¹⁸² Kauffman confirmed this view through his study of autocatalytic sets, whereupon he asserts: “The essence [of life] was not to be found in any individual piece of the set, but in the overall dynamics of the set: its collective behavior.”¹⁸³ The two perspectives highlighted the clash between studies that focus on individual components of a system (typical of the reductionist approach in science) and those that view systems as constituted by basic laws and components, but recognise that those components interact dynamically such that it is their organisation that indicates complexity.¹⁸⁴

In hindsight, Kauffman admits that he too easily dismissed the biologists’ Darwinian theory of ‘natural selection’. He had argued (and continues to) that life was not just a random accident, but was part of Nature’s incessant compulsion for self-organisation, that is: “Order emerging spontaneously from molecular chaos and manifesting itself as a system

¹⁸¹ Kauffman, S.A. *The Origins of Order: Self-Organization and Selection in Evolution*. New York: Oxford University Press. 1993, p.173. [emphasis added.] Kauffman’s summary reiterates the terms first introduced by Warren Weaver for describing approaches to dealing with complex problems. Weaver, W. “Science and Complexity,” *American Scientist*. Vol.36, No.4. 1948. Gerald Weinberg extended this classification of methodological approaches to systems of differing complexity (based on the number of components), and distinguished between ‘organised simplicity’ as dealing with ‘small-number systems’; ‘disorganised complexity’ with ‘large-number systems’; and ‘organised complexity’ as falling within the region of ‘middle-number systems’. Ecosystems exemplify the latter, for they show considerable internal structuring and are far from random. Furthermore, they are characterised by intermediate number of components and structured interrelationships among these components. The number of components may be relatively simple, but the organisation is complex (e.g., nonlinear, chaotic behaviour). Weinberg, G.M. *An Introduction to General Systems Thinking*. New York: John Wiley. 1975.

¹⁸² Lewin, R. *Complexity. op. cit.* p.137. [emphasis added.]

¹⁸³ Waldrop, M.M. *Complexity. op. cit.* 1992, p.124.

¹⁸⁴ “Whenever you look at very complicated systems in physics or biology, he [Stephen Wolfram] said, you generally find that the basic components and the basic laws are quite simple; the complexity arises because you have a great many of these simple components interacting simultaneously. The complexity is actually in the organization – the myriad possible ways that the components of the system can interact.” *ibid.* p.86. [emphasis added.]

that grows.”¹⁸⁵ Through collaboration with neo-Darwinist population biologist John Maynard Smith, and in conjunction with Sante Fe colleagues, Kauffman came to recognise that self-organisation and natural selection need not be adversarial views of complexity in biological evolution.¹⁸⁶ Rather, they could be considered complements; a position that Kauffman now actively promotes:

“The existence of spontaneous order is a stunning challenge to our settled ideas in biology since Darwin. Most biologists have believed for over a century that selection is the sole source of order in biology, that selection alone is the ‘tinkerer’ that crafts the forms. But if the forms selection chooses among were generated by laws of complexity, then selection has always had a handmaiden. ...

The revision of the Darwinian worldview will not be easy. ... Without a framework to embrace both self-organization and selection, self-organization has been rendered almost invisible, like the background in a gestalt picture. With a sudden visual shift, the background can become the foreground, and the former foreground, selection, can become the background. Neither alone suffices. Life and its evolution have always depended on the mutual embrace of spontaneous order and selection’s crafting of that order. We need to paint a new picture.”¹⁸⁷

The Edge of Chaos

The most convincing case, the one that eventually persuaded Kauffman to transform his objection to natural selection theory to an acceptance of selection as complementary to self-organisation, was the ‘edge of chaos’ concept. Stuart Kauffman, Chris Langton and Norman Packard (all associated with the Sante Fe Institute) were all, independently, working on the edge of chaos idea throughout the 1980s. Whereas Kauffman approached the idea from his experiments with Boolean networks, Packard and Langton looked at various transition stages of cellular automata. Langton came to a startling conclusion that the region between order (cellular automata classes I and II) and chaos (class III) was a ‘phase transition’ (class ‘IV’) that he attributed to ‘complexity’ in dynamical systems. This in-between region acquired the apt description of the ‘edge of chaos’.¹⁸⁸

¹⁸⁵ *ibid.* p.124.

¹⁸⁶ “...the new science of Complexity includes external as well as internal factors. The external factor is selection.” Lewin, R. *Complexity. op. cit.* p.148.

¹⁸⁷ Kauffman, S.A. *At Home in the Universe: The Search for Laws of Self-Organization and Complexity.* New York: Oxford University Press. 1995, pp.8-9. [emphasis added.]

¹⁸⁸ “Whereas Chris had termed the transition point ‘the onset of chaos,’ Norman coined the phrase ‘the edge of chaos.’ It is much more evocative, and brings forth the image of being poised in space, tentative, dangerous even, yet full of potential. Like all powerful phrases, the edge of chaos has stuck, and has become iconic for the immanent creativity of complex systems.” Lewin, R. *Complexity. op. cit.* pp.53-54. [emphasis added.]

The different phases of water are often drawn upon by Complexity theorists as a metaphor to encourage understanding of the edge of chaos concept. At one extreme is order, which may be compared to the solid phase of ice where molecules are rigidly locked to a structure. At the other extreme is chaos; the gaseous turbulence of steam where molecules continually tumble over each other in a seemingly random fashion. The edge of chaos region could be then be likened to the liquid water phase (between ice and steam). And yet the edge of chaos is not purely fluid either. Somewhere between the two fundamental phases of matter; i.e., solid and fluid, is a third fundamental class. It is at the boundary region where the ordered regime of frozen components just begins to ‘melt’, yet has not gone as far as the chaotic regime where no frozen components exist (all is turbulence; fluid or gas). The distinction may be subtle, but is important.¹⁸⁹

As Langton observed, in first-order phase transitions there exists only an *either-or* choice, such that molecules are forced into either rigid order or turbulent chaos. In the second-order phase transitions, however, the choice is less abrupt; there exists the possibility that chaos *and* order combine, and that there is a transition region where the balance is perfect. If life is balanced on the edge of chaos, as Kauffman alleges, then it is balanced on an arête where danger lurks on either side: either too much chaos or too much order. Life, in this sense, is a continual negotiation of that balance: an adaptive, flexible response to changes in a moment-by-moment dance; a true appreciation of what it means to be ‘alive’. Langton expresses:

“But right *at* the transition, the balance is perfect: the ordered structures fill a volume precisely equal to that of the chaotic fluid. Order and chaos intertwine in a complex, ever-changing dance of submicroscopic arms and fractal filaments. The largest ordered structures propagate their fingers across the material for arbitrarily long distances and last for an arbitrarily long time. And nothing ever really settles down.”¹⁹⁰

Kauffman’s central hypothesis is that living systems exist in that boundary region near the edge of chaos. Where he had previously asserted that self-organisation is the most powerful force in biology, Kauffman now concedes that living systems are not deeply entrenched in the ordered regime. Natural selection is like a law of motion: “...a force that is constantly

¹⁸⁹ Both Langton and Kauffman draw on the water metaphor. Refer to: Waldrop, M.M. *Complexity. op. cit.* pp.234-235, 293 (respectively). Also: Kauffman, S.A. *At Home In the Universe. op. cit.* p.26.

¹⁹⁰ Waldrop, M.M. *Complexity. op. cit.* pp.229-230. [italics in original, underline added.]

pushing emergent, self-organizing systems toward the edge of chaos.”¹⁹¹ Near the edge of chaos, fundamental properties of complex adaptive systems (i.e., their computational ability, fitness, and evolvability) are maximised (or optimised). Despite the apparent importance assigned to the notion of ‘region’, the edge of chaos is not a fixed position; rather, the concept should emphasise the process of evolution – how systems behave rather than how they’re made. As Langton explains, the edge of chaos is where systems are “...both stable enough to store information, and yet evanescent enough to transmit it. These are the systems that can be organized to perform complex computations, to react to the world, to be spontaneous, adaptive, and alive.”¹⁹²

Despite all attempts, the ‘edge of chaos’ may simply, in the end, require acceptance as a concept that evades precise definition. Perhaps it is this elusiveness that characterises the concept as an ‘edge’ that is continually contested; where learning and adaptation are key in maintaining life evolved to a point poised between order and chaos. The most illustrative summary of the concept may be that which alludes to the edge of chaos as a sort of “immense edge-of-chaos membrane”:

“...the edge of chaos is like an infinitesimally thin membrane, a region of special, complex behaviors separating chaos from order. But then, the surface of the ocean is only one molecule thick, too; it’s just a boundary separating water from air. And the edge of chaos region, like the surface of the ocean, is still vastly beyond all imagining. It contains a near-infinity of ways for an agent to be both complex and adaptive. Indeed, when John Holland talks about ‘perpetual novelty,’ and adaptive agents exploring their way into an immense space of possibilities, he may not say it this way – but he’s talking about adaptive agents moving around on this immense edge-of-chaos membrane.”¹⁹³

Hierarchy Theory and Emergence

The ‘perpetual novelty’ that John Holland refers to is associated with the concept of *emergence*: the observation that at different levels in an hierarchical organisation of systems, properties ‘emerge’ that were not previously apparent at ‘lower’ levels.¹⁹⁴ Typically, emergent properties are revealed from a macroscopic perspective: “These are properties of

¹⁹¹ *ibid.* p.303.

¹⁹² *ibid.* p.293.

¹⁹³ *ibid.* p.295.

¹⁹⁴ “We are everywhere confronted with emergence in complex adaptive systems – ant colonies, networks of neurons, the immune system, the Internet, and the global economy, to name a few – where the behavior of the whole is much more complex than the behavior of the parts.” Holland, J.H. *Emergence. op. cit.* p.2.

higher levels in the system that are not obvious from the properties of the parts.”¹⁹⁵ Holland alludes to the issue of *scale*, which is central to Hierarchy Theory. As with fractal geometry, Mandelbrot’s enquiry into the length of Britain’s coastline would suggest that seeking a definite answer (a finite number) is much less important than the recognition that answers are dependent on the scale in which the questions are posed.¹⁹⁶ In turn, the questions depend on the observer’s point of view in determining the system ‘type’ and ‘scale’ (temporal and spatial).¹⁹⁷

Hierarchy Theory distinguishes two main ways of describing hierarchical relationships: ‘nested’ and ‘non-nested’ hierarchies. In the former, lower levels are nested inside and in aggregate make up the higher levels. This is typical of the conventional hierarchy of levels of organisation used in biology, whereby taxonomic units are arranged sequentially from ‘lower’ to inclusive ‘higher’ levels: i.e., cell, organism, population, community, ecosystem, landscape, biome, biosphere. The conventional ranking misrepresents ‘hierarchy’ as referring solely to vertical structures of control (whether seen as top-down aggregates or bottom-up collections of components).¹⁹⁸ Yet, as Timothy Allen and Thomas Hoekstra warn: “By choosing either order, up to biosphere or down to organisms and cells, the ecologist can easily be led away from considering interlevel relationships in the other respective direction.”¹⁹⁹

The introduction of Koestler’s Janus-faced ‘holons’ (refer to Chapter Two), however, challenged the linear conventional ranking by treating ‘levels’ in an organisation not as permanent entities in a predetermined hierarchical scale, but as expressions of both part and whole (acknowledging the inseparability of the dual tendencies). This fundamental shift in perspective was acknowledged by ecologist Frank Egler who wrote: “With the ecological departures from classical biology, however, we are beginning to look upon the world as

¹⁹⁵ Allen, T.F.H. and Starr, T.B. *Hierarchy: Perspectives for Ecological Complexity*. Chicago: The University of Chicago Press. 1982, pp.38-39.

¹⁹⁶ The connection between ‘scale’ and ‘self similarity’ is noted by Mandelbrot: “...the notion of self similarity seems tantalizingly close to the physicists’ much more recent and still unsystematic notions of *scaling* and of renormalization groups.” Mandelbrot, B.B. *Fractals. op. cit.* p.17. [emphasis in original.]

¹⁹⁷ Timothy Allen and Thomas Hoekstra explain: “Scale pertains to size in both time and space; size is a matter of measurement, so scale does not exist independent of the scientists’ measuring scheme.” Allen, T.F.H. and Hoekstra, T.W. *Toward A Unified Ecology*. New York: Columbia University Press. 1995, p.2.

¹⁹⁸ In addition to vertical stratification in biology, Koestler acknowledged horizontal alignments (which gives theoretical support to concepts in ecology such as ‘network theory’).

¹⁹⁹ Allen, T.F.H. and Hoekstra, T.W. *Toward A Unified Ecology. op. cit.* p.8. They add: “For any level of aggregation, it is necessary to look both to larger scales to understand the context and to smaller scales to understand mechanism; anything else would be incomplete.”

wholes within wholes within wholes, without the sharp boundaries that separate one man from another.”²⁰⁰ Thus, from a ‘holarchic’²⁰¹ perspective, any given focal level is ‘nested’ within a system (its context) which in turn, when viewed from a higher scale, appears as a sub-system within an even wider environment.²⁰² This suggests that the descriptors ‘system’ and ‘environment’ should not be mistaken for ‘fixed reality’, but have relevance only with respect to the chosen *scale of observation*. Whereas the classical notion of hierarchy involves discrete levels, Allen and Hoekstra provide a new meaning of a ‘level of organisation’ based on Hierarchy Theory:

“...we do not view levels of organization as an attribute of nature alone. In the framework we erect, levels are a property that only emerges from observation. Levels emerge from the interaction between decisions of the observer and the part of the universe observed.”²⁰³

The ‘non-nested’ hierarchy, in contrast, does not demand physical aggregation of the parts to form the whole: “Non-nested hierarchies relax the requirement for containment of lower by higher holons and also do not insist that higher holons are derivable from collected lower holons.”²⁰⁴ In non-nested hierarchies, an ecosystem may be embedded within another ecosystem, but this ‘embeddedness’ does not imply that one ecosystem is derived from or reducible to another. Social groupings are also examples of ‘non-nested’ hierarchies, such that individuals who conjoin to form a society do not merge into one ‘mega-individual’ collective but retain their unique individuality within the societal whole.²⁰⁵ Thus, as Tim Allen and Thomas Starr explain: “In the non-nested case the individual

²⁰⁰ Egler, F.E. *The Way of Science. op. cit.* p.122. Refer to pp.122-128, “The Nine Levels of Integration,” where the ninth ‘nested’ level of integration is the ‘Human Ecosystem: man-and-his-total-environment’.

²⁰¹ ‘Holarchy’ is Koestler’s term for a hierarchy based on a nested relationship as ‘holons’. Henry Regier reconsiders the ‘-archy’ conjunctive of both ‘hierarchy’ and ‘holarchy’, and offers a new term: ‘*holonocracy*’; conjoining Koestler’s ‘holon’ and the Greek root ‘-cracy’. He explains: “... ‘archy’ comes from the Greek word meaning ‘rule’ which in turn comes from the Latin for ‘straight stick’ which connotation is still used with the ‘wooden straight edge ruler.’” In contrast to linear hierarchies, holons are nested entities with both autonomy and embeddedness, and reciprocal interactions with other holons: “This implies that a holon possesses some ‘power’ or ‘strength’ which relates to the Greek words for ‘cracy’ as in ‘democracy.’ Empowerment, etc. Holonic power or strength may result from internal systemic integrity, inter alia. So should we use the term ‘holonocracy’ for what we commonly term ‘holarchy?’” Regier, H.A. “Holonocracy, of course!” *e-mail*. 7 October 2001.

²⁰² “In hierarchies, content and context together generate significant behavior at each scale-defined level.” Allen, T.F.H. and Hoekstra, T.W. *Toward A Unified Ecology. op. cit.* p.10.

²⁰³ *ibid.* p.20.

²⁰⁴ Allen, T.F.H. and Starr, T.B. *Hierarchy. op. cit.* p.38.

²⁰⁵ Refer to Chapter Three where examples of indigenous tribal groupings and Western medieval communal-based villages are contrasted with modern individualism, interest groups, and institutions.

holons are taken at face value as quasi-independent wholes which are part of a hierarchical system of communication.”²⁰⁶

What distinguishes a ‘higher’ level from ‘lower’ levels in a hierarchy are constraining factors and boundary conditions. The description ‘higher’ should not be misconstrued as somehow preferential, but should be understood relationally: “Higher holons in a hierarchy constrain lower holons and provide the context in which lower holons function.”²⁰⁷ When the word ‘constraint’ is associated with human hierarchies, negative connotations may be engendered (e.g., institutions that degenerate into rigid structures of domination and control).²⁰⁸ In the context of Hierarchy Theory, however, constraint appears as a paradox that “...both limits freedom and gives more freedom at the same time.”²⁰⁹ Constraint places limits on the ‘degrees of freedom’ while still allowing for choice, thus allowing for an ‘informed freedom’. The balance between too much constraint (leading to rigidity) and not enough constraint (resulting potentially in poor decisions or paralysis leading to indecision) is continuously tested and negotiated in the context of an ever-changing, adaptive, hierarchical system. Allen and Starr outline:

“The positive aspects of organization emanate from the freedom that comes with constraint. The constraint gives freedom from an infinite and unmanageable set of choices; regulation gives freedom within the law. Since constraint comes from environment inertia and intransigence, the fast reacting constrained holon is free to do its will within the constrained region. ... The power to constrain gives the burden of responsibility, whereas being constrained gives freedom from those pressures. The self-assertiveness of the constraining environmental holon in its struggles with its own constraining superenvironment essentially protects the subholons that the constrained environment itself controls.”²¹⁰

Delineating boundary conditions remains a contentious issue in ecology. The conventional hierarchy in biology tends only to emphasise visible and tangible criteria, such as the skin of an organism or the shoreline of a lake. Yet, intangible surfaces may also be used to

²⁰⁶ Allen, T.F.H. and Starr, T.B. *Hierarchy. op. cit.* p.40.

²⁰⁷ *ibid.* p.16.

²⁰⁸ Capra distinguishes between hierarchies in Nature (as networks) and hierarchies designed by humans which tend to be arranged like a pyramid. Capra announces: “In nature there is no ‘above’ or ‘below,’ and there are no [heteronomous] hierarchies. There are only networks nesting within other networks.” Capra, F. *The Web of Life. op. cit.* p.35.

²⁰⁹ Pattee, H.H. “The Physical Basis and Origin of Hierarchical Control,” pp.71-108, in: Pattee, H.H. (ed.) *Hierarchy Theory: The Challenge of Complex Systems*. New York: George Braziller. 1973, p.73. Howard Pattee distinguishes between structural and control constraints: “...although we recognize structural hierarchies in both living and non-living matter, it is the *control* hierarchy that is the distinguishing characteristic of life.” p.75. [italics in original.]

determine boundaries. Hierarchy theorists advocate that organisation results from differences in process rates. Higher levels, for example, occur at slow rates and, in a nested hierarchy, act to contain the lower levels that exhibit rapid rates. This focuses attention on the relationships; the connections within and interactions between levels. While the observation that “everything is interconnected” does not prove practically useful, it may be possible to distinguish weak interactions from strong internal interconnections, hence defining the system from its environment.²¹¹ Thus, one of the main advantages of Hierarchy Theory is that it “...provides a consistent methodology for dealing with the natural world at many spatiotemporal scales.”²¹² The implication is that “...we must view the world at the spatiotemporal scale at which it responds, rather than the space and time frame in which we operate.”²¹³

Complex Adaptive Systems

John Holland’s description of ‘complex adaptive systems’ adds to the Sante Fe Institute studies in the Complexity sciences an important unifying link between the organisational structure of living, complex systems and their functional or behavioural attributes; namely, that they ‘adapt’. The generic grouping of a vast range of complex adaptive systems (e.g., ecologies, economies, immune systems, developing embryos, the brain, etc.) was based on the observation that each involved a similar ‘evolving structure’: “All of them involve great numbers of parts undergoing a kaleidoscopic array of simultaneous interactions. They all seem to share [at least] three characteristics: *evolution*, *aggregate behavior*, and *anticipation*.”²¹⁴ A brief outline of the essential features of complex adaptive systems may aid in drawing conceptual links between complex systems theories (influenced by physics, far-from-equilibrium thermodynamics, nonlinear mathematics, complex computer simulation modelling, etc.) and the possible implications of those theories vis-à-vis complex systems perspective(s) of ecosystems.

²¹⁰ Allen, T.F.H. and Starr, T.B. *Hierarchy. op. cit.* p.15. [emphasis added.]

²¹¹ “Rates inside the surface characterize interactions among components and are relatively rapid and uniform. Rates outside the surface characterize interactions among complete holons and are relatively slow and weak.” O’Neill, R.V. *et. al. A Hierarchical Concept of Ecosystems. op. cit.* p.79.

²¹² *ibid.* p.84.

²¹³ *ibid.* p.100.

²¹⁴ Holland, J.H. “Complex Adaptive Systems,” *Daedalus*. Vol.121, No.1. 1992, p.19. [emphasis in original.]

As Holland alludes to above, complexity not only includes the high number of parts in a system (this being the most common measurement of biodiversity in traditional ecological practice, e.g., population/species counts²¹⁵) but is also associated with the dynamic organisation and interaction of those parts. A complex adaptive system may be described as a network of interacting ‘agents’ acting in parallel (e.g., the food web in ecology), whereby each agent is constantly acting upon and reacting to the changes in the other agents. Rather than being controlled by a global power, the network nature of a complex adaptive system tends to be highly dispersed.²¹⁶ Therefore, coherent behaviour in the system arises from competition and cooperation among the agents themselves. In other words, the *aggregate behaviour emerges from the interaction of the parts* (and not simply the sum of individual actions).²¹⁷ This allows a new appreciation of the role of parts as they constantly revise and recombine, with respect to each other, to form new wholes: “It builds a ‘picture’ of the situation from parts rather than treating it as a monolithic whole never before encountered.”²¹⁸ As Holland explains, a complex adaptive system is a distributed rule-based system:

“A complex adaptive system has no single governing equation, or rule, that controls the system. Instead, it has many distributed, interacting parts, with little or nothing in the way of a central control. Each of the parts is governed by its own rules. Each

²¹⁵ Nina-Marie Lister proposes a broadened definition of biodiversity (emerging from a systems-based approach to science) which explicitly incorporates the notions of scale and context, and the qualities of uncertainty and complexity: “Conventional definitions of biodiversity, limited to either one level of the hierarchy (e.g. species) or one perspective (e.g. structure), are problematic when they fail to recognize *explicitly* the scale and observer-dependency of the diversity concept. ...even at the species scale of diversity, for which rudimentary measures and absolute counts of individuals exist, there is a staggering degree of uncertainty.” Lister, N-M. “A Systems Approach to Biodiversity Conservation Planning,” *Environmental Monitoring and Assessment*. Vol.47. 1998, p.126. [emphases in original.]

²¹⁶ For example, there is no master neuron in the brain, nor is there any master cell within a developing embryo.

²¹⁷ Although no reference is offered, a connection could be drawn between John Holland’s ‘emergence’ and R. Buckminster Fuller’s ‘synergy’ (see Chapter Two). Both concepts refer to the dynamic interactions between the parts which give rise to a whole that is more than the simple sum of its parts (cf. Smuts’ ‘holism’; see Chapter Two). It is with the different interpretations of ‘more’ that there is potential for argument. Vitalists have asserted the ‘more’ as a type of ‘élan vital’ (vital spirit), whereas proponents of Complexity sciences, such as Holland, assert the ‘more than the sum of its parts’ in non-reductionist but also non-vitalistic terms. Weinberg puts into perspective misunderstandings of ‘emergence’ with respect to systems thinking: “...Systems writers sometimes speak of ‘emergent’ properties of a system, properties that did not exist in the parts but that are found in the whole. Other writers attack this idea, saying that emergent properties are but another name for vital essence. Moreover, they can support their arguments with specific examples of ‘emergent’ properties that turned out to be perfectly predictable. Which is right? Both are right, but both are in trouble because they speak in absolute terms, as if the ‘emergence’ were ‘stuff’ in the system, rather than a relationship between system and observer. Properties ‘emerge’ for a particular observer when he could not or did not predict their appearance. We can always find cases in which a property will be ‘emergent’ to one observer and ‘predictable’ to another.” Weinberg, G.M. *An Introduction to General Systems Thinking*. *op. cit.* p.60. [emphasis added.]

²¹⁸ Holland, J.H. “Complex Adaptive Systems,” *op. cit.* p.22.

of these rules may participate in influencing an outcome, and each may influence the actions of other parts. The resulting rule-based structure becomes grist for the evolutionary procedures that enable the system to adapt to its surroundings.”²¹⁹

In addition, a complex adaptive system is ‘open’ to flows with its environment. The exchange between the system and its environment, however, is neither simple nor unilinear. A living system is not a simple stress-response mechanism but is adaptive: “That is, these systems change and reorganize their component parts to adapt themselves to the problems posed by their surroundings.”²²⁰ Over time, the process of evolution modifies and rearranges the tissues of successive generations of organisms. Thus, a complex adaptive system ‘learns’ through exploring and exploiting new opportunities and, in so doing, builds on a history that has (so far) proven successful in a Darwinian survival sense.²²¹ Furthermore, such a system not only *adapts* and *learns* as it evolves, it may also have a role in *anticipating* its future(s).²²² Therefore, complex adaptive systems may also be characterised as active and creative. Holland asserts that:

“...every complex adaptive system is constantly making predictions based on its various internal models of the world – its implicit or explicit assumptions about the way things are out there. Furthermore, these models are much more than passive blueprints. They are active. Like subroutines in a computer program, they can come to life in a given situation and ‘execute,’ producing behavior in the system. In fact, you can think of internal models as the building blocks of behavior. And like any other building blocks, they can be tested, refined, and rearranged as the system gains experience.”²²³

²¹⁹ *ibid.* pp.21-22.

²²⁰ *ibid.* p.18.

²²¹ “Overall, these mechanisms [parallelism, competition, and recombination] allow a complex adaptive system to adapt, while using extant capabilities to respond, instant by instant, to its environment. In so doing the system balances exploration (acquisition of new information and capabilities) with exploitation (the efficient use of information and capabilities already available). The system that results is well founded in computational terms, and it does indeed get better at attaining goals in a perpetually novel environment.” *ibid.* p.26. [emphases added.]

²²² Similarities may be drawn with Prigogine’s dissipative structures. At bifurcation point, the system’s further evolution is partly a matter of chance. The range of developmental paths available, however, is a reflection of the system’s history (and therefore may also be understood, in part, as deterministic). In this way, the system displays a ‘memory’ of a past event and this continues to influence its future. See above: “Order Out of Chaos: Prigogine’s Dissipative Structures.”

²²³ Waldrop, M.M. *Complexity. op. cit.* p.146. See, in particular, pages 145-7 for discussion of John Holland’s presentation, “The Global Economy as an Adaptive Process”, at the Sante Fe Institute economics workshop. Holland’s use of “building blocks” is unfortunate due to its connotations with reductionism. That perspective has roots in the Greek Atomists’ view of matter as ‘basic building blocks’; purely passive and intrinsically dead particles moving in a void. Some at the Sante Fe Institute have challenged Holland on this point: “The difference was that Holland saw this population structure mainly as a collection of building blocks that could be reshuffled for very efficient evolution, whereas Langton saw it mainly as an opportunity for rich, lifelike dynamics.” *ibid.* p.279. [emphases added.]

Ecosystems as Complex Systems: Implications for 'Management'

Ecosystems are archetypical examples of 'complex adaptive systems'.²²⁴ They can be seen as integrated wholes or organised networks of interacting parts (species) adapting dynamically to exchanges between and among other species (e.g., predator-prey relationships). They are also open systems subject to changes in the flow of energy and matter (e.g., nutrient and biogeochemical cycles) for which they must evolve and adapt within their wider environmental context. Indeed, ecosystems are influenced by 'internal' arrangements and 'external' energy fluxes.²²⁵ Thus, both biotic and abiotic factors must be considered in studies of ecosystems, as Tansley's 1935 definition confirms. The study of food webs, niche relationships and 'network theory' in ecology all contribute, in part, to an increased understanding of the dynamics and interrelationships involved in ecosystem studies.²²⁶

Alternatively, ecosystems may also be viewed from a thermodynamic perspective as exemplars of dissipative structures.²²⁷ Building on Prigogine's theoretical opening within physics, James Kay and Eric Schneider, and others, suggest a new thermodynamics of ecosystems as open systems operating far from equilibrium.²²⁸ As with any dissipative structure, ecosystems require a continual input of high quality energy (exergy²²⁹) from their environments to renew themselves (i.e., to self-organise). Exergy has been related to the emerging understanding of biodiversity as analogous to 'information', whereby the quality

²²⁴ "Examples of complex adaptive systems abound in biology. A developing organism, an individual learning to cope, a maturing ecosystem, and the evolving biosphere all provide cases in point." Levin, S.A. "Ecosystems and the Biosphere as Complex Adaptive Systems," *Ecosystems*. Vol.1. 1998, p.432.

²²⁵ Note that, according to Hierarchy Theory, 'external' is a matter of 'scale' and 'type' descriptions.

²²⁶ For elaboration on 'Network Theory' see: Higashi, M. and Burns, T.P. (eds.) *Theoretical Studies of Ecosystems: The Network Perspective*. Cambridge; New York: Cambridge University Press. 1991.

²²⁷ Søren Nielson and Robert Ulanowicz observe: "Modern ecosystem theory offers two principal ontological approaches to ecosystem analysis. ...One way is that ecosystems are viewed as graphs and networks. ...Alternatively, they may be viewed as dissipative structures..." They conclude: "There appears to be a high concordance between the network formulation of ecosystem ascendancy and the thermodynamical concept of exergy." Nielsen, S.N. and Ulanowicz, R.E. "On the consistency between thermodynamical and network approaches to ecosystems," *Ecological Modelling*. Vol.132, Nos.1-2. 2000, pp.23, 30.

²²⁸ Kay, J.J. and Schneider, E. "Embracing Complexity: The Challenge of the Ecosystem Approach," *Alternatives*. Vol.20, No.3. 1994. pp.32-39. Schneider, E. and Kay, J.J. "Complexity and Thermodynamics: Towards a new ecology," *Futures*. Vol.26, No.6. 1994, pp.626-647.

²²⁹ "According to the first law of thermodynamics, energy is indestructible. However, the same amount of energy can have very different quality, that is, capability to conduct or maintain changes. A term, exergy, was introduced ... to measure the difference in physical quality of energy. ...A living system must extract exergy from its environment (either directly from solar energy photosynthesis, or indirectly through food consumption) to structure itself." Günther, F. and Folke, C. "Characteristics of Nested Living Systems," *Journal of Biological Systems*. Vol.1, No.3. 1993, pp.258-259.

of the information entering the system ensures the maintenance of ecosystem integrity.²³⁰ Ecosystems are maintained in their present character (i.e., ‘state attractor’) only *if* the flow (and form) of exergy remains relatively consistent. If the flow of energy and matter change, however, then it can be expected that the ecosystem will also change – either in an adaptive, evolutionary way or in catastrophic and unpredictable upheavals. Seen in this light, loss of biodiversity and depletion of energy resources on a planetary scale can be expected to have extremely serious and, possibly, irreversible consequences for the ability of ecosystems to maintain their present structures and processes.

A nonequilibrium thermodynamic perspective considers ecosystems as complex systems that retain their organised structure within a dynamical region (‘attractor’). That is, ecosystems (mostly) self-organise within a region constrained by energetic limits: a “window of vitality”, as Robert Ulanowicz refers.²³¹ This implies a negotiation between insufficient energy supply, such that ecosystems cannot sustain self-organisation, and too much energy whereby chaos is the consequence. Ecosystem functioning also takes place within structural limits determined in terms of the number of connections per ‘node’ in a complex ecosystem. These fall somewhere between one-on-one relations as ‘minimally connected’ and many-to-many ‘overconnectedness’ (both extremes may, over time, reduce an ecosystem’s resilience and thereby induce vulnerability to external perturbations).²³² However, it is not always the case that an ecosystem will remain within its current energetic ‘window’. Although an ecosystems organise about an attractor and, even when faced by changes in their environmental situation, tend to maintain their current state, there is not necessarily one ‘correct’ state for any ecosystem. In fact, some suggest that ecosystems are more characteristically multi-equilibria phenomena.²³³

²³⁰ “Biodiversity as information provides us with broad, systems perspective, in which the diversity of life is characterized by complex *interactions* rather than a collection of individuals. Thus, as a library of historical and emergent information, biodiversity provides not only a multiplicity of evolutionary and adaptive pathways for future development of life on earth, but the *essential regenerative capacity for all living systems* (Lister, 1994).” Lister, N-M. “A Systems Approach to Biodiversity Conservation Planning,” *op. cit.* p.142. [emphases in original.] This analogy is related to ‘information theory’.

²³¹ Ulanowicz, R.E. *Ecology: The Ascendent Perspective*. New York: Columbia University Press. 1997. See pp.113-119 for Ulanowicz’s discussion of the ‘window of vitality’ concept in relation to the ‘edge of chaos’ concept in Complexity science and Chaos Theory. “One irony about complexity theory is that its practitioners seem less occupied with complexity per se than with limits to complexity.” *ibid.* p.114.

²³² ‘Resilience’ is used here to refer to the size of the domain of attraction around a state: i.e., the maximum perturbation that can be absorbed without causing a shift to an alternative stable state.

²³³ “Ecosystems have multiple possible operating states or attractors, and may shift or diverge suddenly from any one of them... The notion of alternate stable states in ecosystems is not well known in the ecological and in particularly the management community, but it is also not new.” Kay, J.J. and Regier, H.A. “Uncertainty, Complexity, and Ecological Integrity: Insights from an Ecosystem Approach,”

Many factors (such as autocatalytic loops and amplifying fluctuations, i.e., positive feedback) may succeed in pushing an ecosystem beyond a significant distance (outside its current state) and toward a sort of ‘critical limit’ or ‘catastrophe threshold’. It is at this “point of instability”, as Prigogine refers to it, that several choices become available to the dissipative structure’s future development. Although there is a range of choices, the degrees of freedom are constrained (or ‘guided’) by the ecosystem’s historical development. In this way, each ecosystem is truly unique and not simply a display of a universal and predictable succession. However, which path the ecosystem takes when it is pushed to the ‘point of instability’ and when the change will occur are not wholly predictable (although it may be influenced by human intervention, e.g., through resource management or resource exploitation). Note that human influence does not always need be ecologically detrimental, but may also be restorative (to a certain degree of ‘integrity’) as indicated by the growing literature of ‘ecosystem restoration’ practices on a worldwide, local scale.²³⁴

There are a number of different organisational and developmental pathways that an ecosystem may take when it is driven away from its ‘optimum operating point’.²³⁵ Kay suggests the following options: no movement from the optimum operating point (e.g., a temporary and minor disturbance); or a movement away from the point but the ecosystem returns to the same point (e.g., a short-term disturbance with recovery over time). A third option would be a permanent movement from the optimum operating point with the worst case scenario of an ecosystem collapse (i.e., complete loss of ‘ecosystem integrity’²³⁶). For

pp.121-156, in: Crabbé, P.; Holland, A.; Ryszkowski, L. and Westra, L. (eds.) *Implementing Ecological Integrity: Restoring Regional and Global Environmental and Human Health*. Dordrecht: Kluwer Academic Publishers. 2000, pp.130-131.

²³⁴ See, for example, long term attempts to clean up the Great Lakes of USA/Canada adopting an ‘ecosystem approach’. Edwards, C.J. and Regier, H.A. (eds.) *An Ecosystem Approach to the Integrity of the Great Lakes in Turbulent Times*. [Great Lakes Fishery Commission Special Publication 90-4.] Michigan: Ann Arbor. 1990. Communities may play a proactive role in steering ecosystems away from certain scenarios such as ecosystem collapse (e.g., a ‘dead’ lake). This calls for informed discussion between communities and ecosystem scientists on: “...issues of human preferences and choices concerning the preferred attributes of particular SOHO [Self-Organising, Holarchic, Open] systems, and to the implications of achieving them through adaptive management, monitoring and appropriate structures for governance.” Kay, J.J.; Regier, H.A.; Boyle, M. and Francis, G. “An Ecosystem Approach for Sustainability: Addressing the Challenge of Complexity,” *Futures*. Vol.31, No.7. 1999, p.721. [emphasis added.]

²³⁵ The ‘optimum operating point’ is: “The point in state space where the disorganizing forces of external environmental change and the organizing thermodynamic forces are balanced is referred to as the *optimum operating point*.” Kay, J.J. “A Nonequilibrium Thermodynamic Framework for Discussing Ecosystem Integrity,” *Environmental Management*. *op. cit.* p.484. [emphasis in original.]

²³⁶ “Integrity of a system refers to our sense of it as a whole. If a system is able to maintain its organization in the face of changing environmental conditions, then it is said to have integrity. If a system

example, if an ecosystem is permanently stressed or pushed outside its ‘window of vitality’, it may be overwhelmed to such an extent that it results in chaos of a destructive nature, as in ecosystem collapse (e.g., extreme deforestation may lead to desertification; over-use of groundwater may lead to salination of land).

Less extreme cases (in terms of the third option) lead to a new optimum operating point, found either on the original thermodynamic branch (e.g., retrogression); on a bifurcation from the original branch; or on a different thermodynamic branch altogether (following ‘catastrophic reorganisation’). In the latter case, the ecosystem may suddenly ‘flip’ into a new organisational structure: thermodynamically speaking; the system reaches a bifurcation point and flips into a qualitatively different attractor state. Following such rapid and unexpected change, the dissipative structure may then once again settle into, or adapt to, a new pattern of self-organisation. The important lesson for resource management is to recognise that there is more than one possible ecological state (attractor) for an ecosystem. Attempts to ‘manage’ ecosystems in one stable state, even when perceived as the preferred state, may in the long run be detrimental and leads to a gradual reduction in the system’s resilience to absorb unexpected changes or ‘surprise events’.

A nonequilibrium view of ecosystems recognises that its evolution is not always a continuous process (i.e., smooth and predictable), but may be discontinuous. For example, ecosystems are sometimes subjected to ‘disturbance’ events (e.g., fires, storms, and other environmental fluctuations) that may deflect an ecological community from some otherwise predictable successional path.²³⁷ Viewed from a different hierarchical scale perspective, it has been suggested that disturbance should be valued as an important generator of heterogeneity; the valuable qualitative variability of biodiversity.²³⁸ Therefore,

is unable to maintain its organization, then it has lost its integrity.” *ibid.* p.483. [italics in original, underline added.]

²³⁷ White and Pickett propose the following definition of ‘disturbance’ (adding the caveat that matters of scale and process have to be specified in each case): “A disturbance is any relatively discrete event in time that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment.” They clarify: “...our definition of ‘disturbance’ includes environmental fluctuations and destructive events, whether or not these are perceived as ‘normal’ for a particular system.” White, P.S. and Pickett, S.T.A. “Natural Disturbance and Patch Dynamics: An Introduction,” pp.3-13, in: Pickett, S.T.A. and White, P.S. (eds.) *The Ecology of Natural Disturbance and Patch Dynamics*. Orlando, Florida: Academic Press. 1985, pp.7, 6.

²³⁸ “Historically, ecologists have been slow to recognize the importance of disturbances and the heterogeneity they generate. Several factors [have contributed to its dismissal.] ... First and perhaps foremost is the tendency to concentrate on the presumed equilibrium nature of biological systems... When large-scale disturbances were examined, they were often considered as exceptional circumstances

the most appropriate resource management response is not to prevent perturbations per se, but to sustain a large stability domain (i.e., building and maintaining resilience of desired ecosystem states). Marten Scheffer *et al.* explain:

“Prevention of perturbations is often a major goal of ecosystem management, not suprisingly. This is unfortunate, not only because disturbance is a natural component of ecosystems that promotes diversity and renewal processes, but also because it distracts attention from the underlying structural problem of resilience. The main implication ... is that efforts to reduce the risk of unwanted state shifts should address the gradual changes that affect resilience rather than merely control disturbance.”²³⁹

Some disturbances may be of a more unexpected nature such as the ‘surprise events’ that give rise to abrupt and rapid changes; i.e., Catastrophe Theory.²⁴⁰ Such ‘catastrophic’ change should not always be a cause for alarm but may otherwise be accepted a completely ‘normal’ process of ecosystem evolution (e.g., the release of stored biomass through a forest fire results in a qualitatively different but equally ‘natural’ ecosystem type). Sven Jørgensen explains that Catastrophe Theory deals with shifts in equilibrium or attractor points on the ecosystem level:

“Typical living systems follow a catastrophic pattern in response to severe environmental stresses. ... They [ecosystems] have developed mechanisms for dealing with stress due to environmental changes. One of these mechanisms is a sudden shift in properties, which may be named a catastrophe. Such catastrophes are therefore not necessarily negative events, as it may be a fast adaptation to a new situation. In addition, many systems take the advantage of severe environmental conditions to test the survivability of the components of the system or eliminate weak ones.”²⁴¹

In ecosystem evolution the label ‘catastrophe’ has misleading connotations and is therefore an unfortunate choice, for it engenders images of ‘disaster’. A catastrophic event (e.g., an earthquake, volcanic eruption, flood, etc.) is typically deemed disastrous when human life

rather than as an extreme on a gradient of disturbance intensities.” Karr, J.R. and Freemark, K.E. “Disturbance and Vertebrates: An Integrative Perspective,” pp.153-168, in: *ibid.* p.155. [emphasis added.]
²³⁹ Scheffer, M.; Carpenter, S.; Foley, J.A.; Folke, C. and Walker, B. “Catastrophic shifts in ecosystems,” *Nature*. Vol.413. 2001, p.596. [emphasis added.]

²⁴⁰ The French mathematician René Thom developed Catastrophe Theory as a purely mathematical formalism in the 1960s. Thom and others extended its field of application, claiming that Catastrophe Theory could provide insights into a broad range of phenomena displaying abrupt discontinuities, from the metamorphosis of a caterpillar into a butterfly to the collapse of civilisations. Catastrophe Theory has been applied in several fields including the social sciences, medicine, economics and ecology.

or infrastructure is threatened. In times of crisis, overly aggressive sentiments are asserted in slogans such as: “Man Against Nature”. A complex systems understanding indicates that Nature is not an enemy of Man. Rather, faults lie with modern lifestyles and their ‘unnatural’ departure from ecological realities. Instead of manipulating ecosystems to suit the modern economic market, communities are challenged to reflect upon their own motives and consider how best to adapt modern lifestyles to reflect ecological patterns and rhythms, as Nina-Marie Lister and James Kay advocate:

“The challenge is to reform decision making, from control-oriented, predictive, and interventionist *management of the environment*, to adaptive, flexible, and participatory *management of human activities*. In these ways, adaptive planning is a process that more closely models the living systems it is intended to shape, and that is responsive to change in these systems, responding to new ecological information before critical and irreversible thresholds are crossed. In this way, adaptive management is ‘to learn to manage *by change* rather than merely reacting to it.’”²⁴²

Such an abstraction of modern culture (particularly urban) from ecology has contributed to a vulnerability whereby modern structures are less ‘resilient’; that is, less able to respond in an adaptive manner to changes in Nature.²⁴³ Thus, change (especially unpredictable, ‘surprise’ events) comes to be regarded as a threat to economic stability rather than accepted as normal for the adaptive evolution of complex ecosystems. Furthermore, attempts to control such ecological ‘disturbance’ has an enantiomorphic flavour to it: the more we attempt to control something, the greater the ‘threat’ itself becomes. Holling confirms:

“So this is the puzzle: The very success in managing a target variable for sustained production of food or fiber apparently leads inevitably to an ultimate pathology of

²⁴¹ “Catastrophes occur typically in cases where two or more non-linear processes are interacting, which is the general case for ecosystems.” Jørgensen, S.E. *Integration of Ecosystem Theories: A Pattern*. Dordrecht: Kluwer Academic Publishers. 1992, p.257. [emphasis added.]

²⁴² Lister, N-M. and Kay, J.J. “Celebrating Diversity: Adaptive Planning and Biodiversity Conservation,” pp.189-217, in: Bocking, S. (ed.) *Biodiversity in Canada: Ecology, Ideas, and Action*. Peterborough, Ontario, Canada: Broadview Press. 2000, p.210. [emphases in original.]

²⁴³ Gunderson’s *et al.* review of ecosystems and institutions include regional case studies outlining patterns of pathology in managed ecosystems, whereby resource exploitation has led to ecological, sociological and institutional breakdown. Frances Westley, in his contribution on contemporary organisations, comments: “The stronger (strength = closed, focused, monolithic, and orthodox) that [planning] paradigm, the more unreceptive to stimuli the organization becomes. Studies of highly successful firms that create intensive focus and unified cultures indicate they do so at the expense of responsiveness. ...the highly focused organization over time ceases to pick up stimuli signaling fundamental changes in the environment and gradually reduces internal diversity until it is insufficient to respond to new demands from the environment.” Westley, F. “Governing Design: The Management of Social Systems and Ecosystems Management,” pp.391-427, in: Gunderson, L.H.; Holling, C.S. and Light, S.S. (eds.) *Barriers and Bridges to the Renewal of Ecosystems and Institutions*. New York: Columbia University Press. 1995, p.397. [emphasis added.]

less resilient and more vulnerable ecosystems, more rigid and unresponsive management agencies, and more dependent societies.”²⁴⁴

ELEPHANTS AND ECOSYSTEMS: A Plurality of Perspectives

How catastrophes are received is often indicative of how they are perceived. In ecology, this implies a role for the human as ‘perceiver’, as opposed to strict ‘observer’. In such an understanding, an ecosystem would not be seen as a stand-alone object on a neutral backdrop, existing ‘out there’ in a reality independent of human perception. There is an emerging awareness and acceptance within ‘complex systems ecology’ of the ecologist as playing a crucial role in actually determining by definition (from a scientific point of view) what an ecosystem is. Thus the ecosystem is a heuristic; dependent on human definition(s) that inevitably highlight different connections (within a wider appreciation of all phenomena as interrelated nonlinearly). The ecosystem description that results is a reflection of the ecological approach adopted, as well as the ‘type’ and ‘scale’ characteristics promoted by the ecologist.²⁴⁵

Acknowledgement of different ‘type’ descriptions of ecosystems dispels notions of pure objectivity of the scientific observer and provides a basis for acceptance of a more pluralistic approach to ecosystem studies. In highlighting the futility of singular perspectives, the parable of the blind men and the elephant is often drawn upon. In this example, each blind man touches a different part of the elephant and describes what he feels, extrapolating his point of view/touch to create an image of the whole.²⁴⁶ This is the dilemma of specialists generalising. The moral that is commonly drawn from this parable is that each description of the elephant is but one incomplete part of a whole that is accessible to none of the blind men alone. There is a plurality of type descriptions and while no one perspective is wrong in and of itself, all are incomplete without the others.

²⁴⁴ Holling, C.S. “What Barriers? What Bridges?” pp.3-34, in: *ibid.* p.8.

²⁴⁵ Allen *et al.* explain: “There are two separate considerations with respect to the nature of the boundary of ecological systems: system scale and type. ... One has to look at the appropriate scale to see an object, but which object one sees in the foreground at a certain scale comes from the standards that prescribe the type of system.” Allen, T.F.H.; Bandurski, B.L. and King, A.W. *The Ecosystem Approach: Theory and Ecosystem Integrity*. International Joint Commission. (Report to the Great Lakes Science Advisory Board). 1993, p.6.

²⁴⁶ “Four blind men are led into a courtyard to experience an elephant for the first time. The first grasps the trunk and declares that elephants are fire hoses. The second touches an ear and maintains that elephants are rugs. The third walks into its side and believes that elephants are a kind of wall. The fourth feels a leg and decides that elephants are pillars.” (And so on...) O’Neill, R.V. *et al.* *A Hierarchical Concept of Ecosystems. op. cit.* p.3.

O'Neill *et al.*'s review of ecology and hierarchy concepts raises a number of important issues about how ecology is approached; i.e., the 'window' through which the ecologist views the criteria. They expose two major and often conflicting perspectives in ecology: the population-community approach and the functional-dynamic approach. Taken to extremes, the population-community approach tends to emphasise structure and classify Nature into discrete objects whereas the process-functional approach focuses on energy flows and nutrient cycling in the ecosystem. The authors claim that neither 'window' is complete in itself, but that both approaches are biased by the scale from which they view the ecosystem. Instead, they propose a synthesis ('Ecosystems as Dual Hierarchies') between the two major approaches as an 'integrative paradigm' for the study of ecological systems. In adopting the elephant/ecosystem analogy, O'Neill *et al.* conclude:

“This well-worn parable contains an important moral for the ecosystem ecologist. Like elephants, ecosystems can be viewed as many perspectives. Our conclusions are biased by the way we observe ecosystems. For example, if we focus on interactions among individual organisms, ecosystems seem relatively constant backgrounds, contexts within which the interesting phenomena occur. If we focus on succession, ecosystems appear to change continuously through time. In fact, both impressions are correct, depending on the purpose and the time-space scale of our observations.”²⁴⁷

When the parable of the elephant is employed in ecology (or science in general), each blind man approaches the elephant-part with more-or-less rational tools of analysis. They make use of their limited sensory attributes (namely, touch) to draw their conclusions of the whole (be it elephant, ecosystem, or Reality). Hence their analyses are restricted methodologically to tangible descriptions (tested by a rational rationale through scientific experimentation). Treated in this way, the elephant (cf. ecosystem) is but surface skin deep. None of the 'blind' attempt to ask the elephant to explain herself. Does she have a soul?²⁴⁸ None query whether she is more than the sum of the parts; of her part-plurality-'type'

²⁴⁷ *ibid.* [emphasis added.]

²⁴⁸ Typically, scientists avoid such a question by rejecting outright any non-rational criteria as a type of vitalist 'nonsense' (non-sense; non-common-sense; 'sense' from the Latin *sensus*, meaning "faculty of feeling, thought, meaning"). James Lovelock's Gaia hypothesis has suffered from such attacks, partly because of its nominal association with the Greek goddess Gaea; the Earth personified as a living being. In a conversation with Roger Lewin, Lovelock comments: "I recognize I use words that sometimes irritate biologists ... Biologists have fought long battles against vitalism, animism, anything that smacks of some kind of force beyond the immediate mechanics of the system. So, anything that sounds holistic – a dirty word in itself – is viewed with suspicion. I don't have an instinctive reaction against words like that." Lewin, R. *Complexity. op. cit.* p.128. More recently, James Lovelock and Lynn Margulis' hypothesis of the Gaia system has been gaining scientific credibility in association with discussions on autopoietic networks. Refer to: Capra, F. *The Web of Life. op. cit.* pp.213-221.

descriptions. Is an ecosystem *more* than its parts (i.e., species, populations, etc.) and *more* than its processes (i.e., the interactions of ecosystem ‘components’; flows of energy and nutrients)? Even if all the blind men combine their stories, is Nature known simply by summation (a synthesis of analyses)? Jørgensen *et al.* approach this question:

“A fundamental precept of the new *ecosystem* ecology must be that complex systems are not reducible, that from cell to biosphere the essence of systemness is interconnection – all things acting together in a tangle of complexity that may be partly charted, as in molecular biology, but can never be fully unravelled without sacrificing the essence. A kind of uncertainty principle exists, then, for large systems as it does for small. If we cannot understand systems except by separating them into parts, and if by doing this we sacrifice important properties of the whole, then we cannot understand systems. The Heisenberg dilemma extended to ecology asserts that a science of parts cannot explain the multiscale reality of wholes.”²⁴⁹

UNCERTAINTY AND PLURALISM IN ECOLOGY

There is an inherent uncertainty in ecosystem behaviour which is more than a reflection of incomplete knowledge on the part of the ecologist. Werner Heisenberg’s ‘uncertainty principle’ does not simply allude to a partiality of knowledge whereby given the possibility of a ‘perfect’ world, complete information may eventually be attained (aided through the advances of modern technology). Rather, uncertainty is inherent in an essentially unpredictable Nature.²⁵⁰ This underscores the transition from Newtonian to Prigoginian/Quantum scientific paradigms. In the latter, reality is probabilistic; ‘creative uncertainty’ abounds in Nature. The implications of a probabilistic universe with respect to scientific knowledge of ‘reality’, were explored by quantum physicist Niels Bohr, who stated: “It is not possible to make an unambiguous picture (a model) of reality, as the uncertainty limits our knowledge.”²⁵¹

Heisenberg’s ‘uncertainty principle’ is not simply an add-on to ‘normal’ scientific practice. It requires a fundamental revision; a ‘scientific revolution’ in Kuhnian terms. In attempts to

²⁴⁹ Jørgensen, S.E. *et al.* “Ecosystems emerging: toward an ecology of complex systems in a complex future,” *op. cit.* p.3. [italics in original, underline added.]

²⁵⁰ “...Heisenberg’s uncertainty principle is a fundamental, inescapable property of the world. ...The uncertainty principle signaled an end to Laplace’s dream of a theory of science, a model of the universe that would be completely deterministic: one certainly cannot predict future events exactly if one cannot even measure the present state of the universe precisely!” Hawking, S.W. *A Brief History of Time: From the Big Bang to Black Holes*. [Introduction by C. Sagan.] London: Bantam Press. 1988, p.55.

comprehend Nature comprehensively, the awareness of such irreducible uncertainties might lead the inquirer to ask: Is Nature even knowable (in an objective sense) at all? J.B.S. Haldane's statement comes close to an acceptance of the fundamental limitation of human knowing itself: "Now my own suspicion is that the universe is not only queerer than we suppose, but queerer than we can suppose."²⁵² And yet, human *knowing* is not divorced (and never has been) from human *living* ('be'-ing) – the 'culture of ecology' and the 'ecology of culture' are inseparable.

The quantum revolution brings to the fore the unintended but inescapable influence of the 'observer' in an experiment, whereby the very act of observation changes the outcome of the study.²⁵³ The observer's influence on the outcome of the observed experiment/study is not simply a consequence of incorrect methodological procedures or operational failures. Rather, Heisenberg's uncertainty principle challenges the fundamental subject-object duality on which Newtonian reductionist science is predicated (the 'method' of Western science).²⁵⁴ Thus, humans are not 'objective outsiders' but are an *influential part* of ecosystems. As Heisenberg explains: "When we speak of a picture of nature provided by contemporary exact science, we do not actually mean any longer a picture of nature, but rather a picture of our relation to nature."²⁵⁵ The wave-particle 'nonduality' provides a scientific basis for pluralism and complementarity. Jørgensen *et al.* draw links between modern physics and ecology:

²⁵¹ Quoted in: Jørgensen, S.E. "Quantum Mechanics and Complex Ecology," pp.34-39, in: Patten, B.C. and Jørgensen, S.E. (eds.) *Complex Ecology: The Part-Whole Relation in Ecosystems*. Englewood Cliffs, New Jersey: Prentice Hall. 1995, p.36.

²⁵² Haldane, J.B.S. *Possible Worlds and Other Essays*. London: Chatto and Windus. 1927, p.286. Frank Egler later echoed the same sentiments with respect to complexity: "...nature is not only more complex than we think. It is more complex than we can think." Egler, F. *The Way of Science*. *op. cit.* p.21. [emphasis in original]. See citation in Chapter Two.

²⁵³ "When we are observing objects of our daily experience, the physical process transmitting the observation of course plays only a secondary role. However, for the smallest building blocks of matter every process of observation causes a major disturbance; it turns out that we can no longer talk of the behavior of the particle apart from the process of observation." Heisenberg, W. "The Representation of Nature in Contemporary Physics," pp.215-232, in: May, R. (ed.) *Symbolism in Religion and Literature*. New York: George Braziller. 1960, p.221.

²⁵⁴ Heisenberg reviews the Cartesian partition between the 'res cogitans' and 'res extensa' with respect to quantum physics: "Natural science does not simply describe and explain nature; it is part of the interplay between nature and ourselves; it describes nature as exposed to our method of questioning. This was a possibility of which Descartes could not have thought, but it makes the sharp separation between the world and the I impossible." Heisenberg, W. *Physics and Philosophy: The Revolution in Modern Science*. London: George Allen & Unwin. 1958, p.75. [emphasis added.] See pp.71-84, "The Development of Philosophical Ideas Since Descartes in Comparison with the New Situation in Quantum Theory."

²⁵⁵ Heisenberg, W. "The Representation of Nature in Contemporary Physics," *op. cit.* p.230. [emphasis added.]

“It could be argued that ecosystem theory now is at the same stage where physics was at the beginning of the present century. ... Modern physics has changed the view of science. Before relativity and quantum mechanics, it was considered that science would be able to provide an accurate and determinate description of nature. Quantum theory altered this, and in its resolution with classical mechanics introduced dualistic (or pluralistic) and complementary perspectives. It became accepted that, due to observational limitations, two or more different views could be equally valid as scientific explanations. ... As Bohr (1948) observed, there is not one true, unambiguous picture of nature, but many pictures based on different observations. All these are equally valid and contribute to the total picture, which is pluralistic.”²⁵⁶

What may be emerging from a science of complex systems is an ‘opening’ within the scientific worldview that allows for a genuine acceptance of pluralism. Jørgensen *et al.* claim: “Heisenberg’s uncertainty principle might be more correctly named the ‘principle of pluralism’ – many different viewpoints are needed to capture a complete picture of nature. Bohr insisted that the orbits of quantum particles should not be considered uncertain, but pluralistic.”²⁵⁷ These ‘many different viewpoints’ might not only be sought from within science (a plurality of ‘type’ descriptions), but also from ‘other’ (i.e., not of Western dualistic ‘method’ origin) cultural viewpoints. Such an opening, aided through cross-cultural dialogue, might stimulate the type of questioning that enriches understanding of complexity and pluralism, as Prigogine states: “It should be emphasized that science is an ideology – science too is based on a culture, and often the important, new questions which rejuvenate science come from questioning which emerges from other cultural viewpoints.”²⁵⁸ Cross-cultural questioning has the potential to address issues that not only ‘rejuvenate science’, but draw urgent attention to the fundamental task of questioning relationships of cultures with ecology.

One may then approach the parable of the elephant from a wider, cross-cultural enquiry whereby the Man of Science is seen as only one of the ‘blind men’ amongst other men similarly ‘blinded’ by their logical constructs and cultural worldviews. The story originates from the Buddhist tradition, wherein the Buddha is said to have told this story to his followers when they came to him unsettled by the many different religions they had heard about from wandering teachers:

²⁵⁶ Jørgensen, S.E. *et al.* “Ecosystems emerging: toward an ecology of complex systems in a complex future,” *op. cit.* p.9. Refer also: Bohr, N. “On the notions of causality and complementarity,” *Dialectica*. Vol.2. 1948, pp.312-316.

²⁵⁷ Jørgensen, S.E. *et al.* “Ecosystems emerging...” *op. cit.* p.11.

²⁵⁸ Prigogine, I. “The Philosophy of Instability,” *Futures. op. cit.* p.398.

“In former times a Raja sent for all the blind men in his capital and placed an elephant in their midst. One man felt the head of the elephant, another an ear, another a tusk, another the tuft of its tail. Asked to describe the elephant, one said that an elephant was a large pot, others that it was a winnowing fan, a ploughshare, or a besom. Thus each described the elephant as the part which he first touched, and the Raja was consumed with merriment. ‘Thus,’ said the Buddha, ‘are those wanderers who, blind, unseeing, knowing not the truth, yet each maintain that it is thus and thus.’”²⁵⁹

Here pluralism is understood as more than a *plurality* of type and scale descriptions within ecology (i.e., different descriptions of ecosystems emanating from the same secular, scientific worldview). Rather, pluralism is understood as an acceptance of ‘other ways of knowing’ (not necessarily of Western scientific origin). In this sense, the notion that a ‘Truth’ exists and may eventually be uncovered by following the logical, methodical steps of ‘normal’ science (brick-by-analytical-brick of knowledge) is dispelled. Reality is a plurality of ‘truths’ that encompass much more than a scientific (ecological) horizon of intelligibility.²⁶⁰ At a fundamental level this requires a humility of spirit and mind. A ‘post-normal’ science (as opposed to Kuhn’s ‘normal’ science and the ‘post-modern’ critiques of modernity) is proposed from a complex systems view of ecology.²⁶¹ This offers some

²⁵⁹ Krieger, D.J. *The New Universalism. op. cit.* p.2. Quotation cited in: Humphreys, C. *Buddhism*. Hammondsworth: Penguin. 1951, p.11.

²⁶⁰ Neils Bohr acknowledges the pluralism of great truths: “To the one kind [of truth] belong statements so simple and clear that the opposite assertion obviously could not be defended. The other kind, the so-called ‘deep truths’, are statements in which the opposite also contains deep truth.” Bohr, N. “Discussion with Einstein on Epistemological Problems in Atomic Physics,” pp.32-66, *Atomic Physics and Human Knowledge*. New York: Science Editions. 1961, p.66.

²⁶¹ “The post-modern phenomenon is one of a deepening disillusion and a consequent fragmentation at all levels including the ideological and the societal. One reaction, as among some leading exponents of post-modernity, is despair. Another reaction is to reassert ‘normality’ ... in which uncertainty is never mentioned. ... Finally, the post-normal response is to recognize the challenge, with all its dangers and promise; and then to start towards a reintegration, through the acceptance of uncertainty and the welcoming of diversity.” Funtowicz, S.O. and Ravetz, J.R. “Science for the Post-Normal Age,” *Futures*.

scale and organisation are also key concerns in the emerging complex systems perspective of ecosystems.

promise in opening the spaces for interactive dialogue both within science and between the many other 'blind men' of the world.

CHAPTER FIVE – ‘SUSTAINABLE DEVELOPMENT’ OR ‘SUSTAINED DEVELOPMENT’?

INTRODUCTION: The Insidious Character of Development

A university student wishes to ‘escape’ mid-winter blues for a week or so on a tropical island in the Pacific. Digging into her student budget, she purchases an aeroplane ticket and a short while later touches down in Viti Levu, the main island of Fiji. The next day she boards a boat destined for the most remote offshore island group, supposedly not yet commercialised as a ‘party island’ for rich teenagers. On arrival, she is not disappointed. Although advertised on the world-wide-web, the backpacking accommodation is low-key and run by the local villagers. When the tides are right, the local villagers drag nets to catch fish, and by day tend to cassava and taro gardens, pick bananas and pawpaw as they ripen, and scrape coconuts for milk. She settles into a *bure* (traditional thatched house) on the seashore edge and begins to relax.

After a few days amongst the hospitality of the local villagers, she begins to learn that things are not quite as harmonious as they first appeared. A walk to the other side of the island opens up a picture-postcard vista: a beautiful lagoon with waves gently lapping against a golden beach and palm trees swaying in the breeze. The coral, however, is mostly dead. The tropical fish display a dazzling array of electric colours, but they are few. The cruise ships take precedence and private sailing boats blot the seascape. At low tide it is possible to circumnavigate the island, where the exposed mangrove mudflats now reveal an isthmus connected to another island. That island is privately owned by an American millionaire (she learns that there is a long-standing dispute over land title, with indigenous villagers claiming that the island was originally sold illegally). ‘Paradise’ here – if it ever actually existed – is well and truly shattered.

The saga that unfolds has an almost eerily familiar ring to it: a retired, rich American businessman buys an island in the Pacific as his personal hideaway. He sets about ‘developing’ the island; building expensive resorts to attract Hollywood stars on vacation (for approximately US\$1000/night). Unfortunately, his development enterprises involve bulldozing hillsides and emptying the dirt overflow into the mangrove swamps, which happen to be the breeding habitat for fish, which happens to be the staple diet of the

islanders. With a few handshakes in the right direction, and the reassurance that environmental laws are not quite up to 'First World' stringency, he continues his developing. But, now he wishes to expand. He offers a handsome price to the neighbouring islanders for the purchase of their 'property'. The local Fijians, having lived on the same islands in communal village lifestyle for generations, decline his fiscal offer. The millionaire is disgruntled, but not undone.

Putting to test his master business skills, the rich outsider employs the highly successful divide-and-rule tactic. He at first placates one of the local chiefs, offering to finance a tourist backpacking venture with promises of lucrative gains for the whole village. Because the village has no way of funding such an enterprise, he presents the up-front capital costs at a low interest rate loan. He even advertises on their behalf over the Internet and connects them to the appropriate local transportation services (over which he has a monopoly). As a gesture of good-will (and public relations), he donates money to the local school and hospital. As the lure is set, he waits for the bait to be nibbled and the hook to be swallowed. Where one village has tasted a golden opportunity, the others are soon to follow. Some villages are more successful in attracting backpackers than are their neighbours (it is seemingly arbitrary). Villages now compete with one another: brother against brother. All are indebted to the Rich Man.

Recapitulation: Ritual and Game

The clash of cultures in this Fijian experience typifies the meeting of *modernity*, underpinned by an incessant drive for 'development', and an *indigenous* community connected by strong communal bonds to a particular place and/or people. These two radically divergent forms of societal organisation were introduced in abstract terms in Chapter Three "Ritual and Game". In that chapter, 'ritual' includes indigenous cultures (drawing common themes from among the vast diversity of autochthonous peoples) *as well as* cultures of Europe where society was arranged and functioned in accord with those same underlying patterns of social organisation; e.g., medieval guild-based townships. In contrast, the 'game' typology exemplifies modernity; born of the secular-scientific worldview which arose in the post-Enlightenment culture of Western Europe and now expressed through the 'global economic culture' of multinational corporations and technological society.

The present chapter will provide contextual substance to the meeting of ‘game’ and ‘ritual’ cultures, hereafter referred to respectively as ‘moderns’ (or, alternatively, ‘Civilised Man’ or ‘Economic Man’) and ‘indigenous’ (otherwise referred to as ‘Primitive Man’ or ‘Vernacular Man’). These alternative descriptions (in parentheses above) indicate the cultural bias which underpinned Western European attitudes at different stages of encountering the ‘Other’. This includes early colonial expeditions where Europeans cast themselves as ‘Civilised Man’ (gender-bias is intentional) and the ‘other’ (i.e., indigenous and tribal peoples) as their ‘Primitive’ counterpart. The cultural bias has extended to contemporary economic imperialism where money and technology are upheld as the measure of superiority (e.g., ‘developed’ versus ‘underdeveloped’ nations). Such labels usually appeal to a dialectical mentality, whereby one culture (and gender) is presented in positive or elitist terms, thus denigrating all others in a negative frame. In this chapter, the meeting of the ‘other’ will be approached through alternate lenses: the assault of Western European society on indigenous worldviews, and three responses of indigenous peoples to modernity. This will be addressed through a critique of the ‘development ethos’.

GOETHE’S *FAUST*: “Faust the Developer”

The history of Doctor Faustus, the magician who sold his soul to the devil in return for personal services, was first published as *Faustbuch* by Johann Spiess in 1587 and sold as a chapbook at country fairs. It was soon after adapted by Christopher Marlowe into a play for the Elizabethan stage and acquired widespread fame through troupes of travelling puppeteers. However, it was the German poet Johann Wolfgang von Goethe who, over a period of sixty years (≈ 1770 -1831), re-wrote *Faust* as a long drama that surpasses all previous versions in richness and depth of historical perspective. In Goethe’s *Faust*, Dr. Faustus sold his soul to the devil not for any clearly defined and desired personal riches of life, but in exchange for the transformation of his ideas into social action. Marshall Berman, in a recent critique of modernity and development in the twentieth century, explains: “One of the most original and fruitful ideas in Goethe’s *Faust* is the idea of an affinity between the cultural ideal of *self*-development and the real social movement toward *economic*

development.”¹ Thus, Berman concludes that Goethe’s *Faust* is “...the first, and still the best, *tragedy of development*.”²

Berman identifies three metamorphoses of Faust (The Dreamer, The Lover, The Developer) and draws analogies from these stages of Faust’s self-development to the economic development and cultural revolution that spurred the growth of modernity. As *The Dreamer*, Faust is introduced as a highly qualified and erudite individual held in great esteem among his intellectual and vocational peers. Yet, Faust scorns his achievements (he has mastered the total medieval university curriculum) and laments that they are all inward triumphs (of the mind only). His intellectualism has isolated him from the real connections of a concrete community; the medieval village life that he has distanced himself from. Weary and frustrated, Faust invokes the Earth Spirit. The apparition materialises and mocks Faust’s attempts to be a “superman” (the archetypal modern ‘hero’), challenging him instead to take up the ordinary duties of a citizen. She advises: “Art thou really so different from the others? Get to know thyself. Live in peace with the world.”³ His pride wounded, Faust rejects her and ignores the content of her message.

In the depths of self-eroding despair, Faust resolves to kill himself. At the crucial moment of his impending suicide, the pealing of bells from the Easter celebrations flood through his windows, drawing him back to the happy memories of his childhood: he is saved, literally, “by the bell”. Faust steps outside to join the rejoicing crowd of local folk. The delight of his social reunion is soon shattered, however, when Faust is reminded of why he withdrew from society: he scoffs at the ignorance of the ‘simple’ village people who accept faith at face value. Returning to his study, Faust makes the acquaintance of his satanic companion, Mephistopheles. They enter into a pact: Faust forfeits his soul and in return Mephisto agrees to aid him in a life adventure whereby “...Mephisto will never succeed in

¹ Berman, M. *All That Is Solid Melts Into Air: The Experience of Modernity*. *op. cit.* p.40. [italics in original.]

² *ibid.* For background sources to Goethe’s *Faust*, as well as the author’s comments on the drama, contemporary reactions and modern criticism, the translation by Walter Arndt and edited by Cyrus Hamlin is recommended (reference below). However, for the purposes of this study, Goethe’s *Faust* will be presented as an allegory to the nature of ‘development’ as it has come to represent modernity, and will necessarily be limited in the detail that justifies a literary discussion of this classic masterpiece. For the (restricted) purposes of the present study, Marshall Berman’s Chapter One; “Goethe’s *Faust*: The Tragedy of Development,” pp.37-86, in: *ibid.* serves this discussion well.

³ Weigand, H. “Goethe’s *Faust*: An Introduction for Students and Teachers of General Literature,” pp.446-472, in: Hamlin, C. (ed.) *Faust: A Tragedy. Background and Sources, The Author on the Drama, Contemporary Reactions, Modern Criticism*. [Translated by W. Arndt.] New York: Norton and Company. 1976, p.449.

extinguishing the restless urge that makes Faust forever reach beyond the illusory satisfaction of the moment..."⁴ Employing the "powers of the underworld", Faust is granted unrestrained powers to bring all his fantasies of the mind to fruition. The first 'fantasy' that Faust explores is that of his own sexuality.

The second metamorphosis, Faust *The Lover*, involves an affair with Gretchen; an innocent and virtuous young woman whose "little world" extends no further than her small, religiously devout town. Their romance, however, results in Gretchen's tragic death. The newborn freedom which Gretchen tastes and takes a liking to now isolates her from her village, for she is no longer willing nor able to fit back into the social role expected of her. The "little world" from which Faust plucked Gretchen now crashes in on her, as friends and neighbours turn against her with a cruel vengeance. She has no means nor place to 'escape'. Faust, however, has long since removed himself from the ties and responsibilities of a citizen in a real community. Because he is not embedded within this "little world" he is not vulnerable as Gretchen is to the backlash of her kin. Although distressed at the loss of Gretchen, Faust resolves to "keep moving" and therefore not be tied by guilt to his past. Berman comments on this clash of the 'open man' and the 'closed world':

"Faust participates in, and helps to create, a culture that has opened up a range and depth of human desires and dreams far beyond classical and medieval frontiers. At the same time, he is part of a stagnant and closed society that is still encrusted in medieval and feudal social forms: forms like the guild specialization that keeps him and his ideas locked away. As the bearer of a dynamic culture within a stagnant society, he is torn between inner and outer life."⁵

The third and final metamorphose portrays Faust as *The Developer*. Together, Mephisto and Faust secure a whole coastal region and a host of workers to exploit in order to bring Faust's grand visions for development into concrete plans. His task is monumental: to change the entire environment and create a dynamic economy and community where all

⁴ *ibid.* p.456.

⁵ Berman, M. *All That Is Solid Melts Into Air. op. cit.* p.43. [emphasis added.] Berman adds: "...In the twentieth century, intellectuals in the Third World, bearers of avant-garde cultures in backward societies, have experienced the Faustian split with a special intensity. Their inner anguish has often inspired revolutionary visions, actions and creations..." Note that Berman's representation of medieval society as "encrusted" is typical of modern critics of Western history who deconstruct their own cultural past as the interplay of opposing dialectical extremes; e.g., modernity as *dualistic* (dynamic individualism) versus pre-modern society as *monistic* (stagnant and authoritarian). Refer above to the section in Chapter Two; "The Dialectical Dilemma."

individuals are “free to act”.⁶ Thus Goethe’s *Faust* may be interpreted as the “experience of modernity”⁷, whereby whole physical, social and moral worlds are radically transformed in the name of economic development and progress. This transformation, however, requires that the innocence of the “little worlds” be punctured and levelled to their very foundations in order to allow the rebuilding of a new civilisation.

As much as development is a creation anew, the “powers of the underworld” also destroy. This ‘ugly side’ of development is displayed in Faust’s intolerance to those who resist his grand schemes. In Goethe’s *Faust*, the old couple, who live by the seashore in their small, humble abode and refuse to move, represent the “people who are in the way”: those classified as obsolete to the process of progress.⁸ Their property (an ‘island’ within the ‘sea’ of developed land) is no great physical threat to Faust, but the tolling of bells from their little cottage grates on his conscience: They are a reminder of the virtues of the Old World. Not only must bonds be broken with the traditional Old World, but Faust demands that no trace of his past remain at all. Faust discreetly arranges for the old couple to be disposed of; a sinful act which he delegates to Mephisto. The past is thus obliterated; a characteristic of modernity that Loren Eiseley deplors:

“Faustian man is never at rest in the world. He is ... a spokesman of the will. He is the embodiment of a restless, exploratory, and anticipating ego. In that last word we have the human head spun round to confront its future – the future that it has created. ... I would merely add one observation: that the owl, Minerva’s symbol of wisdom, is able to turn its head through an angle of one hundred sixty degrees. It can be not visually anticipatory alone, it can look backward. Perhaps it is the lack of this ability that gives modern man and his children a slightly inhuman case of countenance.”⁹

⁶ With *Faust* we identify the birth of modern liberalism: rights-bearing individualism and an insatiable addiction to never-ending change with seemingly no limits (see Chapter Three discussion of ‘Game’). Hermann Weigand affirms: “The spirit of Faust stops at nothing in its quest for self-realization. An exponent of this spirit, Faust, the individual, assumes symbolic significance as the extreme exemplar of the deepest drives of western civilization. Self-realization, properly considered, is a program without inner or outer limits. ... The hazard of self-destruction in the pursuit of this quest is a risk to be faced.” Weigand, H. “Goethe’s *Faust*: An Introduction for Students and Teachers of General Literature,” *op. cit.* p.448. [emphasis added.]

⁷ See: Berman, M. “Introduction: Modernity – Yesterday, Today and Tomorrow,” pp.15-36, in: *All That Is Solid Melts Into Air. op. cit.*

⁸ Berman comments: “They [old couple] are the first embodiments in literature of a category of people that is going to be very large in modern history: people who are in the way – in the way of history, of progress, of development; people who are classified, and disposed of, as obsolete.” *ibid.* p.67.

⁹ Eiseley, L. *The Invisible Pyramid*. New York: Charles Scribner’s Sons. 1970, p.85.

THE 'PROGRESSIVE WORLDVIEW': The Gifts of the Jews

Interpreting Goethe's *Faust* as an allegory to modern development raises a number of questions about the nature of 'development'. Just what *is* this driving urge to 'develop' that forever unsettled Faust and today characterises the dynamism of the modern spirit? Whence this restlessness? Certainly it was not encouraged within the inner circle of medieval ritual life, where the "little world" bound all to a social net that was secure as long as everyone adhered to the moral code. Even for those like Gretchen, who broke free of their village confines, life outside their community context bore no meaning and hence no desire to 'develop'. Of course, where village life imposed too much on individuality, refused to adapt, or began to ossify into a privileged elite (e.g., with the rise of a mercantile class), resentment from within might have unsettled the composure of the whole.¹⁰ However, as the Gretchen tragedy suggests, this was not enough in itself to overthrow the communitarian cohesion of such societies.¹¹

Rather, as the literary character of Faust suggests, the restless nature of development came from 'outsiders'; from wandering pilgrims and nomadic tribes.¹² Underpinning Faust's ceaseless momentum was a resolve not to dwell¹³ in the moment nor reflect on the past (and its associated guilt), but instead to be led by the lure of the *future*. The driving force of development is thus definitive of the modern eschaton; all sacrifices (present and past) bear the promise of future prosperity. To 'develop' was now understood as advancing through time; a forward movement that left the past behind in search of something better. This

¹⁰ Refer to the discussion in Chapter Three; "The Communal Spirit of Medieval Ritual," and the degeneracy of medieval ritual into feudal 'ritualism'.

¹¹ Berman relates the 'Gretchen tragedy' to contemporary development, interpreting the "little worlds" in monistic terms, i.e., as closed to change. He alleges that the threats to these "little worlds" come from both internal and external factors: "The vast majority of people still live in 'little worlds' like Gretchen's, and those worlds, as we have seen, are formidable enough. Nevertheless, these cellular small towns are beginning to crack: first of all, through contact with explosive marginal figures from outside – Faust and Mephisto, ... but more important, through implosion, ignited by the volatile inner developments that their own children, like Gretchen, are going through." Berman, M. *All That Is Solid Melts Into Air*. *op. cit.* p.59. [emphases added.] For further discussion on the dynamic of local versus globalisation, refer below: "Three Responses of Indigenous Peoples to Global Culture."

¹² Specifically the ancient Hebrews; the tribe of desert nomads who "changed the way everyone thinks and feels" (see below). In general, most nomadic tribes have altered environments in very minor ways and, in contrast to intensive settlement, allowed those environments to recover.

¹³ To "dwell", from the Old English (about 725) *dwellan*, meaning: "to hinder, delay, be tardy, linger, tarry; originally, to make a fool of, lead astray." Barnhart, R.K. (ed.) *Chambers Dictionary of Etymology*. New York: Chambers. 1988, p.308. To "dwell" implied that those who remained in a place or in a time (i.e., the past or present) were lazy and 'unproductive'. To be future-oriented and constantly on the move is therefore to be 'forward-looking' and progressive; qualities that are admired and expected of all 'successful' moderns.

perverse twist in temporality would have seemed absurd to the ancients, whose notion of 'future' was a replay of the past; the earthly replay of the drama of the heavens. However, for moderns who have adopted the "processive worldview" from their predecessors, the Jews, "history" – as one of the many "gifts of the Jews"¹⁴ – is always something new:

“...a process unfolding through time, whose direction and end we cannot know... The future will not be what has happened before; indeed, the only reality that the future has is that it has not happened yet. It is unknowable... We do not control the future; in a profound sense, even God does not control the future because it is the collective responsibility of those who are bringing about the future by their actions in the present. For this reason, the concept of the future – for the first time – holds out promise, rather than just the same old thing. We are not doomed, not bound to some predetermined fate; we are free.”¹⁵

The defining feature of this temporality is *linearity*. It was only when the circular worldview of the Wheel, the timeless kosmos of ritual-based cultures, was shattered by this linear arrow of time that the notion of "history" made any sense.¹⁶ As Thomas Cahill recounts, history was born in the narrative of Avram's Journey to the "promised land"; a journey to an unknown destination prompted by the faith of founding a great nation.¹⁷ Previously all 'new' events were explained by recourse to the past (sustained through mythology) or quietly merged into the 'timeless flow' of the ever-present in which was experienced the 'fullness of time'.¹⁸ In the Journey of the ancient Jewish nomads, however, events were

¹⁴ Thomas Cahill verifies: "The Jews gave us ... our outlook and our inner life. ... Most of our best words, in fact – *new, adventure, surprise; unique, individual, person, vocation; time, history, future; freedom, progress, spirit; faith, hope, justice* – are the gifts of the Jews." Cahill, T. *The Gifts of the Jews: How a Tribe of Desert Nomads Changed the Way Everyone Thinks and Feels*. New York: Nan A. Talese, Doubleday. 1998, pp.240-241. [italics in original.]

¹⁵ *ibid.* p.131. [underline added.]

¹⁶ Cahill comments: "All evidence points to there having been, in the earliest of religious thought, a vision of the cosmos that was profoundly cyclical. ... The Jews were the first people to break out of this circle... But their worldview has become so much a part of us that at this point it might as well have been written into our cells as a genetic code. We find it so impossible to shed – even for a brief experiment – that it is now the cosmic vision of all *other* peoples that appears to us exotic and strange." *ibid.* pp.5-6. [italics in original.]

¹⁷ See *ibid.* Also, refer to: Rifkin, J. *Time Wars: The Primary Conflict in Human History*. *op. cit.*, especially pp.125-131 for a discussion of the Jewish image of the future: "The Jews not only helped create the concept of history, but also imbued it with a mission. History was the place where God and his chosen people played out a relationship together. Above all else, it was a place where promises were made which would be fulfilled sometime in the future." p.127.

¹⁸ It must be emphasised that indigenous peoples' concepts of time are not in any way homogeneous or restricted to a monotonous cyclical formula. In an indigenous kosmology, *repetition* of the past is not to be misunderstood as an exact *replication* but rather as a reinforcement of traditions and relationships with the ancestors. Too often moderns misrepresent indigenous worldviews in static, monistic terms as resisting growth per se. Jeremy Rifkin explains: "In mythic cultures, duration was secondary to regeneration. Because everything repeated itself through endless cyclical regeneration, timelessness was built into the process. It was not necessary to project some timeless paradise at the end of history because there was no history to contend with. In traditional cyclical time cultures, the social order experienced a

singled out as unique and unrepeatable pinpoints in history. Avram's Journey formed a chronological sequence of events; a quantifiable record of the linear passing of time.

It is perhaps only possible to truly conceive the magnitude of this new awakening to temporality when compared to the worldview that the ancient Hebrews 'left behind'. Indeed, this contrast might also be felt in the rift between moderns and those cultures to whom the linear and abstract concept of time is still considered an aberration (or, at least, an incomplete explanation).¹⁹ However, it is not the intent of this study to discuss in depth different cross-cultural perspectives with respect to time.²⁰ Rather, it is to be aware that time underpins much of what is taken-for-granted in a given worldview. For example, the scientific theory of evolution as proceeding from simple to complex/higher forms would not make sense without moderns' unquestioned acceptance of time as unidirectional and linear-oriented.²¹ Significantly, linear temporality also provides meaning to the ideology of 'progress'; defined and measured as *distance from the source*, and its association with the idea of improvement over time.²²

continual birth with each new ecological cycle." *ibid.* p.126. [underline added.] See especially his Chapter Nine, "The Timeless State," pp.123-133, for a discussion of the Jewish influence on modern time consciousness. Refer also to the discussion of "Ritual: Indigenous Kosmology," in Chapter Three above.

¹⁹ In an indigenous kosmology, time is not abstract (as is linear time), but is profoundly qualitative and relative. Time is punctuated by 'events' which take on a symbolic meaning in relation to the mythology and rituals particular to their culture. (Refer to: Sullivan, L.E. *Icanchu's Drum: An Orientation to Meaning in South American Religions*. New York: MacMillan. 1988, especially Chapter Four; "Time," pp.153-227. "Time in cosmos and culture is not, indeed cannot be, uniform in shape, homogeneous in texture, or univocal in meaning. The multiple modes of time cherished and reflected upon in every culture mirror the complexity of human experience." p.153.) The clash of 'universal' versus 'particular' is illustrated by the (now) universally computerised and abstract 'western standard time' (based on Greenwich mean time in England) and, in the shadow of Big Ben, the 'small hand' of 'primitive' temporality which is indeed 'primal' in the sense of being attuned to the rhythms of Nature particular to a place. Many ritual-based cultures planted and harvested by moon phases and according to ecological indicators of seasonal change; e.g., "Thanksgiving" celebrations in North America.

²⁰ For a cross-cultural comparison on time (Western linear time, Indian cyclic time, and traditional Australian Aborigines place-based concepts), see: Raine, P. "Beyond Universalism: The Shaman and the Ecologist. An Ever Open Horizon," *INTERculture. op. cit.*, especially pp.22-24. Peter Raine reveals that one of the most 'radical' (i.e., incomprehensible to most moderns!) worldviews is the Australian Aborigines who rejected measured time altogether. "In their worldview it is the movement of places that gives rise to sequential change in which events 'abide'." p.22.

²¹ The concept of 'time' is a key concern to modern physics. More recently, the notion of time as irreversible (which is an underlying assumption of both classical thermodynamics and Darwinian evolution) has been questioned by Ilya Prigogine (and others) in his far-from-equilibrium 'dissipative structures'. Refer to: Prigogine, I. *From Being to Becoming: Time and Complexity in the Physical Sciences. op. cit.* Also, see discussion in Chapter Four above; "Order Out of Chaos: Prigogine's 'Dissipative Structures'."

²² "Progress may be defined, and indeed can only be measured precisely, as *distance from the source.*" Eastham, S.T. "Modernism contra Modernity: The 'Case' of Ezra Pound," *Paideuma*. Vol.30, Nos.1&2. Spring & Fall 2001, p.114. [italics in original.] 'Progress' forms part of the "myth of history", which Panikkar critiques in his; "Part Two. The End of History: The Threefold Structure of Human Time-Consciousness," pp.79-133, in: Panikkar, R. *The Cosmotheandric Experience. op. cit.*

'ENFRAMING' THE 'OTHER': Non-Human Nature; Non-Western Cultures

The observation that time may be expressed sequentially (e.g., the visible growth of organisms through various embryonic stages) is not unique to biologists, evolutionary theorists, or even to the Western worldview. For example, the formation of a bud on a tree and its subsequent bursting into bloom is, as many indigenous cultures' ritual-based calendars indicate, a temporal display. As Martin Heidegger describes, the "bringing-forth" (*poiēsis*) of the blooming bud is a kind of "revealing" (or "truth").²³ It might then be asserted that the pattern of 'organic growth' that gives rise to the expression of flower is a type of 'development', in its original etymological sense as an "unfolding of latent possibilities".²⁴ Although the bursting of the bud into bloom may be anticipated in advance, the true nature of this unfolding – the revealing of the bud as flower – is neither known nor knowable to those who appreciate its delicate petals (i.e., it cannot be *forced* to bloom).²⁵ In this sense, the "arising of something out of itself" (*physis*) is a "bringing-forth" (*poiēsis*) that may be thought of as the 'will' (or *Way*) of Nature.

In contrast to revealing as *physis*, the "revealing" that characterises modern development (or technology) is of a different kind. Here, what is meant by 'technology' (*technē*) is *not* simply the physical apparatus (*instrumentum*) of what is deemed by moderns to be 'technological'. While the assault of the technological (e.g., the physical construction of hydroelectric dams, etc.) on Nature warrants the onslaught of environmental and social critiques by post-modernist development critics,²⁶ what Heidegger attempts to draw moderns' attention to is the urgent need for questioning concerning the "essence of technology". The essence of technology is a revealing that is a "challenging-forth" quite unlike the "bringing-forth" of

²³ "Every occasion for whatever passes over and goes forward into presencing from that which is not presencing is *poiēsis*, is bringing-forth [*Her-vor-bringen*].' ... *Physis* also, the arising of something from out of itself, is a bringing-forth, *poiēsis*. *Physis* is indeed *poiēsis* in the highest sense. For what presences by means of *physis* has the bursting open belonging to bringing-forth, e.g., the bursting of a blossom into bloom, in itself (*en heautōi*). In contrast, what is brought forth by the artisan or the artists, e.g., the silver chalice, has the bursting open belonging to bringing-forth not in itself, but in another (*en allōi*), in the craftsman or artist." Heidegger, M. "The Question Concerning Technology," pp.3-35, in: *The Question Concerning Technology and Other Essays*. [Translated and with an Introduction by W. Lovitt.] New York: Harper and Row. 1977, pp.10-11. [italics in original.]

²⁴ *Develop* meaning; "to unroll, unfold, open out." Skeat, W.W. *An Etymological Dictionary of the English Language*. *op. cit.* p.266. From the Italian, *sviluppare*; to unwrap, disentangle, or to unfurl (a banner), to open out of its enfolding cover. A growth from the inside out.

²⁵ Notwithstanding genetic modification, which is the latest expression of a scientific challenging that attempts to assert ultimate control over Nature.

the bud into bloom. Heidegger asserts: “The revealing that rules in modern technology is a challenging [*Herausfordern*], which puts to nature the unreasonable demand that it supply energy that can be extracted and stored as such.”²⁷ The ‘latent unfolding’, or will/Way of Nature, is thus denied by modern technology which instead directs moderns to approach Nature as *something to be ‘willed’*.²⁸

The essence of technology is not itself technological, but is characteristic of the very essence of moderns themselves.²⁹ Heidegger refers to the modern age as that of the “world picture”; not in the sense of a painting or pictorial image but, rather, as “...the conquest of the world as picture.”³⁰ Ensnared as such, moderns position themselves “in the picture” as subject (*subiectum*)³¹, and set about “Enframing”³² the “world” as a system of objects (i.e., “standing-reserve”). Assuming “relational center” in the picture, the *subiectum* “represents and sets before” oneself all that is by way of a calculating ordering way of revealing.³³ Therefore, all that “presences” is thrown over-and-against the calculating *subiectum* as an

²⁶ There is overwhelming and undeniable evidence of the global environmental crisis and social injustices resulting from ‘development’ projects which stem from an excessive ‘needs-driven’ modern industrial society. Refer below to the section; “Development and the Global Environmental Crisis.”

²⁷ Heidegger, M. “The Question Concerning Technology,” *op. cit.* p.14. [italics in original.] “*Technē* ... reveals whatever does not bring itself forth and does not yet lie here before us, whatever can look and turn out now one way and now another. ... This revealing gathers together in advance the aspect and the matter of ship or house, with a view to the finished thing envisioned as completed, and from this gathering determines the manner of its construction.” Heidegger, M. “The Question Concerning Technology,” *op. cit.* p.13. [italics in original.]

²⁸ This ‘willed’ ordering is characteristic of the methodology that underpins the historical (and natural) sciences, wherein historiography seizes hold of what is past and objectifies it. From this objectified account of “history”, the future is then “projected”, as Heidegger asserts: “All mere chasing after the future so as to work out a picture of it through calculation in order to extend what is present and half-thought into what, now veiled, is yet to come, itself still moves within the prevailing attitude belonging to technological, calculating representation.” Heidegger, M. “The Turning,” pp.36-49, in: *The Question Concerning Technology and Other Essays. op. cit.* p.48.

²⁹ Panikkar takes a stance similar to Heidegger, stating that: “...the essence of technology (essentially different from *technē*, as I insist on underlining) does not reside in the machines but in a fundamental attitude towards what is real.” Panikkar, R. “The Discovery of the Metapolitical,” *INTERculture. op. cit.* p.33. [italics in original.]

³⁰ See Heidegger’s essay; “The Age of the World Picture,” pp.115-154, in: *The Question Concerning Technology and Other Essays. op. cit.* p.134. “Hence, world picture, when understood essentially, does not mean a picture of the world but the world conceived and grasped as picture.” p.129. [underline added.]

³¹ Heidegger explains: “That the world becomes picture is one and the same event with the event of man’s becoming *subiectum* in the midst of that which is...” *ibid.* p.132. [italics in original.]

³² In Heidegger’s words: “We now name that challenging claim which gathers man thither to order the self-revealing as standing-reserve: ‘*Ge-stell*’ [Enframing].” Heidegger, M. “The Question Concerning Technology,” *op. cit.* p.19. [italics in original.]

³³ The subject-object distance which underpins the dualistic rationality of the modern mind is also characteristic of moderns’ ‘unnatural’ separation from Nature, as Panikkar observes: “It is the estrangement of the human mind from nature that leads to the assumption that univocity is the ideal. Thinking begins to be understood as measuring, calculating.” Panikkar, R. “The Invisible Harmony: A Universal Theory of Religion or a Cosmic Confidence in Reality?,” in: *Invisible Harmony. op. cit.* p.179.

object of comparative relation.³⁴ In this way, nothing can ‘be’ in and of its own true, inner nature (unfolding in its own ‘way’) but is already claimed to be known in advance as object. The future is ensnared and represented, set before oneself, so as to grasp and hold it secure. Thus, Avram’s journey of discovery to an unknown but ‘promised land’ is further perverted in the contemporary era (where insecurity has become an obsession) to that of a predetermined path of ‘non-discovery’. The future is first projected, then back-cast to produce procedures for progressing to a designated time not-yet-arrived-at, but already held captive as object.³⁵

The ability to conceive and relate to the ‘other’ as Other (that is, an ultimately mysterious ‘otherness’) is denied through objectification (and objectness) and the similarly deceptive burial of the Self as a relational ‘subject’. Adapting Heidegger’s “world picture” to the European colonialists’ distorted view of ‘reality-as-object’, Timothy Mitchell exposes the illusion of spectacles like the Egyptian exhibition, on display in Paris during 1889.³⁶

³⁴ Heidegger states: “That which is, is no longer that which presences; it is rather that which, in representing, is first set over against, that which stands fixedly over against, which has the character of object [*das Gegen-ständige*]. Representing is making-stand-over-against, an objectifying that goes forward and masters. In this way representing drives everything together into the unity of that which is thus given the character of object.” Heidegger, M. “The Age of the World Picture,” *op. cit.* p.150. [italics in original.] See Chapter Two; “Dualism – The Many”, where I explained: “‘Reason’ is reduced to what is ‘rational’ and, as the etymology of the words suggest, what is rational is that which is held in *ratio* to another thing (bringing self-awareness).” This subject-object dualism underpins Descartes’ metaphysics; the individualist subjectivism of the ‘ego’ in *cogito ergo sum*.

³⁵ This echoes my contention with modern methodologies which appear to have become a *methodical* procedure of repetition, rather than a more open and exploratory *methodus*; way of teaching or proceeding (from *meta* – after; *hodos*; a travelling road, way). *Chambers Dictionary of Etymology*. [See discussion of ‘method’ in Chapter Two.] Critical of the idea of the *rational* method (as the conduct of science that adheres to firm, unchanging and absolutely binding principles), the philosopher of science, Paul Feyerabend, observes that the history of science reveals a more *anarchist* approach in the progress of scientific knowledge. He explains: “...given any rule, however ‘fundamental’ or ‘rational’, there are always circumstances when it is advisable not only to ignore the rule, but to adopt its opposite. For example, there are circumstances when it is advisable to introduce, elaborate, and defend *ad hoc* hypotheses, or hypotheses which contradict well-established and generally accepted experimental results...” Feyerabend, P. *Against Method*. [Third Edition.] London: Verso. 1993 [1975], p.14. [italics in original.] On ‘method’, the history of modern hermeneutics and phenomenology of understanding, see the important work of philosopher Hans-Georg Gadamer on *Truth and Method*. New York: Crossroads. 1975. Projected forecasts steal the mystery of the future and hold the fullness of the present at ransom. Time both defines and restricts the modern mind. Illich states critically: “Planning is the sin of presumption.” Illich, I. “Part Moon, Part Travelling Salesman: Conversations with Ivan Illich,” *CBC “Ideas”*. Canadian Broadcasting Corporation. 20-24 February 1989.

³⁶ Note that, while Timothy Mitchell refers to Heidegger’s essay; “The Age of the World Picture,” as his inspiration for this discussion, Mitchell’s use of Heideggerian terms such as ‘representation’ and ‘enframing’ take on a much narrower definition (in the context of European colonisation of Egypt) than that which Heidegger expresses. Mitchell explains: “Non-Europeans encountered in Europe what one might call, echoing a phrase from Heidegger, the age of the world exhibition, or rather, the age of the world-as-exhibition. World exhibition here refers not to an exhibition of the world but to the world conceived and grasped as though it were an exhibition.” Mitchell, T. *Colonising Egypt*. Berkeley: University of California Press. 1988, p.13.

Mitchell explains that visitors from the Middle East to Europe were often stared at, as if they themselves were objects on exhibit. Furthermore, the Egyptian exhibition altered the European viewers' perceptions not just of the Oriental visitor, but of themselves as separate (set apart) from the world.³⁷ Mitchell confronts the dualism characteristic of the Western (and modern) mind: "The more the exhibit drew in and encircled the visitor, the more the gaze was set apart from it, as the mind is set apart from the material world it observes."³⁸ From this analogy of the world-as-exhibition, Mitchell investigated colonial attitudes that sought to re-order the 'reality' of the 'other' as object-like and therefore legible only to a 'calculating ordering' representation of reality:

"We need to understand how the West had come to live as though the world were divided in this way into two: into a realm of mere representations and a realm of 'the real'; into exhibitions and an external reality; into an order of mere models, descriptions or copies, and an order of the original. ... We need to understand, moreover, how this distinction corresponded to another division of the world, into the West and the non-West; and thus how Orientalism was not just a particular instance of the general historical problem of how one culture portrays another, but something essential to the peculiar nature of the modern world."³⁹

WHEN 'CIVILISED MAN' MEETS 'PRIMITIVE MAN'

The cross-cultural encounter is essentially a meeting of the 'other'. It is useful, therefore, to briefly outline how moderns and indigenous peoples each address their alternate 'other'. Three responses and reactions of indigenous peoples to the colonising global culture (modernity) will be discussed in a later section of this chapter. The present enquiry will focus on three (among a multifarious selection) cultural attitudes held by Europeans that have influenced the nature of their responses to and interactions with indigenous cultures. The controversial labels of 'Civilised Man' and 'Primitive Man' echo the language bias and attitude of Westerners when they first encountered the 'other' in their explorations of the

³⁷ "The curious double position of the European, as participant-observer, makes it possible to experience the Orient as though one were the visitor to an exhibition. Unaware that the Orient has not been arranged as an exhibition, the visitor carries out the characteristic cognitive manoeuvre of the modern subject, who separates himself from an object-world and observes it from a position that is invisible and set apart." *ibid.* p.28. This objectification is a form of control (and European colonisation) that is entrenched through ontological and epistemological distinctions made between 'the Orient' and 'the Occident' and underpins 'Orientalism' which Edward Said describes as "...the corporate institution for dealing with the Orient – dealing with it by making statements about it, authorizing views over it, describing it, by teaching it, settling it, ruling over it: in short, Orientalism as a Western style for dominating, restructuring, and having authority over the Orient." Said, E.W. *Orientalism*. New York: Pantheon Books. 1978, p.3.

³⁸ "The representation of reality was always an exhibit set up for an observer in its midst, an observing gaze surrounded and set apart by the exhibition's careful order." *ibid.* p.9.

New World. Although the following discussion does not follow a strict chronology, the intention is to highlight that colonial attitudes (although nowadays coined in more appeasing, scientifically-accepted language) still underpin, and therefore inhibit, the cross-cultural agenda. Three of these attitudes are discussed: (1) Indigenous as Pre-Modern Self: 'Contemporary Ancestor'; (2) Indigenous as Sociobiological and Anthropological 'Object'; and (3) Indigenous as 'Romanticised Hero': The 'Ecologically Noble Savage'.

Indigenous as Pre-Modern Self: 'Contemporary Ancestor'

The dialectical reaction of modern, science-based society to its own pre-modern societies has greatly influenced moderns' impressions of the 'other', i.e., non-Western cultures, and continues to do so.⁴⁰ The attitudes held by 'civilised' moderns are most often those of disdain for pre-modern societies; viewing that 'pre-historic' stage of their own cultural evolution as 'primitive' (e.g., pagans as superstitious or as heathen).⁴¹ This has contributed to a tendency by moderns to assign to indigenous peoples the same cultural characteristics that they attribute to their own pre-Enlightenment (Western, ritual-based) societies.⁴² Thus, homologies are drawn between the 'other' and a pre-modern 'stage' in Western society's historical development, e.g., from early hunter-gatherer groups of hominids through to medieval feudal society. In particular, tribal societies now appear in the eyes of moderns as

³⁹ *ibid.* p.32.

⁴⁰ The transformation of the medieval era into the modern worldview was characterised by a number of heretical movements. Each 'new' movement rose in dialectical opposition to the preceding; e.g., the Reformation met with a Counter-Reformation, the Scientific Revolution faced strong religious reaction from the Catholic Church and the Romantics, and currently Modernity is being challenged by Post-Modernists. In each case, the 'new' values and cultural visions of the revolutionaries have come at the expense of attempts to eliminate the 'other' through cultural and historical amnesia. Refer to Loren Eiseley's comments above.

⁴¹ "The pagans ... were the *pagani*, the country folk who stubbornly preserved all these 'old ways' in the face of the emerging technological and imperial juggernaut of city-culture, 'civi'-lization." Eastham, S.T. "Modernism contra Modernity," *op. cit.* p.111. [*italics in original.*] It wasn't until as late as the seventeenth century that the word "civilisation" took on its main use not so much a process as a state of social order and refinement. It was held in deliberate cultural contrast with 'barbarism' (here treated as synonymous with 'primitive' and 'savage'; denoting a similar sense of cultural inferiority).

⁴² A common misconception of medieval Europe tends to be coloured by historical impressions of the degeneracy of village life in Europe during the later stages of the Renaissance (i.e., when the Church seized control as a powerful intermediary and the feudal system became hardened). As a consequence, medieval villages are misappropriated as monistic: closed and static, hierarchical and authoritarian, stifling of individuality, etc. The communal spirit of medieval life *may*, in fact, resonate more closely with ritual-based aspects of indigenous communities, where both might be interpreted as expressions of the 'nondual method'. Refer to Chapter Two for outlines of 'methods' and to Chapter Three for a description of "The Communal Spirit of Medieval Ritual."

a “contemporary ancestor”: somewhat quaint and technologically ‘backward’.⁴³ This is reflected in the following account by a pioneering anthropologist, Marcel Mauss:

“...Usually these kinds of facts are used as curiosities, or at the most for comparison, to gauge how far our own societies are removed from or resemble these kinds of institutions, which are termed ‘primitive’.

However, they have general sociological value, since they allow us to understand a stage in social evolution. But there is more to them than this: they have also a bearing on social history. Institutions of this type have really provided the transition towards our own forms of law and economy. They can serve to explain historically our own societies.”⁴⁴

Such self-centred interpretations by moderns may be traced to certain ideological positions advocated in England in the nineteenth century by Herbert Spencer (1820-1903) and others to justify ethnocentric assumptions of European superiority. Indeed, Spencer was amongst those who keenly adopted Charles Darwin’s scientific theory of biological evolution by way of ‘natural selection’⁴⁵, to which he attached his own “survival of the fittest” idiom. Spencer extended Darwin’s biological theory to ‘cultural evolution’ as the “progressive developmentalism”⁴⁶ of human societies; thereby identifying himself as a Social Darwinist.⁴⁷ In striving to correlate ‘social order’ with a ‘natural order’, it was posited by advocates of Social Darwinism that all human societies could be positioned within a ‘universal order’, represented as a linear continuum of evolution from ‘primitive’ to ‘civilised man’, with Western society claiming the apex. In claiming the apex in this so-called progressive

⁴³ Gilbert Rist explains: “In feigning to explain the variety of cultures, one reduces all cultures to the same standardizing denominator. The ‘sauvage’ (a French colloquial expression for a Native Indian) can no longer be a source of self-questioning like he was during the 18th century, since he is merely ‘our contemporary ancestor’ (Morgan).” Rist, G. “Is Development a Western Notion?” *INTERculture*. Vol.20, No.2. Issue No.95. 1987, p.16. See discussion below on indigenous people as the ‘ecologically noble savage’.

⁴⁴ Mauss, M. *The Gift: The Form and Reason for Exchange in Archaic Societies*. [Translated by W.D. Halls, Foreword by Mary Douglas.] London: Routledge. 1990 [1950], p.47. [underline added.] Mauss studied gift-giving ceremonies and the economies of Polynesia and the Pacific in general, and drew conclusions about his observations of indigenous rituals through analogy with ancient Roman, Indo-European, Germanic and Celtic systems of law.

⁴⁵ Darwin, C. *The Origin of Species*. [Edited with an Introduction by G. Beer.] Oxford: Oxford University Press. 1996 [1859].

⁴⁶ Greta Jones comments: “The importance of the theory of mental evolution was this. By taking the complexity of faculty as pre-given, by using history as the means by which this complexity was achieved and by describing this process as one of graduated evolution, Darwin fell into the trap of progressive developmentalism.” Jones, G. *Social Darwinism and English Thought: The Interaction between Biological and Social Theory*. Sussex: The Harvester Press. 1980, p.17.

⁴⁷ Defined in brevity: “Social Darwinists ... endorse two fundamental facts about human nature: that it is continuous with animal psychology, and that it has evolved through natural selection.” Hawkins, M. *Social Darwinism in European and American Thought, 1860-1945: Nature as Model and Nature as Threat*. Cambridge: Cambridge University Press. 1997, p.31.

journey of cultural evolution, Western values have assumed normative status and relativised all other cultures to a lesser state of moral virtue.⁴⁸

In many ways, Darwin's notion of development (when allied with social and cultural ideas) could be described as a reassertion of the 'Great Chain of Being' of the eighteenth century.⁴⁹ That system of heteronomous hierarchy, with its graduated ranking system, was again reasserted through the pseudo-scientific doctrine of Social Darwinism to justify the division between superior and inferior classes/cultures: the "haves" and "have-nots" of capitalism.⁵⁰ This separation was justified on the basis that the "have-nots" could always improve themselves and therefore 'catch up' to the "haves" (this line of reasoning underpins the contemporary "development ethos", as discussed below). Darwin, in his *Descent of Man*, stated: "Differences of this kind between the highest men of the highest races and the lowest savages, are connected by the finest gradations. Therefore it is possible that they might pass and be developed into each other."⁵¹ Following this lead, Spencer's Social Darwinism constructed an image of the 'other' which was intended to exult the mores of his own social elite and therefore also to excuse their excesses:

"Spencer needed to portray primitives as immoral, irrational and aggressive in order to show how individuality, freedom and morality emerged during the process of evolution through a logic of differentiation, specialisation and individuation. It enabled him to construct an evolutionary continuum and, by means of his recapitulation perspective, to substitute a number of contemporary social categories for those at the lowest point of the continuum. Thus children, women, inferior social ranks and tribal social cultures could all be substituted for pre-historic man, depending on the context in question."⁵²

⁴⁸ Goldsmith states: "Thus, a cardinal tenet of modernist ethics is that morality begins with modern man and that one cannot talk of primitive man, or of other forms of life, as 'moral'. This was the view of both T.H. Huxley and Julian Huxley after him." Goldsmith, E. *The Way. op. cit.* p.84.

⁴⁹ Note that the doctrine of the 'Great Chain of Being' has much older origins (Peter Marshall suggests it originated in Asia, was made prominent in Greek thought through Plato and Aristotle, and then elaborated into a system by Neoplatonists). However, the fullest expression of the idea was given in the eighteenth century by Alexander Pope. See: Marshall, P. *Nature's Web. op. cit.* p.219. See also: Lovejoy, A.O. *The Great Chain of Being: The Study of the History of an Idea.* Cambridge, Massachusetts: Harvard University Press. 1936, especially pp.183-207, "The Chain of Being in Eighteenth-Century Thought, and Man's Place and Rôle in Nature". Arthur Lovejoy affirms the link with Darwin's theory of evolution: "Next to the word 'Nature,' 'the Great Chain of Being' was the sacred phrase of the eighteenth century, playing a part somewhat analogous to that of the blessed word 'evolution' in the late nineteenth." p.184.

⁵⁰ In modern parlance, Social Darwinism can be equated with certain ideological positions such as racism, imperialism, patriarchy and, especially, pro-capitalism.

⁵¹ Darwin, C. *The Descent of Man, and Selection in Relation to Sex.* London: John Murray. [Second Edition.] 1882 [1871]. p.66. See especially Chapter Three; "Comparison of the Mental Powers of Man and the Lower Animals," pp.65-96.

⁵² Hawkins, M. *Social Darwinism in European and American Thought, 1860-1945. op. cit.* p.98.

Much as the pattern of embryological growth in any organism, human psychological development was treated in similar fashion. Thus, at the forefront of this evolutionary continuum strode ‘civilised man’ (read: European, male, urban; of city-‘civi’-culture) who, so it was argued, possessed the highest faculties of complexity. By implication, if not otherwise stated outright, all ‘others’ lagged behind this exemplary figure. In terms of psychological development and mental intelligence, the relationship of moderns to all others was likened to one of an authoritative adult who put up with the antics of a disobedient and ignorant child.⁵³ This same relationship is echoed with respect to scientific knowledge and all ‘other ways of knowing’; the latter defined by the former as ‘pre-scientific’ and of a fictional, mythic status. Scholar, jurist and historian Vine Deloria Jr., of the North American Standing Rock Sioux tribe, strongly objects to this stereotype:

“One reason that scientists examine non-Western knowledge on an ad hoc basis is the persistent belief held by Western intellectuals that non-Western peoples represent an earlier stage of their own cultural evolution – often that tribal cultures represent failed efforts to understand the natural world (the Incas had wheels, why didn’t they make cars?). Non-Western knowledge is believed to originate from primitive efforts to explain a mysterious universe. In this view, the alleged failure of primitive/tribal man to control nature mechanically is evidence of his ignorance and his inability to conceive of abstract general principles and concepts. Tribal methodologies for gathering information are believed to be ‘pre-scientific’ in the sense that they are pre-causal and incapable of objective symbolic thought. This belief, as we shall see, is a dreadful stereotypical reading of the knowledge of non-Western peoples, and wholly incorrect.”⁵⁴

Indigenous as Sociobiological and Anthropological ‘Object’

In its most recent manifestation, Social Darwinism reappears as Edward Osborne Wilson’s “sociobiology”: the “new synthesis” of biological and social sciences.⁵⁵ In his synthesis, E.O. Wilson “shrinks” the humanities and social sciences to “specialized branches of biology”, providing explanations of human psychological and sociological behaviour by

⁵³ Jones confirms: “The history of psychology after Darwin was, in fact, surprisingly similar to that of comparative morphology. ... In a similar fashion to embryology, psychology treated the mental development of a human child as a recapitulation of the general stages of the race’s psychological evolution. They looked for the early psychological forms which had survived frequently finding these in the mental character of the ‘savage’ races.” Jones, G. *Social Darwinism and English Thought. op. cit.* p.13.

⁵⁴ Deloria, V. Jr. “If You Think About It, You Will See That It Is True,” *ReVision*. 1996, Vol. 18, No.3. p.37. [emphasis added.]

⁵⁵ Wilson, E.O. *Sociobiology: The New Synthesis*. [New Edition.] Cambridge, Massachusetts: Harvard University Press. 2000 [1975]. Hawkins discusses the accusation that sociobiology is a renascent Social

way of biological and genetic determinants.⁵⁶ Not surprisingly, sociobiology has met with two strongly divided intellectual camps. One group supports E.O. Wilson's assertions of cultural evolution, summarised as: "Genetic determinism narrows the avenue along which further cultural evolution will occur. ...cultural change is the statistical product of the separate behavioral responses of large numbers of human beings who cope as best they can with social existence."⁵⁷ Critics of sociobiology, whom Wilson dismisses as "imposing holistic traditions"⁵⁸, take exception to Wilson's attempts to reduce all life (and, in his most recent attempt, a 'consilience' of all knowledge)⁵⁹ – in its myriad variety and unfathomable mysteriousness – to cultural survival as sheer behavioural instinct: the ultimate reductionist assault (and, indeed, insult).

Darwinism: Hawkins, M. *Social Darwinism in European and American Thought. op. cit.* "Postscript: Social Darwinism old and new: the case of sociobiology," pp.292-313.

⁵⁶ Reductionism *par excellence!* Wilson, E.O. *Sociobiology. op. cit.*, especially the final chapter; "Man: From Sociobiology to Sociology," pp.547-575. Wilson's revision of the entirety of Western intellectualism continues in similar fashion: "...history, biography, and fiction are the research protocols of human ethology; and anthropology and sociology together constitute the sociobiology of a single primate species." (p.547.)

⁵⁷ Wilson, E.O. *On Human Nature*. Cambridge, Massachusetts: Harvard University Press. 1978, p.78. [emphases added.] Wilson's prognosis of humanity as aggressively individualistic and competitive is decisively dualistic, as outlined above in Chapter Two. Wilson defines cultural change as simply the "product" (sum of parts) of "behavioural responses" ('person' reduced to a mechanical function), echoing the dismally pessimistic opinion of Thomas Hobbes in *Leviathan* (1651). Hobbes argued that without state/government intervention, there can only be war: "Hereby it is manifest, that during the time men live without a common power to keep them all in awe, they are in that condition which is called war; and such a war, as if of every man, against every man." Such conditions (consequent to a time of war), results in "...the life of man, [as] solitary, poor, nasty, brutish, and short." To this end, Hobbes attributes indigenous peoples: "For the savage [sic] people in many places of America ... have no government at all; and live at this day in the brutish manner..." Hobbes, T. *Leviathan or The Matter, Form and Power of a Commonwealth Ecclesiastical & Civil*. [Edited and Abridged with an Introduction by John Plamenatz.] London: Collins. 1962 [1651], pp.143, 143, 144. See especially Chapter Thirteen; "Of the Natural Condition of Mankind as Concerning their Felicity, and Misery," pp.141-145.

⁵⁸ Wilson summarises his opposition in typically dialectical fashion: "...the competing hypothesis which has dominated the social sciences for generations, that mankind has escaped its own genes to the extent of being entirely culture-bound." Wilson, E.O. *On Human Nature. op. cit.* p.32.

⁵⁹ Wilson proposes a "consilience" of all knowledge as the key to intellectual unification, particularly in linking the sciences and humanities. He dreams of "...understanding the human condition with a higher degree of certainty", with the same hopes of complete unity of knowledge advanced by the Enlightenment thinkers of the seventeenth and eighteenth centuries. Wilson, E.O. *Consilience: The Unity of Knowledge*. London: Little, Brown and Company. 1998, p.7. [emphasis added.] Wendell Berry's retort to Wilson's *Consilience* and to reductionist science in general, presents a persuasive argument against attempts to reduce all life (and its ultimate mysteries) to scientific determinism. Berry considers such an attempt to be dangerous: "But the most unscientific and the most disturbing thing about this book is Mr. Wilson's appropriation of whatever is unknown. He does this by variations on the themes of 'until' and 'not yet.' He cannot bring himself to say that scientists do not know something; he must say that they do not know it *yet*; he must say that one thing cannot be known *until* another thing is known. ...This 'not yet' forthrightly appropriates mystery as future knowledge. ...As soon as a mystery is scheduled for solution, it is no longer a mystery; it is a problem. ...The practical result of such language is a sort of moral blindness." Berry, W. *Life Is A Miracle: An Essay Against Modern Superstition*. Washington, D.C.: Counterpoint. 2000, p.36. [italics in original.]

Deloria alleges: “If cultural evolution has been unkind to non-Western human societies, physical evolution has been devastating because it is the framework within which cultural anthropology is *supposed* to make sense.”⁶⁰ The framework for physical evolution was first proposed as a scientific theory in Darwin’s 1859 *The Origin of Species*. Since then, investigations into *The Ascent of Man* have traced the origin of human life to the ancestral fossil remains of early hominids in Africa.⁶¹ Thus, as J. Bronowski observes: “It took at least two million years for man to change from the little dark creature with the stone in his hand, *Australopithecus* in Central Africa, to the modern form, *Homo sapiens*.”⁶² While biological evolution ‘took its time’ for the human being to emerge from ape ancestry, cultural evolution ‘took off’ at a far faster pace: in only twenty thousand years *Homo sapiens* emerged into ‘Modern Man’.⁶³ As a comparative example, Bronowski cites the nomadic Lapps (indigenous peoples of Sweden) and contrasts them with ‘civilised’ people who settled and established a city-culture. His cultural bias against nomadic peoples is obvious:

“And this creature that had roamed and marched for a million years had to make the crucial decision: whether he would cease to be a nomad and become a villager. ...I believe that civilisation rests on that decision. As for people who never made it, there are few survivors. ...And you actually have to travel with them [nomad tribes] and live with them to understand that civilisation can never grow up on the move.”⁶⁴

If, as E.O. Wilson asserts, cultural change is simply the “statistical product” of “behavioural responses” and, as Bronowski contends, nomadic peoples “never made it”

⁶⁰ Deloria, V. Jr. *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*. New York: Scribner. 1995, p.65. [italics in original.]

⁶¹ See: Bronowski, J. *The Ascent of Man*. London: British Broadcasting Corporation. 1973.

⁶² *ibid.* p.59. [italics in original.]

⁶³ Bronowski explains: “The history of man is divided very unequally. First there is his biological evolution: all the steps that separate us from our ape ancestors. Those occupied some millions of years. And then there is his cultural history: the long swell of civilisation that separates us from the few surviving hunting tribes of Africa, or from the food-gatherers of Australia. And all that second, cultural gap is in fact crowded into a few thousand years.” *ibid.* [emphasis added.]

⁶⁴ *ibid.* p.60. [emphasis added.] Bronowski paints a picture of the nomad’s life as devoid of meaning (they build no memorials) and as ‘simple’, if not pragmatically stoical, as a sheer necessity of survival. To moderns, the indigenous nomadic groups appear ‘stuck in a time phase’ and therefore ‘dull’: “Nothing else in their lives is new.” (p.62) Although indigenous nomads may not dwell in a fixed place, they retain direct contact with Nature and a spirituality which is ‘place-centred’ (e.g., the nomadic Australian Aborigines ‘abide’ in place, not time). In contrast, the globally transient ‘modern nomad’ is the individual (e.g., tourist, business person, employee, etc.) who belongs ‘everywhere’ but, in reality, is a ‘citizen of nowhere’. This restless rootlessness has, paradoxically, borne a craving for the familiar (and the homogeneous); *Coca-Cola*, *McDonald’s*, and other global industries (e.g., hotel chains) have infiltrated even the most remote places. For a number of interesting perspectives on this ‘modern nomad’ personality, see: “Tales of the Modern Nomad: How to Stay Rooted in a Restless World,” [Special section.] *Utne Reader*. No.100. July-August 2000, pp.42-55.

(i.e., adjusted to a ‘civilised’ culture), an obvious question might then be: *of what purpose is the ‘other’ to moderns?* One answer to this enquiry may emerge from attempts to form missing links between biological and cultural theories of evolution. As Hawkins suggests: “...the primary function of the primitive in these [Social Darwinist] theories was to define the starting point of evolution by marking the threshold of animality/humanity.”⁶⁵ According to Social Darwinism, on the ladder of cultural evolution indigenous peoples are separated by only a few evolutionary stages from the biological origins of humankind, i.e., the apes!⁶⁶ And, yet, as Marshall Sahlins points out, the belief in the “savage within us” is peculiarly Western in origin:

“So far as I am aware, we are the only society on earth that thinks of itself as having risen from savagery, identified with a ruthless nature. Everyone else believes they are descended from gods. ... Judging from social behavior, this contrast may well be a fair statement of the differences between ourselves and the rest of the world. In any case we make both a folklore and a science of our brutish origins, sometimes with precious little to distinguish between them. And just as Hobbes believed that the institution of society or the Commonwealth did not abolish the nature of man as wolf to other men but merely permitted its expression in relative safety, so we continue to believe in the savage within us – of which we are slightly ashamed.”⁶⁷

The dilemma presented to moderns is thus two-fold: to be rid of ‘contemporary ancestors’ and the shameful reminder of the “savage within us”; or, to retain indigenous peoples as a benchmark between animals and humanity and, by extension, between ‘primitive man’ and ‘civilised man’? To the scientific historian, therefore, it appears that the ‘other’ may only be valued insofar as they appeal ‘theoretically’ as a ‘living object’ that marks moderns’ progress from this so-called animal state of savagery. In what must be an outrageous insult to indigenous peoples the world over, E.O. Wilson’s statement typifies this approach:

“...If it is true that history is guided to a more than negligible extent by the biological evolution that preceded it, valuable clues to its course can be found by studying the contemporary societies whose culture and economic practices most closely approximate those that prevailed during prehistory. These are the hunter-gatherers: ... [list omitted] ...almost all are in danger of assimilation into surrounding cultures or outright extinction. Anthropologists, being fully aware of the great theoretical significance of these primitive cultures, are now pitted in a race against time to record them before they disappear.”⁶⁸

⁶⁵ Hawkins, M. *Social Darwinism in European and American Thought. op. cit.* p.298. [emphasis added.]

⁶⁶ Suggestive of the shared etymological root of ‘primitive’ and ‘primate’ from the Latin *primus*; ‘first’.

⁶⁷ Sahlins, M. *The Use and Abuse of Biology: An Anthropological Critique of Sociobiology.* Ann Arbor: The University of Michigan Press. 1976, p.100. [underline added.]

⁶⁸ Wilson, E.O. *On Human Nature. op. cit.* p.82. [underline added.]

The recording of “primitive cultures” has taken shape in a dual manner. Through archaeological digs, the unearthing of pre-modern cultural artefacts (bones and flint tools, etc.) has contributed to a historical reenactment of the evolution of man-as-the-toolmaker.⁶⁹ Likewise, in anthropological studies, ‘living’ sociological examples were typically recorded through a process which first entailed cultural *deconstruction* (i.e., disentangling details from their ‘messy’ social contexts) followed by *reconstruction* (i.e., establishing general patterns of meaning from empirically-sourced data to form a coherent image or projection of the ‘other’). Such structural analyses in anthropology were only obtained (and are sustained) through the pretence to objectivity; the ethnographer as a so-called ‘neutral observer’. Even as a ‘participant observer’, where the anthropologist attempts to blend into the social context of the ‘other’ and relies on the aid of suitably qualified informants,⁷⁰ the exercise reflects similar methodological dilemmas.⁷¹ Indeed, in

⁶⁹ An over-emphasis on tool-making in human technical development has presented a skewed and incomplete understanding of human *cultural* development. Mumford claims: “Manual dexterity played a vital part in this [man’s] development, but mental dexterity, the capacity to remember, to learn, to anticipate, played an even greater role; and that part of man’s achievement which centered in symbols counted for more than the shaping of tools.” Human’s greatest need was to transform animal signals to complex human symbols through sounds and gestures. However, the importance of *language* and *ritual* in human evolution is often grossly underestimated in biological-based studies: “The understanding of this original condition has been largely suppressed because our own [Western, modern] culture over-stresses more practical interests.” Mumford, L. *Technics and Human Development*. Vol. One. *op. cit.* p.72.

⁷⁰ It is worth commenting here on Margaret Mead’s classic in anthropology: *Coming of Age in Samoa: A Study of Adolescence and Sex in Primitive Societies*. Middlesex, England: Penguin, which was first published in 1928 following her fieldwork stint during 1925-6. The controversial counter-investigation (verging on interrogation) by Derek Freeman; *Margaret Mead and Samoa: The Making and Unmaking of an Anthropological Myth*. Middlesex, England: Penguin. 1983, raised serious doubt about the reliability of Mead’s study (and therefore credibility as an anthropologist). These doubts were based on evidence that Mead’s closest informants had fed her a series of “fibs” and “jokes” about their adolescent sexual experiences (see personal testimony of Samoan informant in Foreword to Freeman’s *Margaret Mead and the Heretic*, the 1996 republished version of his original critique, p.viii). However, it is also worth noting that Freeman comes from an opposing anthropological tradition to that of Mead and her mentor/supervisor, Franz Boas. Whereas Freeman fits the description of a “sociobiologist” (see Lowell, p.13), elevating ethology and the advancement of anthropology as a science (see his chapter; “Towards a More Scientific Anthropological Paradigm”), both Boas and Mead emphasise culture as a major determinant of human behaviour (although they did not, as Freeman incorrectly alleges, dismiss the possibility that biological differences could influence some types of behaviour. Freeman labels them “cultural determinists”). See Lowell D. Holmes’ study: *Quest for the Real Samoa: The Mead/Freeman Controversy & Beyond*. [Postscript by E. Leacock.] Massachusetts: Bergin & Garvey Publishers. 1987, especially Chapter One; “Mead’s *Coming of Age* Research,” pp.1-10, and Chapter Two; “Restudies: Use and Misuse,” pp.11-23. Furthermore, Boas and Mead regard *cultural context* as crucial to anthropological studies, employing the philosophical stance of ‘cultural relativism’ (rather than the pretence of ‘scientific objectivity’) in order to challenge the dangerous American prejudices that assume supposed superiority of European races. See, for example, Mead’s Chapter 13; “Our [American/European] Educational Problems in the Light of Samoan Contrasts,” pp.157-186.

⁷¹ The ethnographer’s claim to “psychological closeness” with his or her subjects raises an epistemological issue which Clifford Geertz challenges: “(The moral idealization of fieldworkers is a mere sentimentality in the first place, when it is not self-congratulation or a guild pretense.)” Geertz, C. “From the Native’s Point of View’: On the Nature of Anthropological Understanding,” pp.55-70, *Local Knowledge: Further Essays in Interpretive Anthropology*. New York: Basic Books. 1983, p.56. The task

both roles, as archaeologist and anthropologist, the scientific treatment of the 'other' reduces them to a studied *object*.

Today, the remnant of this fabrication of the 'other-as-object' has left many indigenous peoples recoiling and searching to reinstate their cultural roots or, in some cases, reconstruct their own 'true' identity. Deloria comments on the task of cultural reaffirmation: "For American Indians, the struggle of this century has been to emerge from the heavy burden of anthropological definitions that have made Indian communities at times mere laboratories for political and social experiments."⁷² Yet, not only has anthropology treated the 'other' as an experimental object; it has also reduced the human experimenter (as 'subject') to the status of an 'objective' observer in the world.⁷³ In so doing, the real lessons of cross-cultural studies are denied: those of Self-understanding. Through his life experiences among significantly different 'others', American anthropologist Stanley Diamond makes the following significant contribution with respect to his own discipline (and culture): "I was just fully beginning to realize that anthropology had become a privileged way of maintaining distance in the name of science, not only from the people one 'studied,' but from one's own cultural predicament, from oneself."⁷⁴ He further reflects:

"...although my theoretical and monographic reading had led me to think otherwise, I had about reached the conclusion shared by most contemporary,

of the anthropologist requires that he or she at least be aware of the methodological range of interpretation extending from the "experience-near" *particular* through to the "experience-distant" *abstract* conceptions. Geertz explains: "The real question, ..., in the case of 'natives,' you don't have to be one [or pretend to be one] to know one, is what roles the two sorts of concepts [experience-near or experience-distant] play in anthropological analysis." "To grasp concepts that, for another people, are experience-near, and to do so well enough to place them in illuminating connection with experience-distant concepts theorists have fashioned to capture the general features of social life, is clearly a task at least as delicate, if a bit less magical, as putting oneself into someone else's skin." Geertz, C. "From the Native's Point of View," *op. cit.* pp.57, 58.

⁷² Deloria, V. Jr. *Red Earth, White Lies. op. cit.* p.65.

⁷³ Heidegger was well aware of the impending consequence of man's dualistic divorce from the world, when all that 'surrounds' the human subject, eventually and perhaps inevitably, is controlled and conceived of as objects in a world picture. One of the most devastating consequences of this scientific-based conception of the world in objective terms is the denigration of the human Self to that of a mere species – i.e., *homo sapiens* as 'one species among many'. Where is the dignity in that? Heidegger comments: "Namely, the more extensively and the more effectively the world stands at man's disposal as conquered, and the more objectively the object appears, all the more subjectively, i.e., the more importunately, does the *subiectum* rise up, and all the more impetuously, too, do observation of and teaching about the world change into a doctrine of man, into anthropology. It is no wonder that humanism first appears where the world becomes picture." Heidegger, M. "The Age of the World Picture," *op. cit.* p.133. [italics in original.]

⁷⁴ Diamond, S. *In Search of the Primitive: A Critique of Civilization.* [Foreword by E.R. Wolf.] New Brunswick; New Jersey: Transaction Books. 1974, p.69.

academic anthropologists – primitive peoples are really just like us. Or, if characterological differences can be noted, they are variations on a common human theme, molded within cultural, but not cultural-*historical*, dimensions. I no longer believe this. There are profound qualitative distinctions between primitive and civilized peoples, glossed over by anthropologists anxious to remove the stigma of inferiority by the term *primitive* and still embarrassed by Voltaire's impertinent attack on Rousseau."⁷⁵

Indigenous as Romanticised Hero: The Ecologically Noble Savage

Accounts from early European voyages to the New World from the seventeenth century onwards gave rise to at least two major Euro-centric impressions of indigenous peoples of the Americas and Pacific. One image cast the natives as 'bestial savages'; the naked hunters whose aggressive war-like nature resembled that of the pitiful 'non-society' depicted by Thomas Hobbes.⁷⁶ The other impression characterised 'primitive man' as a 'Noble Savage': indigenous peoples epitomised all that is 'natural' in sharp contrast to the 'artificiality' (i.e., 'unnaturalness') of industrial European society. Jean-Jacques Rousseau (1712-1778) was among those who strongly objected to the social inequalities exacerbated in his own eighteenth century French 'civilised state'.⁷⁷ Opposing a Hobbesian state-imposed government, he argued that only in the original 'state of Nature' could true liberalism be freely expressed by all.⁷⁸ As the French forerunner to the Romantic movement (which rose

⁷⁵ *ibid.* pp.60-61. [italics in original, underline added.]

⁷⁶ On Hobbes, refer to fn.57 above. The culturally invented notion of 'savagery' served as the dialectical opposite of the European 'civilised' order, as Ter Ellingson points out: "The 'Savage' and the 'Oriental' were the two great ethnographic paradigms developed by European writers during the age of exploration and colonialism; and the symbolic opposition between 'wild' and 'domesticated' peoples, between 'savages' and 'civilization,' was constructed as part of the discourse of European hegemony, projecting cultural inferiority as an ideological ground for political subordination." Ellingson, T. *The Myth of the Noble Savage*. Berkeley: University of California Press. 2001, p.xiii. In the myth of the 'Noble Savage', the order of preeminence is reversed in favour of the supposed nobility of the 'primitive'.

⁷⁷ Rousseau, J-J. *Discourse On the Origin and Foundations of Inequality Among Men*. Amsterdam: Marc Michel Rey. 1754.

⁷⁸ A dictionary definition of the 'state of nature' includes: "condition of man before society is organized" (Concise Oxford Dictionary). However, *before* civilisation, Nature was feared as an 'unorganised' wilderness (*wildöoren*) where wild beasts roamed. Etymologically, 'savages' occupied these wild woods, as Peter Marshall explains: "To many, the cutting-down of the forests, like the cutting-down of weeds in a garden, symbolized the triumph of civilization. As the word 'savage' (from *silva*, 'a wood') implies, the forest was long synonymous with wildness and danger." Marshall, P. *Nature's Web. op. cit.* p.257. Winona LaDuke, a native person of the Anishinabeg band from the White Earth Reservation, similarly comments: "...there is the attitude toward what is wild as opposed to what is cultivated or 'tame.' This [industrial] society believes it must tame the wilderness. It also believes in the superiority of civilized over primitive peoples, a belief that also follows a linear model: that somehow, over time, people will become more civilized. Also related of course is the idea behind colonialism: that some people have the *right* to civilize other people." LaDuke, W. "Voices from White Earth: Gaa-waabaabiganikaag," pp.22-37, in: Hannum, H. (ed.) *People, Land, and Community. Collected E.F. Schumacher Society Lectures*. [Introduction by N.J. Todd.] New Haven: Yale University Press. 1997, p.27. [italics in original.]

in part to counteract the Industrial Revolution), Rousseau advocated a 'return to Nature' and to traditional small-scale lifestyles.

Not discounting Rousseau's admirable intentions⁷⁹ (many of which underpin aspects of the environmental movement today⁸⁰), it may be argued that the very notion of a 'Noble Savage' was an intellectual myth that served the interests of upper class Europeans (*not* indigenous peoples).⁸¹ The myth, however, has not died from European imagination, but has re-emerged in the form of the 'ecologically noble savage'. Among some equilibrium-centred ecologists and critics of modern industrial society, such as Edward Goldsmith, indigenous/traditional societies are upheld as exemplary 'ecological heroes'; living in harmony with a 'balanced' (that is, stable and orderly) environment.⁸² In contrast, the instabilities of modern industrial society (e.g., environmental pollution and social upheavals, etc.) are cited as evidence of a society profoundly *out of homeostatic balance* with ecological and social systems (cf. also Eugene Odum's systems ecology).⁸³ Taking his cue from Clementsian succession, Goldsmith drew analogies between the nascent 'primary

⁷⁹ Marshall underlines the courage it took for Rousseau to boldly speak out against his own society: "...at a time when it became the policy of colonialists to emphasize the barbarism of non-European societies in order to justify their rule and to impose their own civilization, Rousseau spoke out on behalf of the subject peoples whose traditional ways were threatened. In the process, he brought out the failings of his own industrious and oppressive society." Marshall, P. *Nature's Web. op. cit.* p.242.

⁸⁰ In many parts of the world today there is a renewed effort to explore principles and enact practices of 'sustainable livelihoods' among communities connected either to a particular place or to similar ideals of environmental and social justice, e.g., the Agenda 21 sustainable cities initiatives. Some of these initiatives directly challenge the monolithic global economic system, for example: Schumacher, E.F. *Small Is Beautiful: A Study of Economics As If People Mattered*. London: Vintage. 1993 [1973]. See section below "'Sustainable Development': Sustaining Communities *Not* Development."

⁸¹ Ter Ellingson's comments are most illuminating in this regard: "...it is hardly problematic that writers of the romantic period romanticized 'savages,'... We would undoubtedly find it more problematically interesting if, instead, they had never found 'savage' characters worthy of embracing romantic themes; for such a case would provide evidence of a racism so obtuse as to suggest that the evolution of Europeans beyond a bestial level of intelligence had been very recent indeed." Ellingson, T. *The Myth of the Noble Savage. op. cit.* p.xv.

⁸² Edward Goldsmith was among those who extended cybernetic principles and general systems theory to 'cultural ecology'. He asserts: "What few people today realise is that the religion of traditional societies, that is, the religion of man in his normal surroundings, admirably satisfies cybernetic requirements. *If we take religion as the basic social control mechanism, then the behaviour of traditional society can be described in terms of the basic cybernetic model which ensures the control of all other natural systems.*" Goldsmith, E. "The Religion of a Stable Society," *Man-Environment Systems*. Vol.8, No.1. 1978, p.15. [italics in original.] See also: Goldsmith, E. *The Stable Society: Its Structure and Control. Towards a Social Cybernetics*. Cornwall, England: The Wadebridge Press. 1978. Anthropologists who adopted a similar cybernetics approach to studies of indigenous/tribal peoples include Roy Rappaport (in New Guinea) and Gerardo Reichel-Dolmatoff (in Latin America). Religion is interpreted as a negative feedback control function which maintains the stable state of 'dynamic balance' in the face of deviating social and environmental fluctuations.

⁸³ Goldsmith argues that any deviation from the course of long-term equilibrium "...violates basic cybernetic principles and can only lead to social disintegration, increased instability and eventual

succession' stage and modern industrial society and, in similar vein, assigned indigenous/traditional societies to the 'climax state' of a mature plant community:

*"Randomness, individualism, competition, crude external controls and instability are indeed the inevitable features of a pioneer ecosystems... They are 'also the features of the degraded society of which we [moderns] are part..." "Order, teleology, wholeness, co-operation, stability, and internalised control are the inevitable features of a climax ecosystem as they are of all complex living things. ...The only society that fits this description is a tribal society."*⁸⁴

Closely related to the preferred 'climax state' in Clementsian succession theory is the implicit ideal of the 'Balance of Nature'. The concept of a balance in/of Nature is popularised by environmentalism and inherent in equilibrium-centred theories in ecology (challenged by non-equilibrium ecology).⁸⁵ Some critiques of Western history trace the concept of 'balance' to the Judaeo-Christian belief in an original orderliness of the paradisiacal Garden of Eden before Man sinned.⁸⁶ The mythical image of 'harmonious innocence' may be equated with the age of hunters and gatherers and, by analogous

collapse." Goldsmith, E. "The Religion of a Stable Society," *op. cit.* p.13. [editor's comments, originally in italics.]

⁸⁴ Goldsmith, E. "Gaia: Some Implications for Theoretical Ecology," *The Ecologist*. Vol.18, No.2. 1988, p.66. [italics in original]. Note that Frederic Clements was severely reprimanded by his colleagues when he sought to extend his explanations of the 'superorganism' theory beyond the bounds of biology (see discussion in Chapter Four above). Goldsmith equates Clementsian succession with 'The Way', being the ecological 'critical order' of evolution, asserting that: "To accept the principle of ecological succession to a climax is thus to accept the destructive nature of economic development, and so modernist ecologists eventually had to reject Clements's thesis and succession came to be seen instead as largely random." Goldsmith, E. *The Way: An Ecological World-view. op. cit.* pp.260-261. [underline added.] Refer to Chapter Fifty: "Life processes are sequential and tend towards the most stable state," pp.258-264.

⁸⁵ For a comprehensive overview of the 'balance-of-nature' concept from antiquity through to twentieth century ecology, see: Egerton, F.N. "Changing Concepts of The Balance of Nature," *The Quarterly Review of Biology*. Vol.48, No.1. 1973, pp.322-350. Equilibrium-centred theories in the biological sciences include Clementsian plant succession and Eugene Odum's systems ecology (as well as cybernetics, homeostasis, etc.). Prigogine's far-from-equilibrium 'dissipative structures' and May's non-equilibrium community ecology (diversity≠stability) challenge the equilibrium/balance assertions (see Chapter Four above). With respect to Prigogine's nonlinear thermodynamics and Erich Jantsch's related philosophy, Goldsmith aligns their non-equilibrium theories with Newtonian reductionism and the notion of random change by which 'development' and industrialisation are justified. See: Goldsmith, E. "Superscience – Its Mythology and Legitimation", *The Ecologist*. Vol.11, No.5. 1981, pp.228-241. As reductionist scientists are wont to lump all 'holistic' theories in a 'monistic' bag, so Goldsmith misappropriates all non-equilibrium theories in similar dialectical fashion as an opposing 'dualistic' reductionism. This is an unfortunate misinterpretation, given that non-equilibrium theorists are equally critical of the shortcomings and assumptions underpinning Newtonian reductionism.

⁸⁶ Although the conception of the Earth as an orderly harmonious whole is a very ancient one, maybe established long before the Greeks. Clarence Glacken explains: "Living nature has been one of the important proofs used to demonstrate the existence of a creator and of a purposeful creation... Proof of the existence of divine purpose involved consideration of the assumed orderliness of nature, and if this orderliness were granted, the way was open for a conception of nature as a balance and harmony to which all life was adapted." Glacken, C. *Traces on the Rhodian Shore: Nature and Culture in Western Thought From Ancient Times to the End of the Eighteenth Century. op. cit.* p.36.

extension, to contemporary indigenous peoples who, it might be argued, remain in 'Balance with Nature'.⁸⁷ In this interpretation of Christian theology, actions to 'save' indigenous peoples (i.e., as the original and innocent archetypal 'ecological hero') might be reinterpreted as a missionary attempt at redemption (i.e., self-serving redemption through the act of saviour).⁸⁸ Somé reflects on his personal experiences in Africa of French colonialism and missionary influence:

“Many years later, my generation finds itself gripped by a powerful irony. Suddenly it has become popular to defend tribal people, their world view, and their lifeways. But while the West is engaged in a great debate about what it means to preserve culture, the indigenous world is aware that it has already lost the battle. It seems obvious to me that as soon as one culture begins to talk about preservation, it means that it has already turned the other culture into an endangered species. Then you have the purists on either side who want indigenous cultures to remain 'exactly the same as they have always been.' In many cultures, the Dagara included, it is no longer a question of preservation but of *survival* in some form or another. The culture's own reality has been superseded by the 'fashionable' modernity.”⁸⁹

Contrary to what Goldsmith may have intended, his (and others', e.g., New Age 'spiritualists') idealised representation of indigenous peoples as *the* original 'resource conservationists' may in fact be quite damaging, for it sets indigenous peoples up as 'strawmen'. In counter-attack to claims of ecological nobility, scientific sceptics cite evidence in the form of fossil records which report mass extinctions of mega-fauna in pre-modern times and palynological (pollen analysis) samples which indicate deforestation

⁸⁷ For a liberal Protestant reading of three biblical themes: Dominion, the Fall, and Life in Christ, see: McDaniel, J. "The Garden of Eden, The Fall, and Life in Christ: A Christian Approach to Ecology," pp.71-82, in: Tucker, M.E. and Grim, J.A. (eds.) *Worldviews and Ecology: Religion, Philosophy, and the Environment*. Maryknoll, New York: Orbis Books. 1994. See especially pp.75-76 where Jay McDaniel equates the age of the Garden as the age of innocence and relative harmony among humans and other species, with the mythical image of the age of the hunters and gatherers in human history. See discussion below for the important (more than semantic) difference between 'Balance *with* Nature' and 'Balance *in/of* Nature'.

⁸⁸ This might also be reinterpreted as the desire of moderns to 'develop' their 'Third World' brothers and sisters along the same lines as oneself (thereby 'saving' them from their own parochialism) but also to expand the Church to a truly catholic sphere. Ivan Illich drew 'radical' attention to the papal request in 1960 to send United States and Canadian religious workers to Latin America to 'modernise' the Latin American Church along the lines of the North American model. He states his views emphatically: "I was opposed to the execution of this order: I was convinced that it would do serious damage to those sent, to their clients, and to their sponsors back home. I had learned in Puerto Rico that there are only a few people who are not stunted, or wholly destroyed, by lifelong work 'for the poor' in a foreign country. The transfer of United States living standards and expectations could only impede the revolutionary changes needed, and the use of the gospel in the service of capitalism or any other ideology was wrong." Illich, I.D. "The Seamy Side of Charity," pp.53-68, in: *Celebration of Awareness: A Call For Institutional Revolution*. [Introduction by Erich Fromm.] London: Calder & Boyars. 1971, pp.53-54.

⁸⁹ Somé, M.P. *Of Water and the Spirit: Ritual, Magic, and Initiations in the Life of an African Shaman*. New York: Arkana, Penguin Books. 1994, pp.3-4. [italics in original, underline added.]

events in pre-modern periods.⁹⁰ This has led some apologists of modernity to argue that if today's mechanistic powers to 'develop' and 'destroy' were available in yesteryear, indigenous peoples would have completely decimated their surrounding natural environment: the only thing stopping them from doing so was their 'primitive' technologies. With factual justification, a number of scientists now dismiss indigenous ecological beliefs, knowledge and praxis outright as either 'anti-ecological' or of no real pragmatic relevance to today's complex and global environmental problems.⁹¹ In similar positivist terms, the environmental crisis is defined as an ecological problem-solving exercise, whereby the only 'logical' solution to technologically-created problems is that of introducing further 'technological fixes'.⁹²

The characterisation of indigenous, tribal peoples as 'resource conservators' requires further investigation. Unstated is the modern resource management assumption that indigenous peoples similarly regard Nature as a collection of 'natural resources' related to in terms of artificial extremes; e.g., from preservation zones where human activities are excluded through to severely-modified, 'developed' land for economic production.⁹³ This is

⁹⁰ See: Martin, P.S. and Klein, R.G. (eds.) *Quaternary Extinctions: A Prehistoric Revolution*. Tucson, Arizona: The University of Arizona Press. 1984.

⁹¹ Joel Brown's statement is typical of many contemporary scientists and indeed is needlessly arrogant: "Ngongas, the traditional healers of the Shona culture, Zimbabwe, fail in the delivery of quality health by today's standards. Their outdated worldview makes most health related issues seem more complicated and more multi-factorial than when viewed through the worldviews of modern medicine. With the wrong worldview, one can work very hard, be very bright and dedicated, and still be ineffective." Brown, J.S. "Ngongas and ecology: on having a worldview," *Oikos*. Vol.94, No.1. 2001, p.6. Of course, Brown restricts 'health' to narrow scientific definitions where the body is examined by medical practitioners as an isolated, physical problem-solving exercise. Without here denying the 'proven' successes of modern scientific treatments, the herbal solutions and holistic health practices of traditional faith healers and shamans should not be dismissed either. I would argue that it is less a matter of an "outdated worldview" than the "appropriate worldview". A person's physical deterioration is often the result of a myriad of related factors, some of which might be approached through direct remedial action (e.g., heart replacement surgery) whereas others require family and community support as well as long-term lifestyle changes that extend beyond the physical realm of the immediate suffering individual (e.g., 'relationship' troubles to the heart cannot be 'solved' through heart transplants). Given that Eastern health influences (e.g., acupuncture, yoga, massage, etc.) and indigenous peoples' healing practices (e.g., the sweat lodge / sauna) are now widely used in Western countries, even recommended by Western medical doctors themselves, it might be that Joel Brown's comments are "outdated".

⁹² Lynn White Jr. surmises: "I personally doubt that disastrous ecologic backlash can be avoided simply by applying to our problems more science and more technology. Our science and technology have grown out of Christian attitudes toward man's relation to nature which are almost universally held not only by Christians and neo-Christians but also by those who fondly regard themselves as post-Christians." White, L., Jr. "The Historical Roots of Our Ecological Crisis," *Science*. Vol.155, No.3767. 1967, p.1206. Refer to discussion below: "Development and the Global Environmental Crisis."

⁹³ Conservation efforts, especially the export of American models of national parks or wilderness areas which exclude human uses (and therefore abuses) have not always benefited indigenous peoples and their environments. Vinay Lal explains: "The establishment of wilderness areas – a widely agreed upon objective of the American ecological and conservation movement – in India, it has been argued, often

clearly not the case for indigenous peoples.⁹⁴ In neither role, i.e., preservation or development, are humans truly 'at home' in their ecology/*oikos*, that is, 'naturally' and unselfconsciously a *part of Nature*. Even in the more respectable role of resource manager, humans are still dualistically divorced from their 'wild' subjects.⁹⁵ Rather than accept labels such as 'environmental/resource management', some indigenous peoples choose to describe their interrelationships with Nature as an active and participatory "conservation-through-use".⁹⁶ Here, 'conservation' is imbued with meanings specific to that culture's religio-spiritual context (this, of course, is not accessible by fossil or palynological evidence alone).⁹⁷

involves the displacement of local populations and the loss of traditional homelands... The American model of national parks, many of them set up in areas which are very sparsely populated, and where in any case there was little conflict between people and resources, was transplanted wholesale to countries such as India where the relationship between people and their environment has been much closer, and where animals and people continue to have a symbiotic relationship with each other." Lal, V. "Too Deep For Deep Ecology: Gandhi and the Ecological Vision of Life," *INTERculture*. Issue No.137. 1999, pp.48-49.

⁹⁴ Claudia Notzke notes: "The term 'resource management' is firmly rooted in the traditions of western industrialized society and thus carries much ideological baggage." "It needs to be acknowledged that many aboriginal people, particularly the elders, are uncomfortable with the term 'resource management', not only because there is no equivalent term in aboriginal languages, but also because it implies a sense of superiority over nature and a sense of apartness from it. Many non-native environmentalists express the same concerns. Nevertheless, native people have traditionally employed and are still employing measures of resource manipulation and conservation which would normally be associated with what is referred to as resource management." Notzke, C. *Aboriginal Peoples and Natural Resources in Canada*. North York, Ontario: Captus Press Inc. 1991, pp.1, 2.

⁹⁵ The word 'manage' came from the Italian *maneggiare*, meaning: "to handle or direct a horse". *Chambers Dictionary of Etymology. op. cit.* p.628. The training/taming of 'wilderness' (where wild animals roam; *wilde-deor*) takes on a more bureaucratic focus in modern usage (with 'managers' both of people and Nature). However, it has associations with the Judaeo-Christian role of 'stewardship', where Nature is subdued and tended to as would a gardener who rakes and hoes his or her plot with affection, but with a preordained sense of 'divine orderliness', hence eliminating any unruly 'weeds'. A 'weed', in this sense, is that which seemingly has no purposeful activity and therefore really ought not to exist at all (this being a teleological interpretation of Nature; i.e., 'Balance in Nature'). In contrast, an equivalent category for 'weed' is not found in many indigenous peoples' original (i.e., pre-colonial contact) language. According to indigenous cosmology, each living thing has an identity, a proper place, and a way to be in the great circle of life. For example, the Lakota First Nations have no category for 'unwanted' or 'useless' plants and animals because there are none.

⁹⁶ Roberts, M.; Norman, W.; Minhinnick, N.; Wihongi, D. and Kirkwood, C. "Kaitiakitanga: Maori Perspectives on Conservation," *Pacific Conservation Biology. op. cit.* See also: Jarman, L.A.; Moeau-Punga, M.C.H.A. and Moeau, P.J.R. "Ko Papatuanuku te Matua o te Takata (Earth-Mother, Parent of Humanity) – 'Managing' Papatuanuku: Essential Differences Between Maori and Western Ways of Viewing Resource 'Management'," pp.89-98, in: *Resource Management: Issues, Visions, Practice. A Symposium, Friday 5 – Monday 8 July 1996, Proceedings*. Canterbury, New Zealand: Centre for Resource Management, Lincoln University. 1996. See Chapter Six section: "Kaitiakitanga Versus 'Resource Management'."

⁹⁷ In his examination of various opinions, some that support and others that oppose the claim that indigenous peoples are the 'primal environmentalists', Christopher Vecsey resolves: "We cannot accept the conception of Indians as conservationists in a modern, Western sense. We must understand Indian environmental attitudes on their own terms. ... All humans work on the environment, changing, modifying it for human purposes. Call this harmony or disharmony, depending on one's point of view, but there exists a dialectic between all humans and their environments." Vecsey, C. "American Indian Environmental Religions," pp.1-37, in: Vecsey, C. and Venables, R.W. (eds.) *American Indian*

Furthermore, for Goldsmith 'balance' can only mean *stasis* as long-term stability.⁹⁸ Clearly, Goldsmith interprets indigenous and traditional societies in monistic terms (as static) and, in dialectical opposition, delegates any overt orientation to change is indicative of a society characterised by the dualistic method (refer to Chapter Two above). Although maybe not intentional, his fixation on change-avoidance is in fact a gross misrepresentation and injustice to the many creative and adaptive adjustments made by tribal peoples over millennia who, in spite of sometimes radical imposed changes, have nevertheless retained their unique cultural patterns and traditions. Hence, indigenous and tribal peoples (in order to remain viable) *adapted* their practices in concert with long-term changing environmental and social conditions.⁹⁹ That is; they evolved with regard to an awareness of retaining 'Balance *with* Nature' (this being a dynamic relationship) rather than remaining fixed (in place or time; i.e., sole reliance on past traditions) to a particular pre-conceived measure of a 'Balance *in/of* Nature'.¹⁰⁰ In contrast, the 'dead-end' cultures who refused to adapt or mitigate impending disasters bear the less-than-fortuitous label of today's lessons of history. For example, the plight of the Easter Islanders, who outstripped finite ecological resources on their isolated island, may be extrapolated to today's impending environmental crisis of Earthly dimension. Today, one species (humans as *homo economicus*, the economically prosperous inhabitants) refuse to curtail their greed even despite the

Environments: Ecological Issues in Native American History. New York: Syracuse University Press. 1980, p.8. [emphasis added.]

⁹⁸ In cybernetic terms, Goldsmith stated the goal of traditional society as *stability*: "...stable systems tend towards the avoidance of change. Anthropological studies have confirmed that stable societies are organised (by their cultural evolution) with this end in view." Goldsmith, E. "The Religion of a Stable Society," *op. cit.* p.14. [underline added.]

⁹⁹ Indigenous peoples have displayed remarked ingenuity in adapting practices of other societies in unique and beneficial ways, as Hughes observes: "...Indian cultures were not static, or suspended in the never-never land of the 'ethnographic present.' Before contact became an overwhelming onslaught, Indian tribes incorporated new traits and ideas into their own cultural framework without destroying it. Not all foreign ideas adopted by Indians are a corruption of their own traditions. Adaptation and borrowing do not necessarily destroy the cultural integrity of a people; if they did, there would be no valid culture left anywhere on earth, because all contain borrowed elements." Hughes, J.D. *North American Indian Ecology*. *op. cit.* p.108. Furthermore, Sam Gill asserts that the relationship between Native Americans and their natural environments was anything but 'simple': "...in light of the Navajo views of creation we should reexamine this common assumption that Native Americans are simple children of nature, for I believe we will find it erroneous. Native Americans have shown themselves to be masters of survival in an environment that has often been reluctant to nurture them, but their lifeways can scarcely be called the simple following of natural instincts. It seems almost the opposite." Gill, S. *Native American Religious Action: A Performance Approach to Religion*. Columbia, South Carolina, U.S.A.: University of South Carolina Press. 1987, p.24. [emphasis added.]

¹⁰⁰ Gill further observes: "There is also a tendency to assume that the paradigms which arise from the stories of creation represent Native Americans views of the permanent status of their world. But these patterns of perfect beauty serve more as an objective and a measure in life than as a description of it. Underlying these global representations of the ideal are infinitely complex principles of relationship which determine and direct the lifeways. In the whole range of human action nothing is exempt. In other

scientifically-verified forewarning that ultimate biophysical planetary limits are rapidly being approached.¹⁰¹

In conclusion: A theme that underpins all three responses of European colonists and scientific-based moderns to indigenous peoples is the implicit acceptance of a dialectical basis on which the 'other' is assessed. This dialectic underpins Social Darwinist models of cultural evolution *as well as* the Romantic 'noble savage' and Goldsmith's cultural succession analogy; the latter two merely reversing the order of preeminence in a continuum which assigns degrees of status to so-called inferior/superior peoples. When viewed through Western empirical glasses, the blurred cultural bias does not distinguish a true and unique 'other', but only the 'self' represented at various stages of cultural (and, now, economic) development. Therefore, indigenous peoples are still denied their right to self-expression in accord with their *own* cultural contexts and kosmovisions of reality, but instead are reduced to a figure of comparative value only with respect to a European norm assumed a priori. Today, this norm sustains the aura of 'development'; a somewhat fragile status (given ecological and social instabilities, which Goldsmith and other critics of modern industrialised society are rightly concerned about) maintained in high esteem only when held over against a 'lesser', that is, the stigmatised examples of 'underdevelopment'.

words, for many Native Americans all human action is continually measured against traditional patterns so that the way life is experienced is dependent upon how it is lived." *ibid.* pp.24-25.

¹⁰¹ John Flenley, who has collected palynological records from Easter Island since 1977, is alarmed at the story which unfolded: that of human-induced deforestation leading to the eventual collapse of the Easter Island ecosystem and its dependent human population. His analogy with respect to 'Earth Island' spells out a dire warning: "One cannot resist drawing the analogy between Easter Island, isolated in the Pacific, and the planet Earth, isolated in space. The Club of Rome's computer predictions for planet Earth – even when revised recently – show in most scenarios a decline of resources and a population crash toward the end of the twenty-first century. The Easter Island model suggests that they could well be correct." Flenley, J.R. "Easter Island," pp.310-314, in: Goudie, A.S. and Cuff, D.J. (eds.) *Encyclopedia of Global Change*. Vol.2. Oxford: Oxford University Press. 2002, p.314. See also: Bahn, P. and Flenley, J.R. *Easter Island, Earth Island*. London: Thames and Hudson. 1992. What is perhaps most disturbing is that the Easter Islanders must have been fully aware that their very existence depended on the limited resources of their small, isolated island (it was small enough to walk around in a day). Yet, they still cut down the last tree. The question of utmost pertinence today is: Why did they fail to modify their behaviour (i.e., resource consumption)? Furthermore, this example challenges an implicit assumption that a 'peaceful equilibrium' may only be reached in 'blessed isolation'; whereas, a society closed (in monistic terms) may ultimately fall victim to its own self-devouring extravagances. For an equally reflective account of the Easter Island case, refer to: Ponting, C. *A Green History of the World: The Environment and the Collapse of Great Civilisations*. London: Penguin Books. 1991. See his Chapter One; "The Lessons of Easter Island."

DEVELOPMENT AND THE STIGMA OF 'UNDERDEVELOPMENT'

“Development is dead!”, denounced critic Wolfgang Sachs.¹⁰² By ‘development’, Sachs refers specifically to the (principally) American-driven modernisation of the world through the pursuit of ‘economic development’.¹⁰³ This process was triggered, as Sachs and others pinpoint it, by the post-World War Two presidential speeches of Harry S. Truman; then President of the United States of America.¹⁰⁴ It was in 1949 that Truman and his presidential advisers invented the word “*underdevelopment*” to collectively describe all non-Western, non-American ways of living in terms that connoted a miserable existence (i.e., ‘poverty’) and a ‘backwardness’ in comparison to the apparent luxury and privilege of American ideals and commodity-accumulated materialism.¹⁰⁵ Coined in simple dialectical terms, ‘*underdevelopment*’ was successfully introduced into modern vocabulary (by way of the mass media) and took on a new and significant role as the opposite of ‘development’.¹⁰⁶

Having defined the ‘problem’ as one of “poverty” (susceptible to the “false philosophy” of communism), President Truman then laid out a course of action in terms of “economic development”, industrial and scientific “technical assistance” by experts and financiers, as

¹⁰² “The last 40 years can be called the age of development. This epoch is coming to an end. The time is ripe to write its obituary.” Sach, W. “Introduction,” pp.1-5, in: Sachs, W. (ed.) *The Development Dictionary: A Guide to Knowledge as Power*. London: Zed Books. 1992, p.1.

¹⁰³ Also referred to with respect to multinational corporate monopolisation of the market/economy as ‘globalisation’. For a critique of economic globalisation from a wide range of perspectives, see the comprehensive anthology: Mander, J. and Goldsmith, E. (eds.) *The Case Against The Global Economy: And For A Turn Toward The Local*. San Francisco: Sierra Club Books. 1996.

¹⁰⁴ Contributing authors to *The Development Dictionary*, edited by Sachs (*op. cit.* above), refer to the post-war era as the ‘age of development’. This anthology explores ‘development’ as much more than simply the result of particular social and economic processes, but as a worldview – biased by a Eurocentric perception of reality. The authors assert that the development discourse (including so-called ‘alternative development’) is tainted and call for the whole development idea to be rejected.

¹⁰⁵ Thus Truman captured ‘underdeveloped’ peoples in the following derogatory image: “More than half the people of the world are living in conditions approaching misery. Their food is inadequate. They are victims of disease. Their economic life is primitive and stagnant. Their poverty is a handicap and a threat both to them and to more prosperous areas.” Truman, H.S. “Inaugural Address. January 20, 1949,” pp.112-116, in: Truman, H.S. *Public Papers of the President of the United States Harry S. Truman Containing the Public Messages, Speeches and Statements of the President, 1945-1947*. Washington, D.C.: United States Government Printing Office. 1961-1963, p.114.

¹⁰⁶ Raymond Williams notes that the most significant change in the vernacular use of ‘development’ came after 1945, with respect to the invention of ‘underdeveloped’. This latter term included two ideas: “(i) that of lands in which ‘natural resources’ have been insufficiently **developed** or **EXPLOITED**...” and; “(ii) that of economies and societies destined to pass through predictable ‘stages of **development**’, according to a known model. ... Each sense of *underdevelopment* connected with a view of poor or colonial or ex-colonial societies as places in which already established ideas of **development** must be applied. This was succeeded by the more flattering description of such societies as **developing** or ‘in the course of **development**’.” Williams, R. *Keywords: A Vocabulary of Culture and Society*. [Revised Edition.] New York: Oxford University Press. 1983 [1976], p.103. [bold emphases and capitals in original.]

the only 'logical solution' to 'underdevelopment'.¹⁰⁷ Appealing to his fellow Americans, Truman declared: "The United States is pre-eminent among nations in the development of industrial and scientific techniques." And so righteous American citizens were urged to support global economic development endeavours, to share their own good fortune and superior ideals (i.e., democratic freedom, consumer capitalism, etc.) in the form of 'aid' to the less fortunate and impoverished countries of the world. For the many individuals who heeded the call of 'Third World' development work, their intentions were indeed honourable and their self-sacrifices genuine: they were propelled by a sense of altruism and philanthropy.¹⁰⁸ In his "Inaugural Address" to the American nation delivered at Washington, D.C. on 20 January 1949, President Truman announced:

"...we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.

[...] For the first time in history, humanity possesses the knowledge and skill to relieve the suffering of these people.

[...] I believe that we [the United States] should make available to peace-loving peoples the benefits of our store of technical knowledge in order to help them realize their aspirations for a better life. And, in cooperation with other nations, we should foster capital investment in areas needing development."¹⁰⁹

In "helping them" to help themselves, the development agenda limited the 'underdeveloped' peoples' "aspirations for a better life" solely to the perceived ideals of the

¹⁰⁷ A potentially unlimited monetary fund was established to ensure "the provision of capital for the creation of productive enterprises", provided by the International Bank for Reconstruction and Development and the Export-Import Bank. Truman thus issued the following fiscal rights to the government of the United States: "Since the development of under-developed economic areas is of major importance in our foreign policy, it is appropriate to use the resources of the government to accelerate private efforts toward that end. I recommend, therefore, that the Export-Import Bank be authorized to guarantee United States private capital, invested in productive enterprises abroad which contribute to economic development in under-developed areas, against the risks peculiar to those investments." Truman, H.S. "Special Message to the Congress Recommending Point 4 Legislation. June 24, 1949," pp.329-333, in: Truman, H.S. *Public Papers of the President of the United States Harry S. Truman...op. cit.* p.333.

¹⁰⁸ David Korten, former faculty member of Harvard Business School and now founder and president of the People-Centred Development Forum, reflects on 30 years of experience as a development worker in 'Third World' countries: "As a result of this [classical American development] story, I decided to become a development worker and devote my life to ending the poverty of world's underdeveloped countries. ...I now look back on that experience as my real education – a time during which I became aware of the stark difference between the myth and the reality of the development story that had drawn me to my life's vocation. ... Behind the façade, millions of people were living in dehumanising destitution – many as a consequence of development's intrusion into their lives." Korten, D. "The Post-Corporate World," *The Ecologist*. Vol.29, No.2. 1999, pp.219-220.

¹⁰⁹ Truman, H.S. "Inaugural Address. January 20, 1949," *op. cit.* pp.114-115.

‘American Dream’.¹¹⁰ In most cases, it was simply unquestioned that a people should aspire to nothing but the same material affluence and political infrastructure as the United States and European nations. Furthermore, the meaning of ‘underdevelopment’ was extended to natural resources, where Nature in Third World countries was conceived by developers as a vast store of raw materials that presently lay idle and untapped, that is; ‘undeveloped’ with respect to its potential productive capacity. Thus, as Truman justified to his American audience, the global economic programme would bring further benefits to the United States and other developed countries through opening up new markets for trade and natural resources exploitation¹¹¹:

“All countries, including our own, will greatly benefit from a constructive program for the better use of the world’s human and natural resources. Experience shows that our commerce with other countries expands as they progress industrially and economically.

Greater production is the key to prosperity and peace. And the key to greater production is a wider and more vigorous application of modern scientific and technical knowledge.”¹¹²

Indeed, by modern economic standards, many ‘Third World’ countries do appear ‘poor’; the majority of their peoples ‘lack’ the basics in terms of Western medicinal health systems and educational literacy ‘needs’ of ‘First World’ countries.¹¹³ Here, however, the definition

¹¹⁰ It is difficult to criticise humanitarian efforts where they appear as gift-giving generosity. Serge Latouche explains: “It is through giving, and not taking (or ‘pillaging’, as apologists of the Third World like to call it) that the Centre has acquired an extraordinary power to dominate.” “In all societies, the giver gains prestige and becomes the creditor for a debt of gratitude that can never be wiped out. Neo-colonialism, with its technical assistance and humanitarian giving, has contributed much more to deculturation than did colonialism in all its original brutality.” Latouche, S. *The Westernization of the World: The Significance, Scope and Limits of the Drive towards Global Uniformity*. [Translated by R. Morris.] Cambridge: Polity Press. 1996, pp.22, 57.

¹¹¹ Goldsmith exposes the hidden intent of Western so-called ‘aid’ programmes – development disguised in a more palatable form: “Recent years have seen countless examples of aid programmes tied to ‘development’ projects and to arms sales... Most of the governments that have received security aid from the US in recent decades are military dictatorships such as those in Chile, Nicaragua, Argentina, Uruguay, Peru and Indonesia. They faced no external threats; it was not to defend themselves against a foreign invader that the security aid was needed, but rather to impose development onto a restless population which had already been impoverished by it.” Goldsmith, E. “Empires Without Armies,” *The Ecologist*. Vol.29, No.2. 1999, p.155.

¹¹² Truman, H.S. “Inaugural Address. January 20, 1949,” *op. cit.* p.115. [underline added.]

¹¹³ See: Illich, I. *Toward a History of Needs. op. cit.*, where he explains how (traditional) community “conviviality” has been subverted by professionals who tell you what you need and who claim the power (over communities, the ‘poor’, illiterates, etc.) to prescribe. Sachs extends Illich’s critique to the explanations of ‘underdevelopment’: “...‘poverty’ was used to define whole peoples, not according to what they are and want to be, but according to what they lack and what they are expected to become.” Sachs, W. “The Archaeology of the Development Idea,” *INTERculture*. Issue No.109. 1990, p.9. Hence, the measure for ‘poor’ was held against a Western minimum level of *waged salary* and ‘malnourished’ now defined all those who did not meet Western/American standards of daily food *calorie intake*. And yet hypocrisy is plainly evident, as the following report attests to: “Of the 8 million children 18 years and

of 'poverty' is held up against a Western measure which fails to distinguish between different forms of poverty: *frugality*, *destitution*, and *scarcity*. Sachs notes: (1) "Frugality is a mark of cultures free from the frenzy of accumulation"; (2) "Destitution ... becomes rampant as soon as frugality is deprived of its foundation. ...As soon as [community ties, land, forest and water] are taken away or destroyed, destitution lurks"; (3) "Scarcity ... derives from modernized poverty."¹¹⁴ In many traditional villages prior to intervention by colonialism/development authorities, 'frugality' best characterises their social and economic interactions, as Sachs explains: "'Poverty' [in a traditional village] is a way of life maintained by a culture which recognises and cultivates a state of sufficiency. Sufficiency only turns into demeaning poverty when pressurized by an accumulating society."¹¹⁵ In such communities (and in direct contrast to modern economic society), the accumulation of personal wealth is in fact shunned.¹¹⁶

Prior to 'outside' contact, many traditional communities had no collective perception of themselves as 'poor'. Nor did excessive inequality among individuals exist as a division of

under ... 'two million come from families living in poverty, lacking adequate food, without health insurance, often in physically and socially toxic environments. If current trends continue, as many of one-third of our children will live in poverty and hunger by the year 2000...'" The report *Children and Environment* (1996) refers not to any so-called 'Third World' country, but to the sunshine state of California, U.S.A. Excerpt cited in: Rahnema, M. and Bawtree, V. (eds.) *The Post-Development Reader*. London: Zed Books. 1997, p.360.

¹¹⁴ Sachs, W. "The Archaeology of the Development Idea," *op. cit.* p.11. See especially '2 - Poor Not Different', pp.8-12. Ivan Illich defines "modernised poverty": "Beyond a certain threshold, the multiplication of commodities induces impotence, the incapacity to grow food, to sing, or to build." Illich laments that in many 'developed' countries, the ingenuity of the self-sufficient individual is seen as deviant behaviour and regulated against (note the proliferation of numerous by-laws in small town district planning schemes). Illich adds: "...the poor are the first to suffer when a new kind of commodity castrates one of the traditional subsistence crafts. The useful unemployment of the jobless poor is sacrificed to the expansion of the labor market." Illich, I. "Useful Unemployment and Its Professional Enemies," pp.1-62, in: *Towards a History of Needs. op. cit.* p.10.

¹¹⁵ Sachs, W. "The Archaeology of the Development Idea," *op. cit.* p.11. Refer also to Majid Rahnema's incisive critique of the realities and myths of 'global poverty'. He questions to what extent, if any, the various actions and interventions of modern governments and international institutions of assistance have actually alleviated the sufferings caused by various forms of unwanted or unjust poverty. Rahnema, M. "Global Poverty: A Pauperizing Myth," *INTERculture*. Vol.24, No.2. Issue No.111. 1991, pp.4-51.

¹¹⁶ For example, among North American indigenous nations, especially along the Northwest Coast, when an imbalance of material wealth was evident within a community (or when a neighbouring community/tribe was facing hardship), a *potlatch* – an elaborate gift-giving ceremony – was held whereby a person of standing proved his or her status and wealth by giving away and distributing *all* material possessions. Prestige was gained by the potlatch host as a result of sharing and celebrating material gifts with others. The ethic of sharing is similarly important among Polynesian peoples, and the social/cultural consequences of selfishness or insufficient generosity are dire, as Bernard Mishkin comments with respect to the concept of *mana* (pride/prestige) among Maori of Aotearoa/New Zealand: "Wealth validated chieftainship to no mean extent. Without well-supplied storehouses at his command a chief could not sustain his reputation for liberality, which was essential to the maintenance of his prestige. The disgrace that accompanied his failure to distribute material goods among his guests fell upon his people

rich/poor with respect to the provision of basic material necessities. However, in the wake of significant development influences, the self-image of these communities has changed as have their traditional social and ecological interactions, sometimes radically and almost always detrimentally. Where once these communities were proud of their endogenous ways of being and knowing, there is now an unsettling unease from within: a sense of shame at being different from the universal 'picture perfect' image of modern culture.¹¹⁷ Helena Norberg-Hodge observes changes in a community's self-perception brought about by modern development, particularly foreign tourism, with respect to her long-standing association with the indigenous people of Ladakh in the Indian Himalayan state of Kashmir:

“Within the space of little more than a decade, feelings of pride gave way to what can best be described as a cultural inferiority complex. In the modern sector today, most young Ladakhis – the teenage boys in particular – are ashamed of their cultural roots and desperate to appear modern.”¹¹⁸

Modern development has now penetrated even the most remote communities in the world, infiltrating the safe havens of 'Little Tibet' (Ladakh) in the Indian Himalaya and the Arctic

and was irreparable.” Mishkin, B. “The Maori of New Zealand,” Chapter Thirteen, pp.428-457, in: Mead, M. (ed.) *Cooperation and Competition Among Primitive Peoples. op. cit.* p.433.

¹¹⁷ In August 2000, I stayed with a Dene First Nations community in the Northwest Territories of Canada. Despite the geographic isolation from major North American cities, the infiltration of Western/American influences was notable and, evidently, widespread among other Arctic indigenous communities. I observed a 'cultural gap' between elders and the younger (especially teenage) generations. Whereas elders speak their native tongue and retain traditional methods of preparing food, clothing, etc. (although many also are addicted to 'Western' vices such as alcohol and cigarettes), the younger generations, who have been subject to compulsory schooling, speak English and appear almost disinterested in their traditional values. Instead they imitate the commercialised 'Spice Girls' pop star image as projected by the mass media. Among other outside influences, the devastating cultural effects of global (although mostly American) cable satellite television cannot be underestimated. These insidious, seemingly unstoppable, forces represent a major threat to the intergenerational retention of cultural integrity (and cultural pride) in otherwise remote communities. In support of my observations, refer to: Mander, J. *In The Absence of the Sacred: The Failure of Technology and the Survival of the Indian Nations*. San Francisco: Sierra Club Books. 1991. See especially Chapter Six; “Television (2): Satellites and the Cloning of Cultures. The Case of the Dene Indians,” pp.97-119. As a measure of balance, however, I must add that in the Dene community that I visited, there is a long-term funded project in which young and skilled Dene are recording the traditional knowledge of their elders so that the stories and teachings of their ancestors may be retained for future generations.

¹¹⁸ Norberg-Hodge, H. “The Pressure to Modernize and Globalize,” pp.33-46, in: Mander, J. and Goldsmith, E. (eds.) *The Case Against The Global Economy. op. cit.* p.34. I would argue that a 'cultural inferiority complex' is projected onto those communities by outsiders; 'shame' is felt only in the presence of the 'modern' culture. This is illustrated by the Western tourist who may spend in a day the equivalent of a month's wages for a Ladakhi resident. Rather than feel 'inferior', the local may simply no longer value his or her traditional culture and instead become preoccupied with the 'modern'. For visual confirmation of this disturbing pattern, see the video: Page, J. (Producer). *Ancient Futures: Learning from Ladakh*. [Video.] Clifton, Bristol; England: International Society for Ecology and Culture (ISEC). 1993. Unfortunately, a very similar story is encountered the world over.

once-nomadic, once-‘free’ indigenous peoples of Canada; places and cultures that have lived for hundreds, even thousands of years without desire for modern appliances. Yet modern development is paradoxical: Not only does it attempt to conquer all alternatives by physical obliteration on a grand global scale, but it is also frighteningly narrow, leading to what Thomas Berry deplors as a “technological confinement”.¹¹⁹ The two seemingly contradicting tendencies of modernity – outward expansion and inner confinement – are apparent in the relationship of ‘developed’ countries with respect to the ‘underdeveloped’ underdogs. Development colonises not only physical places but social spaces, overwhelming small communities and forcing those that attempt to resist the assault of ‘monoculturalism’ to retreat to the margins.¹²⁰

THREE RESPONSES OF INDIGENOUS PEOPLES TO DEVELOPMENT

It must not be forgotten that a hundred years ago, over eighty per cent of the world was subject to European colonial rule. The original ‘tools’ of colonial subjugation included physical domination through military weaponry (e.g., the introduction of the musket and gunpowder); the spread of monotheism by Christian missionaries; the sheer dominance of settler numbers over indigenous populations (a result both of European immigration and rapid decline in indigenous populations due to non-immunity to ‘alien’ diseases); and the appropriation of natural resources (particularly land for settlement) from the original inhabitants, either by treaty or aggressive seizure. In countries such as Canada and New Zealand, the historical record of social and cultural injustices is now being addressed by Crown agencies through reparative justice (for example, treaty settlements) and other forms

¹¹⁹ Modern technology and development everywhere reduces the qualitative to quantitative, spiritual to material, diversity to multiplicity, and so on. The underlying dualistic methodology divides and separates, then further dissects what was initially whole and into parts of increasingly smaller detail (refer to Chapter Two and, in particular, the insights of René Guénon). The narrow investigation of reductionist specialists has become a world-wide universal pursuit (exemplified by technologists and scientists). And yet modernity must be wary of the pitfalls of over-specialisation which lead, inevitably, to monistic closure. The danger rises when unrestrained specialisation can no longer relate to other specialist strands, and therefore destroys the basis for wholeness (let alone the integrity of the Whole), as Buckminster Fuller states succinctly: “Specialization is antisynergy.” Fuller, R.B. *Intuition. op. cit.* p.52. Thomas Berry delivers a warning for modern technocratic society: “...we are just emerging from a technological entrancement. During this period the human mind has been placed within the narrowest confines it has experienced since consciousness emerged from its Paleolithic phase. Even the most primitive [sic] tribes have a larger vision of the universe, of our place and functioning within it, a vision that extends to celestial regions of space and to interior depths of the human in a manner far exceeding the parameters of our own world of technological confinement.” Berry, T. *The Dream of the Earth. op. cit.* p.37.

¹²⁰ On the indigenous peoples of North America, Berry remarks: “From having been one of the freest peoples who ever lived, they have become one of the most confined, culturally as well as physically.” *ibid.* p.181. See Chapter Fourteen; “The Historical Role of the American Indian,” pp.180-193.

of reconciliation.¹²¹ However, while attention is drawn to historical grievances of the early colonisation period, a new wave of acculturation continues under the label of ‘development’. Some critics declare that this model of ‘global development’ brings even worse results for cultures and Nature than those stemming from imperial colonialism.¹²²

Today, the ‘enemy’ is no longer identifiable simplistically as the “European” (white man) imperialist invader. Rather, the methods and means of ‘development’ are varied and complex, expressed through a ‘technocracy’ of multi-ethnic constitution. It is not only Western-derived technology that has invaded nearly every people on Earth, but also powerful institutions and multinational business corporations that monopolise economic (and therefore social) interactions. Everywhere one turns, the products of the modern technocratic system are glaringly evident: even in the poorest slums and ghetto residences, ™ (“Trade Mark”) labels and television channelled products infiltrate into homes, preaching the message that consumption and accumulation of material products brings personal ‘happiness’. The jingle recites (and invites) that “you are what you buy”. Given the global nature and forcefulness of this imposing power, individual attempts to resist this onslaught appear as mute means of protest and, therefore, in the long run, futile. Yet, neither apathetic acceptance nor ignorance are justifiable from a societal standpoint, given that the threats of a global environmental crisis accompanying this crisis of ‘monoculturalism’ can no longer be denied.

According to Yvonne Dion-Buffalo and John Mohawk, indigenous cultures (and other colonised peoples) have three choices of response to cultural colonisation (and

¹²¹ A very significant part of the Waikato Claim, which was lodged with respect to breaches of the Treaty of Waitangi (1840), the land wars and consequent confiscation of lands from the Waikato Maori tribe, and the loss of lives and devastation of property and social life that followed, is the Crown’s apology: “The Crown apologises formally and will apologise publicly to Waikato for its actions in sending imperial forces across the Mangataawhiri, for the loss of life and devastation of property that ensued, for the confiscation of Waikato lands and for the crippling effects of raupatu on Waikato.” *Deed of Settlement: Parties, Her Majesty the Queen in right of New Zealand and Waikato*, 22 May 1995. Wellington, New Zealand: Office of Treaty Settlements. 1997. See pp.5-7.

¹²² Goldsmith compares the post-WWII effort to ‘develop’ the Third World through expansion of the West’s economic and trading market to access cheap labour and materials with the goals of colonialism in its later phases from the 1870s. He asserts: “...there is a striking continuity between the colonial era and the era of development, both in the methods used to achieve their common goal and in the social and ecological consequences of applying them. With the development of the global economy, we are entering a new era of corporate colonialism that could be more ruthless than the colonialism that preceded it.” Goldsmith, E. “Development as Colonialism,” *The Ecologist*. Vol.27, No.2. 1997, p.69.

‘development’).¹²³ They can become: (1) ‘good subjects’; (2) ‘bad subjects’; or (3) ‘non-subjects’. As ‘good subjects’, colonised peoples accept and adopt the laws and moral conduct of the colonising powers, with little questioning. The expectation is that indigenous peoples will assimilate the social patterns of the colonising culture and imitate the evolutionist ideals of Western civilisation as the model of ‘progress’. In contrast, as ‘bad subjects’ colonised peoples rebel against the colonial powers and their “alien rules”, yet “...always revolting within the precepts of those rules”. The third response is unlike the other two in that colonised peoples do not respond in dialectical dispute but re-centre themselves as ‘non-subjects’: “...acting and thinking around discourses far removed from and unintelligible to the West.”¹²⁴ In this latter response, indigenous peoples make a collective choice to return to their autochthonous centres, using their positions at the ‘margins’ to their own advantage.

‘Good Subjects’: The Melting Pot of Assimilation

[Unity Through Conformity]

As ‘good subjects’, colonised peoples adopt and conform to the customs of the colonising mainstream. Thus, to wholeheartedly accept ‘development’ and all its acclaimed benefits, the ‘good subject’ willingly assimilates into the dominant culture and assumes the mainstream values and social mores, respects and upholds the law at all times, and ‘corrects’ him/herself onto the right track towards economic and social success. From the perspective of the coloniser/‘developed’, it is considered obvious that so long as the same stages are followed in the path of economic development, indigenous peoples and the ‘underdeveloped’ so-called ‘Third World’ will finally ‘catch up’¹²⁵ to the ‘First World’ standards of living (e.g., educational qualifications, employment careers, monetary-based incomes, material possessions, etc.).¹²⁶ The ‘good subject’ recognises that he or she (or his

¹²³ Dion-Buffalo, Y. and Mohawk, J.C. “Thoughts from an Autochthonous Center,” *Cultural Survival Quarterly*. Vol.7, No.4. 1994, pp.33-35.

¹²⁴ *ibid.* p.35.

¹²⁵ In his critique of Western characterisations of ‘development’, Gilbert Rist comments that the histories of ‘other’ societies (i.e., not Western) are replaced with the Western ideology of progress that views all social changes as following an invariable and universally valid sequence. “By assuming that all people must go through the same stages to reach the same goal it becomes possible to classify them on the same axis and to thus evaluate the distance that each must cover in order to ‘catch up’ on ‘the road to development.’ The only thing that varies from one society to another is the *gap* in terms of that norm...” Rist, G. “Is Development a Western Notion?” *INTERculture. op. cit.* p.15. [italics in original.] Note the ideological connections between evolutionary theory, Social Darwinism, and the ‘development’ agenda.

¹²⁶ If every person in the ‘underdeveloped’ countries were to consume the same quantity of resources as the individual in the ‘developed’ country, then the natural environment would be completely exhausted. Sachs outlines the reality: “If all countries ‘successfully’ followed the industrial example, five or six planets would be needed to serve as mines and waste dumps.” Sachs, W. “Introduction,” pp.1-5, in:

or her children) can attain the status and financial rewards of the 'developed' through one's own individual merits of performance and clear-headed competitiveness (i.e., by 'playing the game').

Certainly there are shining examples of 'successful' individuals who have risen from poverty through the ranks of bureaucracy to claim positions of power. Thus the Harvard business graduate becomes the prototype of the law-abiding citizen of 'everywhere' (belonging, in reality, nowhere). The modern technocrat can be of any chosen colour or custom; indeed, the qualifications of the job require them to leave his or her beliefs (cultural traditions, religious practices, political stance, etc.) at the door and simply 'get on with the job'.¹²⁷ The 'good subject' accepts the inevitability of 'progress' in the belief that higher wages equals personal betterment, achievement and therefore respect in the modern world. However, such individualistic aggrandisement only acts to further distance the newly minted indigenous elitist from his or her tribal group of origin, until that individual scarcely resembles the spirit and way of his or her people at all. The 'good' institution employs personnel from a diversity of cultures; yet, 'multiculturalism', in this disguised sense, might be challenged as simply an exotic charade of 'multi-colourism'.¹²⁸ In a somewhat perverse reverse, the employee puts aside his or her cultural distinctions and adopts, during working hours, the 'culture' of the organisation. In superficial ways the organisation's systems might be adjusted to accommodate a wider array of culturally-sensitive conditions, yet on the whole the System remains patriarchal, hierarchical and intensely competitive.¹²⁹

Sachs, W. (ed.) *The Development Dictionary. op. cit.* p.2. Therefore, in both theory and practice, the development theory of 'catch up' remains a fallacy. The resource consumption and waste assimilation requirements of a defined human population or economy can be calculated using accounting tools such as the 'Ecological Footprint' concept. Wackernagel, M. and Rees, W. *Our Ecological Footprint: Reducing Human Impact on the Earth*. Gabriola Island, BC, Canada: New Society Publishers. 1996. That concept is closely related to what William Catton referred to as 'ghost acreage', defined as: "the additional farmland a given nation would need in order to supply that net portion of the food or fuel it uses but does not obtain from contemporary growth of organisms within its borders..." Catton, W.R. *Overshoot: The Ecological Basis of Revolutionary Change*. [Foreword by S. Udall.] Chicago: University of Illinois Press. 1980, p.276.

¹²⁷ See Chapter Three above: "Dependency and the Modern Institution."

¹²⁸ Refer to section below: "Insert: Development, Diversity and the Dis/Guise of Tolerance."

¹²⁹ As an aside (with relevant parallels for other 'marginalised' sectors of modern society), feminism provides a strong critique of Western society and its patriarchal forms of social dominance from inside the Western worldview (i.e., post-modernism). There is danger, however, in 'fragmented feminist' approaches that assume parity simply through the employment of more women in top-level managerial positions. Where the institution remains hierarchically oppressive, despite the adjustments to gender power relations, the real hope of recovering the 'feminine principle' (not only in women but, perhaps more importantly, in men!) may be subverted and continue to be neglected. Panikkar's comments are relevant here, although they were not stated with respect to feminism per se: "The issue ... is not one of change of guard, but of the System." Panikkar, R. "The Discovery of the Metapolitical," *op. cit.* p.40.

The 'good subject' is not only the obliging 'minority'¹³⁰ group enticed by the promises of development, but might also be extended by analogy to characterise an entire generation of consumers whose ethnic origin is seemingly irrelevant in the marketplace. Who is the exemplary 'good subject' in contemporary society if it is not the youth who unquestioningly lap up the symbols of multinational corporations in order to 'belong'? The mass-produced, packaged fast-foods and labelled clothes act as today's cult fashion statements of assimilation.¹³¹ To be accepted in modern society, the teenager of today must conform to the fashion, foods, music, television viewing, telephone talking, etc. expectations of his or her peer group. Overt differences in physical appearance, language and/or family upbringing from that of mainstream society may incite ridicule or rejection; thus, one's ethnicity is renounced or hidden out of shame. In this respect, the immigrant teen, the indigenous adolescent, and those from other marginal groups are sometimes even more convincing than the European counterpart in his or her desire to conform to the common cohort. To emerge from teenage years and still retain one's individuality and identity despite the crowd's expectations is a major challenge in modern life and one not to be underestimated. To choose other than the indifferent/submissive path of the 'good subject' is to invite a life of constant challenges.

The above examples present the 'good subject' who is already conditioned to the ways of the 'developed' world. But what about the 'good subject' who by choice (or otherwise propelled out of necessity) leaves his or her country and culture of birth behind in search of new promises: the opportunity to strike it rich in 'the promised land of plenty'?

Within democratic nation states (e.g., Canada, Australia, New Zealand, England, etc.), liberal immigration policies offer refuge to those escaping political regimes of terror and oppression. While acknowledging that some of these non-English-speaking immigrants have escaped horrific and inhumane social conditions, there is also a dual recognition that these immigrants/refugees are compliant workers desperate enough to fill the 'developed'

¹³⁰ 'Minority' is used here to refer to a relative position of power (based on monetary wealth and political status) with respect to the global economic system. However, in terms of sheer numbers, the so-called minority in fact forms the majority of the world's population.

¹³¹ Naomi Klein takes an anti-corporate activist stance in her analysis of the effects of corporate branding on today's generation of young consumers seduced by the global language of the 'logo'. She explains that the appeal of branding works at many levels: "...a consensus emerged on Wall Street that if brands were going to matter any more, companies needed to dig deeper and develop an almost spiritual relationship with their consumers." Sibree, B. "Brand Klein – the voice of a generation," *Sunday Star Times*. July 18,

country's demand for low-wage, industrial factory positions. In unwitting compliance, 'good subjects' accept their 'good fortune', taking home a meagre pittance from their monotonous jobs to feed and clothe their fortunate families, in-laws and extended relations. Despite the outcry from human rights' organisations at this none-too-subtle abuse of a vulnerable working class, who among the poor is to complain when there is no shortage of substitutes to fill their place? Today this situation is vividly portrayed by the crowds cramming the English Channel, those desperately testing any means to cross the border between Mexico and U.S.A., and shipments of 'illegal' refugees who risk their lives in the vain hope that the destination is an improvement on the one from which they departed.

And what about the entrepreneurs of the 'Third World' and indigenous community who invite the products of multinational corporations into their homes and villages, who seek the Western tourist dollar even if it means putting their traditional way of life 'on display', and who subject their youth and communities to a sustained false impression of the grandeur of Western-style easy-living? Are they not 'good subjects' who have been totally converted to the self-gratifying positions of power? Those who mouth the magic of the monetary myth within their own communities? It matters not that they may retain some of the indigenous character of their people for, in their preaching of the modern way to achieve dreams of 'success' (here defined solely in economic terms), they are already not what they claim to be – they are not unselfconscious 'vernacular man'. Rather, they believe themselves to be 'better' than their poor cousins: more educated, better clothed, technologically adept, etc.; in short: 'civilised'. In other words, they are the indigenous elite who, even in the absence of a visible colonial outsider, assume the role of the colonialist from a privileged position within (e.g., as advocates of global development and 'Free Trade'). Clearly, this is the situation today for many 'Third World' countries whose government officials and 'expert' professionals act as advocates of the West's quest for 'progress', as Claude Alvares alerts readers to:

“Colonialism even lived on in independent ex-colonies, for the crucial mental image of 'backwardness', passed on by 'advanced' planners to the ruling elite of these countries as they faced the glamorous West, eventually alienated these ruling classes. They came to see themselves as the new bearers of the white man's burden,

and their people as stubborn change-resistant primitives to be treated like recalcitrant children and forced to accept what was good for them.”¹³²

‘Bad Subjects’: Retaliation and Ethnic Backlash

[Nihilism By Division]

The opposing reaction to that of the ‘good subject’ who accepts (be it partially or in full) the path of assimilation would appear to be that of the ‘bad subject’ who lashes out against development’s tangible structures and visible fronts of monocultural oppression. Rather than rolling over in the face of formidable outside forces of development (i.e., as a ‘good subject’), the ‘bad subject’ relentlessly revolts through rebellious retaliation. Such rejection of the status quo gives the ‘bad subject’ a ‘bad name’ as a radical or revolutionary troublemaker.¹³³ However, the fight is reckoned by fellow radicals to be that of the ‘good fight’ – the attempt is self-justifiably noble: to topple those in power and overthrow the System, or at least to temporarily maim the bulldozers of destruction. An eye for an eye; a bullet for a bomb. Extreme reactions, however, are not to be treated mildly: No longer is it implausible that the world’s powers be held to ransom by a terrorist with his finger on the button of a nuclear bomb.

This is not to say that all ‘bad subjects’ are extremist militant objectors. However, when the concerns of indigenous peoples (and others) are continuously and blatantly overlooked by pro-development decision-makers and, indeed, when one’s livelihood or spiritual basis (e.g., sacred sites) are threatened, confrontations may well escalate to previously unexpected and sometimes violent proportions. Such was *The Terrible Summer* of 1990, when the Mohawk First Nations’ peoples felt forced to take to arms in defence of a stand of sacred pine trees at Oka, Kanehsatake (near Montréal, Canada). The trees were to be milled to make way for a golf course ‘development’. The confrontation, which started as a peaceful sit-in protest and led to the Mercier bridge blockade, rose swiftly to the violent and irrational heights of sheer racism.¹³⁴ In response to the Mohawk masked warriors, women

¹³² Alvares, C. “No to Development!” *INTERculture*. Vol.20, No.2. Issue No.95. 1987, p.38.

¹³³ As part of the aforementioned apology of the Crown to Waikato Maori in the settlement of their Treaty of Waitangi claim, the Crown’s apology includes an admission of “unfairly labelling Waikato as rebels.” *Deed of Settlement. op. cit.* p.6. It remains to be seen whether contemporary mainstream media take into account the Crown’s apology over historical misnaming in their present portrayal of Maori protests and land occupations which continue today. Given the media’s huge influence in shaping public perception, the skewing of protest events through sensationalisation and shallow, one-sided journalism are cause for much concern.

¹³⁴ Richard Wagamese, an Ojibway journalist, reflects on the racist actions of Montréal residents in response to the occupation at Oka: “I find it hard to believe that there were no charges laid after the

and children who occupied their ancestral lands, the Québec police and Canadian army (with tanks, helicopters and weaponry) were called in to ‘settle’ the dispute.¹³⁵ The result: a stalemate, and a fatal gunshot. The Mohawks resigned their occupied post but did not surrender, as Richard Wagamese explains:

“Both the prime minister and the minister referred to the peaceful end of the situation. ...This was far from a peaceful ending. There still remains smoldering resentment for each other on the part of both the army and the Mohawks. This is a negative truce not a peaceful termination.”¹³⁶

It has been alleged that development exacerbates tensions between ethnic groups, especially those who are now forced to compete with each other for continued access to and use of (their) natural resources.¹³⁷ Reduced to the role of one ‘resource user group’ among many competing claimants, indigenous peoples are transformed into pawns of the economic system. The Fiji example (above) illustrates the devious divisiveness of the developer whose outside interference has exacerbated inter-village tensions leading, inevitably, to all-out competitive rivalry for the tourist dollar.¹³⁸ Such petty bickering

residents of Chateauguay stoned passing Mohawk vehicles as they left the barricades Aug. 20. Earlier police used tear-gas to disperse rock and bottle-throwing residents who wanted the Mercier bridge opened. Effigies of Mohawks were publicly burned and the overall impression left an indelible question as to who the real savages were.” Wagamese, R. *The Terrible Summer*. Toronto, Ontario: Warwick Publishing. 1996, p.76. See: “Oka Provides Many Lessons,” pp.74-76.

¹³⁵ Alania Obomsawin’s video footage of the two-and-a-half-month ordeal makes for vivid and chilling viewing. She speaks on behalf of thousands of indigenous people when she states: “The crisis marked a turning point for us. For hundreds of years, our people have wanted to negotiate their land rights. The land question and Mohawk sovereignty have been issues since the French and English first settled in the area. A lot of promises were made and never kept. What the confrontation of 1990 showed is that this is a generation that is not going to put up with what happened in the past.” Obomsawin, A. (Writer/Director) and Luhovy, Y. (Editor). *Kanehsatake: 270 Years of Resistance*. [Video.] Montréal, Québec: National Film Board of Canada. 1993. [quote from inside cover.]

¹³⁶ Wagamese, R. *The Terrible Summer*. *op. cit.* pp.75-76. [emphasis added.] Panikkar’s insights are again a reminder that it is only through dialogue that peaceful understanding may be arrived at: “War has never led to peace. War may lead to victory, but victory is victory, not peace; it is a truce until the defeated (or their grandchildren) have reorganized themselves. Peace in ‘our’ terms is a *contradictio in adjecto*, an hypocritical contraction. It denies what it stands for: the real freedom of the human person. Peace without consensus is no peace. Here lies the political significance of what I have been calling dialogical dialogue. Even a dialectical victory will trigger revenge.” Panikkar, R. “The Destiny of Technological Civilization: An Ancient Buddhist Legend *Romavisaya*,” *Alternatives*. Vol.10. 1984, p.247. [underline added, italics in original.]

¹³⁷ Helena Norberg-Hodge notes: “In the South, there is an awareness that modernization is exacerbating tensions; but people generally conclude that this is a temporary phase on the road to ‘progress,’ a phase that will only end once development has erased cultural differences and created a totally secular society. ...I am convinced that ‘development’ not only exacerbates tensions but actually creates them. ...development causes artificial scarcity, which inevitably leads to greater competition.” Norberg-Hodge, H. “The Pressure to Modernize and Globalize,” pp.33-46, in: Mander, J. and Goldsmith, E. (eds.) *The Case Against The Global Economy*. *op. cit.* p.45. [emphasis added.]

¹³⁸ Recall that each village on this remote island is indebted to the developer for the costs incurred in establishing the infrastructure for tourism. Although on a much greater scale, Goldsmith’s examination of

distracts the local people from the background issues – albeit a dominant and overpowering background – in which the development forces become self-enforcing and will eventually squeeze out the traditional economic ways of life. The ‘bad subject’ here has not yet awakened to the fight that lies ahead: the developer, however, is already armed with the power of signed legal documents and expensive lawyers.

Many indigenous peoples throughout the world are, however, becoming increasingly aware of the forces of globalisation behind the promotion of ‘development’, and are taking direct and forceful measures to oppose them. For example, the violent protest of thousands of Indians in Mexico who rose in “dignified reaction to too much development”¹³⁹, sent shock waves through the Mexican government. In retaliation, the then Mexican President, Carlos Salinas (a Harvard-educated economist), ordered the launch of a brutal military attack upon those rebels. Although the conflict was triggered by the signing of NAFTA (the North American Free Trade Agreement between Mexico, U.S.A., and Canada) on 1 January 1994, the indigenous rebels challenged the greater processes of development and colonisation to which they had been subjected for over five hundred years. The *Zapatista* movement can not easily be dismissed by pro-development governments as simply that of one-time extremists.¹⁴⁰ Not only do these rebels represent a diversity of ethnic groups, but they have gained support from millions of people throughout Mexico and inspired liberation initiatives the world over.¹⁴¹

monetary loans to ‘Third World’ countries from Western countries, the World Bank, or IMF (International Monetary Fund) suggests some scary parallels for this particular case in Fiji. He states: “...Third World countries which borrow from the West almost always fall into unrepayable debt. Once in debt, they become hooked on further and further borrowing, thus falling under the power of the lending countries.” Goldsmith, E. “Empires Without Armies,” *The Ecologist. op. cit.* p.157.

¹³⁹ Gustavo Esteva explains: “The revolt was not a response to a lack of development – a call for cheaper food, more jobs, more health care and more education – or to poverty or misery.” Rather, the Indians’ hope is to “...reclaim their commons and to regenerate their own forms of governance and the ‘art of living and dying’.” Esteva, G. “Basta! Mexican Indians Say ‘Enough!’,” pp.302-305, in: Rahnema, M. and Bawtree, V. (eds.) *The Post-Development Reader. op. cit.* p.302 (all quotes).

¹⁴⁰ A letter from Subcomandante Marcos of the *Zapatista* movement states the seriousness with which the group’s members are committed to their stand: “To have a future, we have put our present in jeopardy; and, in order to live, we are dead.” “Suffering death is nothing compared with the agony of being forgotten. ... A country that forgets its past cannot have a future.” Translated excerpts cited in: *ibid.* p.305.

¹⁴¹ To those whose response to globalisation is one of resigned apathy, the example of the Indians in Mexico is something of a ‘wake up’ call. Esteva and Prakash probe: “What can others learn from a provincial movement of desperately poor Third World peasants determined to struggle for their cultures, shamed and silenced for five centuries? Is it possible that such a small movement, militarily insignificant, can be of help to other oppressed peoples?” The results speak for themselves: “...how to explain the fact that people in more than a hundred countries reacted to the *Zapatistas*’ liberation initiatives with meetings, encounters, mobilizations and thousands of concrete proposals? How do we explain the fact that two Italian villages declared themselves *Zapatistas*, while saying that their questions and ventures

Arguably the greatest threat to indigenous peoples strikes not only at the loss of their economic base (i.e., land ownership and sovereign 'user rights'), but works at a deeper level to threaten their very identity as 'indigenous' and as a tribal entity.¹⁴² The most devastating threat of colonisation, in addition to the introduction of physical infrastructure (e.g., housing, schools, dams, power stations, etc.) and structural changes to cultural institutions (e.g., the creation of government agencies within the Western legal framework to attend to 'Indian Affairs', compulsory Western schooling, etc.), is the threat to cultural values and lifestyles, community interdependence and solidarity, and indigenous knowledge – in sum: *indigenous identity*.¹⁴³ The threat to cultural identity is serious because it is less visible than physical and structural changes and, over time and entrenched through assimilation policies, may become irreversible.

Not all 'bad subjects' are so-called as a result of their political stance, but some fall by default into the character of rebellious 'social misfit'; i.e., a failed 'good subject'. Where it is clearly not the case that the individualised indigenous person rises to the same status of the economic elite in the colonial culture, it is reasoned by mainstream society that what appears to be 'holding him back' is his or her own defeatist attitudes and the vicious cycle of poverty. Indeed, dependency on state welfare and development aid continue to undermine self-esteem and destroy cultural integrity.¹⁴⁴ Norberg-Hodge highlights the pressure on indigenous peoples to conform to a "standard Western ideal" (i.e., the 'good

were also their own?" Esteva, G. and Prakash, M.S. "Grass Roots' Post-Modernism. Prologue," *INTERculture*. Vol.29, No.2. Issue No.131. 1996, pp.8, 9. [italics in original.]

¹⁴² Zairean philosopher, V.Y. Mudimbe, addresses various academic discourses that exist concerning "...the meaning of Africa and being African. ...The book illustrates the ways in which Western anthropological and missionary interpretations of African life and thought have introduced distortions not only for Westerners but also for Africans who try to understand themselves by means of Western interpretive models." See: Mudimbe, V.Y. *The Invention of Africa: Gnosis, Philosophy, and the Order of Knowledge*. Bloomington; Indianapolis: Indiana University Press. 1988. [quote from back cover blurb, underline added.]

¹⁴³ Derek Rasmussen is critical of European inventions of 'primitive society', arguing that: "The ability to evaluate a people as 'primitive,' is a right that has been claimed by Europeans throughout 500 years of occupation of North America." His critique focuses on European measures of social progress based on the presence or absence of formal education: "...literacy, rationality, and acquisitiveness were propounded as educational virtues to alleviate the supposed savagery of Host Peoples right from the very first days of mass schooling in Canada." Rasmussen, D. "Dissolving Inuit Society Through Education and Money," *INTERculture*. *op. cit.* p.36.

¹⁴⁴ From his extensive experiences working for a non-government organisation in many 'Third World' countries, Thierry Verhelst affirms: "The real tragedy of 'underdevelopment' is that of the gradual destruction of consciousness, by forcing people into dependency. The resulting disintegration or destruction of society may go so far as an internalized negation of one's self and thus of one's real vitality." Verhelst, T.G. *No Life Without Roots: Culture and Development*. [Translated by B. Cumming.] London: Zed Books. 1990 [1987], p.61. See his Chapter Six; "The Withering Away of People's Identity," pp.61-64.

subject'). In rejecting one's true identity, however, the consequences are less than desirable: "Striving for such an ideal means rejecting one's own culture and roots – in effect, denying one's own identity. The inevitable result is alienation, resentment and anger."¹⁴⁵

For a growing number of colonised peoples, the 'melting pot of assimilation' has left them in a spaceless void where they are trapped between an irrecoverable past and a dismal future – not belonging fully in either. Some no longer believe there is 'hope' for the future, nor cling to the romantic image of their once-proud ancestors. These are the 'lost tribe' of today; the street-kids and gang-affiliated youth (otherwise regarded as the 'drop outs' of modern mainstream society),¹⁴⁶ yet also uncultured and unfamiliar with the traditional ways of their people. Born of frustration and disassociation, this disenfranchised and malleable mass becomes a formidable force, vulnerable to the coercive appeal of a gang leader who incites in them a violent hatred of all 'others' (i.e., racists turn on other ethnic groups as scapegoats for their social problems).¹⁴⁷ Instead of dismissing these 'bad subjects', Maori elder and academic Sidney Moko Mead suggests that modern society take note, for "In the very act of manifesting these values [initiative, imagination and a disciplined way of life] the youth groups point out some of the glaring faults in our society."¹⁴⁸

Review: 'Good' and 'Bad' as Dialectical Extremes

So far, the discussion of indigenous peoples' responses to colonisation/development has been restricted to 'good subjects' and 'bad subjects'. These categories, however, are not as clear-cut as might be implied by the above explanations. Within each, responses range and

¹⁴⁵ Norberg-Hodge, H. "The Pressure to Modernize and Globalize," *op. cit.* p.45.

¹⁴⁶ It is near impossible to 'succeed' in modern society today without certified qualifications and professional training. 'Education', as the self-empowering process of the inquiring person, is nowadays threatened by what Illich deplors as administered 'schooling' and its consequent corrosive effect on the esteem of those individuals who fail to meet certain qualifying standards. Illich asserts: "The higher the dose of schooling an individual has received, the more depressing his experience of withdrawal. ...As the majority shifts from the land into the city, the hereditary inferiority of the peon is replaced by the inferiority of the school dropout who is held personally responsible for his failure. Schools rationalize the divine origin of social stratification with much more rigor than churches have ever done." Illich, I. *Celebration of Awareness. op. cit.* pp.167-168. See his Chapter Eleven; "Planned Poverty: The End Result of Technical Assistance," pp.157-174.

¹⁴⁷ See Chapter Three section on "Mass Man and Totalitarianism", particularly the important critiques of totalitarianism by Hannah Arendt. Similar processes of social disintegration are at play with the formation of patch-protective street gangs. When rejected from family or society, the loner may seek belonging in a 'brotherhood' where his allegiance is tested through illegal and violent expressions of resistance. In these ways, the 'bad subject' verges on 'Nihilism by Division'.

take on slightly different characteristics according to the cultural community to whom Western modernity has infiltrated. Even within a particular community, there is a considerable variety of opinions and actions, with some community members eagerly welcoming modern influences and others violently reacting to them. The distinction between ‘good’ and ‘bad’, therefore, is at best a guide useful in highlighting these two extremes. Yet, further paradoxes emerge when the descriptor ‘extreme’ is adopted; for, in pushing increasingly toward an uncompromising extreme position, there is an invitation for enantiodromia to take effect.¹⁴⁹

Dion-Buffalo and Mohawk are well aware of the ‘dialectical dilemma’ whereby ‘good subjects’ and ‘bad subjects’ appeal as extreme opposites, yet in reality are alternations within a framework already constructed and imposed by the cultural colonialists. The Native American authors argue that: “Both ‘good subjects’ and ‘bad subjects’, although able to point to a process of struggle with their former captors, tend to impose the West’s social conditions of domination and hierarchy which they learned from the colonizers upon their own poor and downtrodden.”¹⁵⁰ This includes not only ‘good subjects’ who stand to gain through power promotion which may then be exercised over their own people, but also ‘bad subjects’; i.e., those that supposedly reject all foreign impositions. Through taking a solely reactionary stance, ‘bad subjects’ are rendered vulnerable as the revengeful victim is to the school bully, for it is the bully that directs what weapons are used.¹⁵¹ Mitchell questions the forms of resistance which the ‘bad subject’ has adopted:

“Anti-colonial movements have often derived their organisational forms from the military and their methods of discipline and indoctrination from schooling. They have frequently been formed within the barracks, the campus, or other institutions of the colonial state. At the same time, in abandoning the image of colonial power

¹⁴⁸ Mead, S.M. *Finding a Pathway to the Future: He Ara ki te Aomaarama*. Planning Paper No.3. Wellington, New Zealand: Te Kaunihera Whakakaupapa mo Aotearoa / New Zealand Planning Council. 1979, p.2.

¹⁴⁹ Recall from Chapter Two that enantiodromia is the tendency of things to change into their opposites; to turn and run in an opposite direction.

¹⁵⁰ Dion-Buffalo, Y. and Mohawk, J.C. “Thoughts from an Autochthonous Center,” *op. cit.* p.35. Several indigenous commentators are alert to this tendency within their own communities, where the ‘bad subjects’ who always react to the colonist imposition have, over time, limited their imagination to dialectical confines dictated by colonisation.

¹⁵¹ Panikkar’s warning is most pertinent: “The solution through reaction, remains, under a subtle form, dependent on the *status quo*. One becomes what one hates. To destroy the adversary, one is obliged to utilize the former’s weapons. In brief, what I call the solution through reaction is the confrontation and struggle with the same weapons as those of the adversary. If one does not rise to a superior level, one does nothing else but perpetuate the law of *karma*.” Panikkar, R. “The Discovery of the Metapolitical,” *op. cit.* p.40. [italics in original, underline added.]

as simply a coercive central authority, one should also question the traditional figure of resistance as a subject who stands outside this power and refuses its demands. Colonial subjects and their modes of resistance are formed *within* the organisational terrain of the colonial state, rather than some wholly exterior social space.¹⁵²

The danger is not only that the 'bad subject' may unintentionally dissolve into a version of the 'good subject' whereby "...one falls into the orbit of the culture that one claims to supplant."¹⁵³ The more frightening danger is that the 'bad subject' may turn full circle and become the next oppressor: the colonised become the coloniser¹⁵⁴; the tolerant turn intolerant.¹⁵⁵ Indian activist, Vandana Shiva, outlines clearly the "dangers of division" which, exacerbated and/or created by globalisation (otherwise described as "economic totalitarianism"), are leading to other extremes in the form of fundamentalism and ethnic nationalism.¹⁵⁶ Shiva claims: "Fundamentalism is once again on the rise around the world. ...recent events bear witness to the transformation of India from a tolerant, inclusive and diverse society into a society burdened with cultural, religious and caste conflict. Globalisation has to shoulder much of the blame for this."¹⁵⁷ Thus, the System, spreading universally in aggressive expansion (the monistic One), splinters into opposing fractional factions (the dualistic Many; plurality) who rise up in heretical revolt.

¹⁵² Mitchell, T. *Colonising Egypt. op. cit.* p.xi. [italics in original, underline added.]

¹⁵³ Panikkar, R. "The Discovery of the Metapolitical," *op. cit.* p.39.

¹⁵⁴ "It must be said that there is the fear that our leadership has lived too long and too closely within mainstream systems and because of this, may avoid the more difficult challenge of true self-government and governing: we will simply be exercising powers of self-administration. This will complete the process of assimilation that began many years ago. The colonized will have become the colonizer." Clarkson, L. *Our Responsibility to the Seventh Generation: Indigenous Peoples and Sustainable Development.* Winnipeg, Canada: International Institute for Sustainable Development. 1992, p.30. [emphasis added.]

¹⁵⁵ For example, the policies and actions of apartheid are evident in Zimbabwe today in a reverse form of white-black racism. In a bloody and intolerant effort to decolonise Zimbabwe, President Robert Mugabe has demanded that all white Zimbabwe landowners vacate their farmlands and leave Africa. Those who have chosen to stay face an uncertain future; a number of white farmers have already been slain by angry mobs of 'bad subjects'.

¹⁵⁶ Canadian journalist Michael Ignatieff, whose journeys have taken him to conflict zones in former Yugoslavia, Germany, Quebec, Kurdistan and Northern Ireland to explore the state of modern nationalism, reflects on the effects of modernisation/globalisation on relations between ethnic groups. He observes that the struggle for distinctiveness in a group's identity takes on a terrifying turn when globalisation threatens to homogenise all external differences: "Modernity – the real life they have been living since 1960 at least – has been steadily reducing the differences between them [Croats and Serbs]. Nonetheless, nationalism has turned the imagined differences between them into an abyss, which can be filled only with gunfire. On both sides of the barricades, young men fight to maintain ethnic difference, both dressed in the same international uniform..." Ignatieff, M. *The Warrior's Honor: Ethnic War and the Modern Conscience.* London: Vintage. 1999, p.57.

¹⁵⁷ Shiva, V. "The Two Fascisms," *The Ecologist.* Vol.29, No.2. 1999, p.198.

Insert: Development, Diversity and the Dis/Guise of Tolerance

Those in full favour of modern development (such as economist Bill Emmott) argue against development critics (such as environmentalist Vandana Shiva) who allege that development overwhelms small communities and indigenous tribal groups, leading to the demise of their traditions through ‘monocultural’ processes of assimilation.¹⁵⁸ The protagonists of the global economic System claim instead that cultural diversity has *increased* since developers punctured the otherwise closed and insular “little worlds” of traditional villagers, thus exposing their cultural riches to the mixed bag of modernity’s gems (and germs). Indeed, the cross-cultural opportunities for interchange of values and ideas (and money) are now available unlike any other era; a “twenty-four hours a day” smorgasbord of multiculturalism. Many urban centres are today characterised by a conglomeration of diverse ethnic groups; enclaves of immigrants and refugees taking shelter under the umbrella of the liberal democratic state. However, where one cultural norm (e.g., Western) is imposed to the exclusion of other cultural contributions, this *acculturation* becomes stifling and problematic. Yet, with increasing and positive inter-cultural contact, the possibility of *inculturation* may germinate opportunities that could flower into new cultural symbioses.¹⁵⁹

On the surface, modern democratic nation states tolerate a plurality of cultural beliefs, religious followings, vocational expressions, and so on. Within modern (global) culture, however, it might be argued that indigenous cultures are tolerated only to the extent that the beliefs that bind the person to his or her community remain secondary to, and do not interfere with, the business of economic competition.¹⁶⁰ It might even be observed that

¹⁵⁸ The debate between Vandana Shiva (Director of the Research Foundation for Science, Technology and Ecology, India) and Bill Emmott (editor of the *Economist*) eloquently illustrates two very different views on the fate of the ‘developing’ world. Emmott advocates open trade as bringing huge benefits for the Third World local farmers. He states: “The point of development is, or should be, [for] those people: to give them opportunities and freedoms to change and improve their lives, if that is what they want. This is never going to be possible without capitalism...” Shiva’s questioning stems from a recognition that traditional farmers are governed by human (and other) relations and not simply motivated by personal profits. She observes: “What is an open society and what is a closed society depends on where one is located in it. Societies free for corporations are becoming unfree for people.” Shiva, V. and Emmott, B. “Is ‘Development’ Good for the Third World?” *The Ecologist*. Vol.30, No.2. April 2000, p.25.

¹⁵⁹ Thierry Verhelst explains: “There is said to be acculturation when a culture of foreign origin profoundly influences an indigenous culture.” “Conversely, there is said to be inculturation when an indigenous culture profoundly influences a culture of foreign origin, to the point where the latter is transformed.” Verhelst, T.G. *No Life Without Roots. op. cit.* p.53.

¹⁶⁰ Again, Panikkar stresses the facile nature of this so-called ‘tolerance’ of the present political system (which underlies technocratic modern culture) as a “latent totalitarianism”, which claims: “...to be tolerant with regard to other cultures provided that they accept the rules of the game which have been established by this encompassing political culture which offers them ‘hospitality.’” Panikkar, R. “The

retention of the ‘other’ (albeit reduced to a politically-ineffective minority or subjugated into submission as the ‘good subject’) is ‘politically convenient’, whereby they serve to sustain the pretension of democratic principles (i.e., the ‘freedom of expression’) that have long been on the wane in modern nation states.¹⁶¹ Panikkar reveals the masked intent of the “metapolitical” in typically vivid terms: “...to want to institute a global political system without cultural uniformity makes no sense. And wanting to impose a unique cultural model represents the elimination of all other cultures – a truly cultural genocide.”¹⁶² It is not just ‘bad subjects’ (turned fundamentalist extremists) whose intolerance of the ‘other’ stretches to intolerable levels!

The apparent ‘tolerance’ of the modern nation state to its myriad and diverse ‘good subjects’ must not be mistaken for a true acceptance of the ‘other’ where pluralism encourages open celebration and freedom of self-expression as “a distinct and viable social form in and for itself”. Rather, the dominant (tending to universalistic) economic System subsumes the ‘other’ within its overarching, flexible framework.¹⁶³ Beneath this surface façade of multicultural harmony, however, simmers a deeper and more unsettling reality:

Discovery of the Metapolitical,” *INTERculture. op. cit.* p.37. Refer also to discussion in Chapter Three above on “Mass Man and Totalitarianism”.

¹⁶¹ During the Cold War era, democracy was almost sanctified by the American masses who united in ‘blind patriotism’ through hatred of the ‘out-group’, i.e., communism as the ‘evil’ threat to “world peace”. See, for example, the opening statements (i.e., those preceding the case for economic expansion into “underdeveloped” nations) of President Truman’s post-WWII “Inaugural Address” to the Nation. In his study of the foundations of democracy, Panikkar reflects on the weakness of the present democracies as “nothing but an oligarchic farce.” Panikkar, R. “The Foundations of Democracy (Strength, Weakness, Limit),” *op. cit.* p.11. Indeed, Lewis Mumford challenges the dialectical division of ‘good’ versus ‘evil’ which underpins the false dilemma of “either democracy or dictatorship”, providing a chilling reminder of the ‘enantiodromic’ tendency of so-called opposing extremes: “But if we must not make the error of thinking that violence and irrationality, in their present quantities, are normal, we must equally be on guard against another illusion, more flattering to our egos, more soothing to our patriotic pride: the notion that these moments of disintegration are peculiar to peoples who, like the Germans, the Russians, or the Japanese, have long been subjected to a repressive, authoritarian government, and have not been moralized, as we have been, by the more reasonable and co-operative practices of democracy. That illusion perhaps seemed plausible in the thirties, when the contrasts between the practices of American democracy and totalitarian absolutism were more sharp than (to our shame) they now are.” Mumford, L. *Interpretations and Forecasts, 1922-1972*. New York: Harcourt Brace Jovanovich. 1973, p.337. See: Chapter Thirty One; “The Uprising of Caliban,” pp.334-350.

¹⁶² Panikkar, R. “The Discovery of the Metapolitical,” *op. cit.* p.38.

¹⁶³ “This monotheism [universalism] is also powerful in other more or less disguised and disfigured forms: one Global Market, one Democracy, one World Government, one Technocracy, and so on, which like the original monotheism are flexible enough to allow for varieties of colors and shapes within the overall monotheistic tableau. ... Nobody in good faith today wants to impose a fascist uniformity – although the implicit danger is there.” Panikkar, R. *Rhythm of Being. op. cit.* p.114. Ellul reiterates: “The perfect technique is the most adaptable and, consequently, the most plastic one. True technique will know how to maintain the illusion of liberty, choice, and individuality; but these will have been carefully calculated so that they will be integrated into the mathematical reality merely as appearances!” Ellul, J. *The Technological Society. op. cit.* p.139.

tolerance as a guise that disguises universalism, a temporary glitch in the development agenda which reduces the ‘other’ to marginal status as a denigrated ‘plurality’. (Recall that plurality is *not* pluralism.¹⁶⁴) Serge Latouche examines the superficial democratic ‘tool’ of tolerance with respect to the ‘other’ who, despite attempts to assimilate or dismiss them, remain genuinely different from moderns:

“...the informal [i.e., ‘non-subject’] is a serious threat and a paradox for modernity. Understandably enough, its existence was for a long time denied outright by Western analysts – it was trivialised as being the mere vestige of a disappearing past. But finally it has had to be tolerated in the face of evidence that it refuses to go away. It is still, however, considered to be provisional or transitory, never recognised for itself. Why not? The existence (or admission) of even one single contemporary social form fundamentally *different* from the grand society would be like the ‘crucial experiment’ in science which ‘proves’ that the rule or hypothesis is not true. ... In this sense acknowledgement of the informal nebula as a distinct and viable social form in and for itself, overturns the exclusive and universalist pretensions of the grand society.”¹⁶⁵

Self-Expression and Renewal: ‘Non-Subjects’

[Uniqueness In Pluralism]

There is a third response that Dion-Buffalo and Mohawk name the “non-subjects” and Latouche refers to as the “informal” modes of socialising. Unlike ‘good subjects’ or ‘bad subjects’, whose responses to colonisation and ‘development’ range from mimicry to mutiny, ‘non-subjects’ continue to act and think in patterns that stem from within their own cultural and spiritual autochthonous centres. To the economic centre, however, ‘non-subjects’ are only acknowledged insofar as they are denigrated as so-called cultural “marginals”. This is based on the misrepresentation that their existence is one of sheer survival on the rough-and-tumble margins of the formal economy. The bias of this characterisation is the belief that ‘non-subjects’ are marginalised only by default for having faltered in meeting certain expectations of the economics-abiding-citizen. The marginals are further misdiagnosed into the less desirable category of ‘not-yet-developed’ where their

¹⁶⁴ “Pluralism in its ultimate sense is not the tolerance of a diversity of systems under a larger umbrella; it does not allow for any superstructure. It is not a supersystem.” Panikkar, R. *Invisible Harmony. op. cit.* p.153. “Pluralism is grounded in the belief that no single group embraces the totality of human experience.” Panikkar, R. “Śunahśepa. A Myth of the Human Condition,” pp.97-184, in: *Myth, Faith and Hermeneutics. op. cit.* p.102.

¹⁶⁵ Latouche, S. *In the Wake of the Affluent Society: An Exploration of Post-Development.* [Introduced and Translated by M. O’Connor and R. Arnoux.] London; New Jersey: Zed Books Ltd. 1993, p.49. [italics in original.]

‘non-subjecthood’ status is pitied as a ‘lack’.¹⁶⁶ The noble gesture of the economic centre is, of course, to offer *more* development in order to close the ever-widening gap between the economic centre and its outlying margins.

The problem with this economic-centred representation of ‘non-subjects’ is that they are cast in either one of only two possible roles: as the not-quite-but-has-potential-‘good subject’ or as the stropy-but-needs-direction-‘bad subject’. The very recognition of ‘non-subjects’ as actors *in their own right* is excluded from the economic stage, for such explicit acknowledgement would be tantamount to admission that the economic System is not supreme in its claim to global control (as Latouche points out, above). And yet ‘non-subjects’ are not abstract actors but real people in a real context (place and time) who mould their lives conjointly within an informal economic sphere where real relationships matter more than money does.¹⁶⁷ What’s more, ‘non-subjects’ refuse to be disregarded by moderns as a ‘minority’ outlaw group, but take pride in their chosen status as ‘marginals’. In paradoxical fashion it is the cultural marginals who in fact wish to marginalise (that is; put limits on) the political economy which they treat warily as a threat and intrusion into their lives. For these reasons and more, Gustavo Esteva claims that it is the marginals who are the “real centres of hope”. He explains:

“The margins are the centres of hope precisely because here we find the pioneers of the post-modern era learning to master their own spaces, their traditional cultural spaces, by marginalizing the modern spaces of economics and the economy, as well as those of the nation state which exists mainly to ‘manage’ this economy.”¹⁶⁸

¹⁶⁶ The more that individual rights and competitive self-interest are pushed to the detriment of community values that emphasise cooperation and mutual tolerance, the more that so-called ‘developed’ countries create their own ‘lacks’. Sachs calls for recognition that the highly diverse and richly creative cultures that are currently stigmatised as ‘underdeveloped’ should, in fact, be upheld as sources of inspiration: “This heritage [of colonialism and development] is like a weight which keeps one treading in the same spot. It prevents people – in Michoacan, Gujarat and elsewhere – from recognizing their own right: to refuse to classify themselves according to the ahead/backward schema; and their freedom: to rejoice in their diversity and wit. Development always suggests looking at the other worlds in terms of what they lack, and obstructs the wealth of indigenous alternatives which could inspire.” Sachs, W. “The Archaeology of the Development Idea,” *op. cit.* p.7. [emphasis added.]

¹⁶⁷ The example of Tepito, a *barrio* of 120,000 in downtown Mexico City, is a ‘poor’ community where *cultural* values take central importance over economic functions, as Gustavo Esteva reveals: “Tepito is a great market. But its social substance, the mortar uniting and articulating the whole, is not an economic one. Tepito is a weave of social relations. It is a way of living, a way of being, of talking, of dancing, of loving and dreaming. The city, on the other hand, its centre supposedly occupied by politics and culture, has been reduced to a marketplace. Its very political activity has been transformed into mere administration of the economy.” Esteva, G. “A New Source of Hope: The Margins,” *INTERculture*. Vol.26, No.2. Issue No.119. 1993, p.38.

¹⁶⁸ *ibid.* p.2.

It is unfortunate that misunderstandings are often perpetuated through mainstream media channels whereby ‘non-subjects’, whose worldview and ways of being *counter-act* Western-style ‘development’, are typically miscast as ‘bad subjects’. The difference is important, because the latter oppose ‘development’ through *counter-reactive* measures only. While protest almost certainly remains a crucial medium for drawing attention to acts of injustice, the nature of the ‘non-subject’s’ protest is notably non-violent and purposively *pro-active*. These convictions ensure that the means do not defy the ends so that the peaceful core of indigenous culture is not undermined. Exemplary figures of non-violent resistance to colonisation, apartheid, and cultural genocide include Mahâtmâ Gandhi, Nelson Mandela and the Dalai Lama. Yet, there are literally thousands of peoples throughout the world today who defiantly defend their gardens, forests and towns from ‘development’ which is imposed on them with little or no consultation. Many of these people take action through peaceful protest to protect themselves and their homes, their traditions and therefore their futures.

A few examples of ‘non-subjects’ in action, drawn from a diverse range of communities throughout the world, serve to illustrate a variety of local responses with respect to global ‘development’ and its consequences for indigenous cultures and environments. While this section focuses on indigenous peoples’ responses to developmental imperialism, it should be acknowledged that ‘non-subjects’ also characterise a great many people from the West (who organise locally and are connected globally) whose lifestyles and community-centred ideals seek alternatives to the modern fixation on unrestrained economic growth.

Forest Protection in INDIA

The ‘Chipko’ movement led by mountain village women in the Indian Himalaya has become an inspirational symbol of solidarity through their simple yet profound gesture of ‘tree hugging’.¹⁶⁹ For at least three decades these village women have supported each other in sustained efforts to protect their environment and livelihoods from deforestation ‘development’.¹⁷⁰ Their concerns were initially triggered by devastating floods which destroyed their village homes and pastures. Contributing causes of these disasters were

¹⁶⁹ “Chipko” is Hindi for “to embrace” or “hug”. For an introduction to “The women of Chipko,” see: Shiva, V. *Staying Alive: Women, Ecology and Development*. London: Zed Books. 1989, pp.67-77.

¹⁷⁰ The actual tradition of women’s leadership in environmental protection is far more ancient, as Vandana Shiva acknowledges: “Three hundred years ago more than 300 members of the Bishnoi community in Rajasthan, led by a woman called Amrita Devi, sacrificed their lives to save their sacred *khejri* trees by clinging to them.” *ibid.* p.67. [italics in original.]

traced to activities in the upper river catchments, where the indigenous forests were being milled and replaced by exotic, faster-growing monoculture plantations. While the villagers' concerns for their trees were ignored at the forestry auction meetings, the women's direct and non-confrontational actions could not be dismissed as easily. They tied sacred threads between trees, sang songs, and clung to individual trees to protect them from the chainsaws.

Whereas some of the males in the villages acquiesced to the economic lure offered by the developers, the women remained adamant in their protection of the trees, the watershed and, ultimately, their homes. In one instance of remarkable courage, a Chipko woman led a protest opposing her husband's forestry contract. Typically, however, outsiders were contracted to fell the forests. Yet, the women's gentle explanations of their interdependency with the forest ecosystem and their solidarity were often enough in themselves to convince the employees that the destruction of the forest is tantamount to the destruction of entire villages' ways of life. Chipko responses have included: direct actions to restrict future milling; raising awareness among villagers about forestry and its effects on the ecosystem and local cultures; consolidation of inter-village support enhanced through communication networks of 'runners'; and longer-term education of 'female forest principles' over those of forestry corporates and their patriarchal structures of profit-making.¹⁷¹ Through simply taking a stand, sharing and speaking out, this informal network of villagers has grown increasingly stronger. Today, Chipko women inspire many grassroots groups throughout the world.

Education in PERU

'Non-subjects' are also reclaiming other colonised spaces; not only physical places but the ways of living and respecting those places from indigenous, earth-centred positions of responsibility. The formation of the PRATEC education programme (in 1987) in the Peruvian Andes, for example, provides an indigenous alternative to the institutionalised schooling programmes that deliver standardised lessons of little direct relevance to local

¹⁷¹ Shiva affirms: "Forests have always been central to Indian civilization. They have been worshipped as Aranyani, the Goddess of the Forest, the primary source of life and fertility, and the forest as a community has been viewed as a model for societal and civilizational evolution. The diversity, harmony and self-sustaining nature of the forest formed the organisational principles guiding Indian civilization..." *ibid.* p.55.

cultures or ecologies.¹⁷² The reassertion of the Andean worldview, kosmologies and agricultural teachings, closely linked to peasant farming communities, places the process and results of education firmly in the ground of real experience.¹⁷³ Students explore the results for themselves, many coming to conclusions that the peasants' seeds (of knowledge) are just as effective in food production results as the modern, technologically-enhanced seeds introduced from outside. Through this education programme, graduates have gained a renewed respect for indigenous knowledge and endogenous development.

The regeneration of the Andean peasants' traditional kosmovision through the context of agricultural education is not, however, being asserted to the absolute exclusion and intolerance of other ways of knowing. It is important to point out that the PRATEC course is not presented in dialectical opposition to Western knowledge (although contrasts and critiques are made), nor is it motivated by fundamentalist, culturally purist or political agendas.¹⁷⁴ Rather, the indigenous teachers seek 'cultural affirmation' through reasserting their own processes of education and learning. As one member of PRATEC explains: "To free ourselves from colonization we have to recuperate our own internal harmony."¹⁷⁵ However, the course also teaches its students to remain open to pluralistic possibilities through a dialogical approach.¹⁷⁶ The 'non-subject', centred in his or her own sense of self (hence; identity, integrity and inner harmony), is then able to fully benefit from, and contribute to, dialogue with others:

¹⁷² PRATEC (Proyecto Andino de Tecnologías Campesinas) is a group of indigenous writers who teach a course aimed at rural developers (mostly agronomists). In addition to presenting the Andean worldview, the course assesses Western knowledge from the native Andean point of view. See: Apffel-Marglin, F. "Development or Decolonization in the Andes?" *INTERculture*. Vol.28, No.1. Issue No.126. 1995, pp.1-17.

¹⁷³ Frédérique Apffel-Marglin explains: "PRATEC emphasizes the situatedness of its Andean point of view, rejecting claims to universality and absolute truth. PRATEC sees the Andean cosmovision as emerging from the very soil and air of the Andes, inseparable from its landscape and its history. ...The very exercise of looking at this [modern Western] hegemonic knowledge system from an Andean point of view robs it of its claims to universality." *ibid.* p.4.

¹⁷⁴ As part of the process of 'decolonisation', the course necessarily includes radical critiques of modern Western assumptions about Nature and human nature (e.g., evolutionary paradigms that bias the unilinear model of 'development').

¹⁷⁵ Eduardo Grillo Fernandez, a core member of PRATEC, shares his impressions: "To free ourselves from colonization we have to recuperate our own internal harmony. Then it will be impossible to colonize us, just like a healthy and strong person, in whom life flows fully, illness cannot penetrate. It is not a question of acting directly against the invader because while we remain perturbed another can always come and invade us." Quote cited in: *ibid.* p.6.

¹⁷⁶ Panikkar, R. "The Dialogical Dialogue," pp.201-221, in: Whaling, F. (ed.) *The World's Religious Traditions: Current Perspectives in Religious Studies*. Edinburgh: T. & T. Clark. 1984.

“In a dialogical relationship one interacts, one listens carefully as well as adopts many things from one’s interlocutor, but ... these things are incorporated into one’s own world rather than one’s world becoming fundamentally transformed through syncretization or hybridization.”¹⁷⁷

Afforestation in ZIMBABWE

Recuperating internal harmony is not enough in itself without means to give effect to the voices of discontent. In Zimbabwe, the liberation movement has so far concentrated on reclamation of the land base, involving violent nationalist actions to uproot present property owners (i.e., guerilla warfare to rid the country of ‘whites’).¹⁷⁸ Resentment and unrest had been brewing for decades, based on feelings that: “Foreign rule and growing land pressure have eroded customary law and traditional ecology.”¹⁷⁹ However, even following Independence in 1981, the local chiefs struggled to regain their traditional authority over ancestral lands. So long as central government continues to impose its laws on the people, the influence of customary lore at the local level remains restricted. In response to locals’ requests that the remedying of environmental degradation can only realistically be achieved through processes that enable self-empowerment, AZTREC (Association of Zimbabwean Traditional Ecologists) was formed in the mid-1980s.¹⁸⁰

AZTREC has focused on addressing three ‘earthkeeping’ responsibilities: afforestation, protection of water resources, and wildlife conservation. Its astounding successes (particularly in tree planting) can be accredited to a number of key factors, including: empowerment of the traditional authorities; the centrality of spirituality and ritual ceremonial healing; and a willingness to blend modern and traditional techniques of environmental protection. By allowing chiefs and spirit mediums their own space to exercise traditional authority, entire communities have been mobilised into lasting

¹⁷⁷ Apffel-Marglin, F. “Development or Decolonization in the Andes?” *op. cit.* p.6.

¹⁷⁸ The dangers of ongoing retaliatory relationships as the reverse racist ‘bad subject’ have already been discussed above. Suffice to say here that the employment of such ‘liberation’ measures can only result in further injustices and acts to reinforce hatred along racial lines. Apartheid benefits only the intolerant and only insofar as they retain their balance of power (inevitably enforced through the right of might). Without cross-cultural dialogue, understanding cannot be improved and the repetition of oppressor-oppressed relationships become seemingly self-perpetuating.

¹⁷⁹ Daneel, M.L. “The African Earthkeepers in Zimbabwe,” *INTERculture*. Issue No.137. 1999, p.23.

¹⁸⁰ The ‘earthkeepers’ might be seen to be an extension of the liberationist movement, but one which requires a different set of skills and motivations for struggle: *healing* the land through afforestation. One of the strengths of AZTREC is its legal status and financial independence as an NGO (non-governmental organisation). Because of this position, AZTREC is enabled to design and implement their own traditionally based environmental programs. Martinus Daneel affirms: “They are able to revive customary ecological laws in accordance with their own insight and, on the strength of the green contribution they

environmental restoration activities. The communities' motivation and determination has been inspired through the prominence given to the mystical factor. This has been further reinforced through ritual ceremonies which are adapted to address the renewal of relationships between humans and Nature and their spiritual and ancestral connections.¹⁸¹ Furthermore, the healing rituals include a far wider set of players than ever before: extending geographically to unite with other tribes, and sometimes including government ministers and officials.

In conclusion: These examples bear witness to grassroots initiatives in response to global development pressures that affect people locally. The stance taken by the tribal peoples of India, Peru, Zimbabwe and elsewhere is not solely reactionary, nor is it by any means wholly submissive. These communities simply continue doing what they have always done: living and celebrating their lives in a relational harmony with their environments. The challenges of these times, however, call for a different set of skills and awareness than in, arguably, any previous epoch. This points to the fact that the ecology and sociology of the environments on which indigenous (and, in reality, *all*) peoples depend are changing at an unprecedented pace and in complex ways not heretofore experienced.

At an essential level, the challenge for 'non-subjects' is one of survival. Yet what point has mere physical existence without the ability to continue to express and celebrate cultural authenticity as a people? The stakes today are high, for there exists the very real threat of being swallowed into a bland oneness or of becoming like an exhibit on display as part of a cacophonous charade of so-called 'cultural diversity'. *Uniqueness In Pluralism* is a necessity of these times for all cultures, not simply the fanciful wishes of a few fringe-dwelling marginals.

are making, to negotiate with government officials on their own terms rather than from a position of total dependence or subservience." *ibid.* p.28.

¹⁸¹ The ritual healing ceremonies have positive spin-offs in many directions, especially in fostering a 'spirit of tolerance' which is sorely needed to counteract the negative 'spirit of blame' that pervaded during the liberation war. Not only do reforestation projects extend over different tribal regions and therefore call for inter-tribal cooperation, but the promotion of interreligious planning and action is also an important accomplishment, as Daneel recognises: "...the chiefs and mediums, because of their traditional religious knowledge and responsibilities, are turning out to be active agents of interfaith dialogue." *ibid.* p.29.

DEVELOPMENT AND THE GLOBAL ENVIRONMENTAL CRISIS

Not only has 'development' lashed out at the "little people" who stand "in the way of progress",¹⁸² but it has also radically altered the natural environments on which so many communities directly depend for their livelihoods. It is more than a simple truism to declare that all peoples alter, to varying degrees, their surrounding environments for their own advantage. Granted, no human being is exempt from a share of the 'blame' nor, for that matter, the co-responsibility required to rectify social and environmental inequalities. However, the collective impact of the era of development; the sustained high cost of modern consumers' expectations and the accumulated pressure of an increasing human population, are unprecedented. The environmental crisis is no longer restricted to isolated locales but has reached truly global proportions. Modern technocracy has the ability (and is displaying it rather effectively) to destroy the very well-spring of natural renewal; i.e., the capacity of ecosystems to regenerate and self-organise in the face of externally-imposed changes. Today, humanity stands at the 'edge of chaos', at a turning point where the now-so-very-real possibility of the abyss is no longer only the dark dread of mere myth.¹⁸³

The facts of the environmental crisis are no longer avoidable: pollution of all major geo-systems (air, water, land); deforestation; acid rain; global warming and climate change; depletion of the ozone layer; widespread desertification and salinisation; chemical waste and nuclear radiation; the list goes on.¹⁸⁴ Mounting pressure from non-government organisations (and others) has prompted political heads of states to attend international meets to address issues surrounding the global environmental crisis (e.g., 1972 Stockholm Conference, the 'Earth Summit' in Rio de Janeiro in 1992).¹⁸⁵ Although cynics feared the

¹⁸² See discussion on Berman's commentary of "Goethe's *Faust*: The Developer" (above).

¹⁸³ On "The Future", the poet Leonard Cohen sings: "Things are going to slide in all directions/ Won't be nothing/ Nothing you can measure anymore/ The blizzard of the world/ has crossed the threshold/ and it has overturned/ the order of the soul/..." Cohen, L. *Stranger Music: Selected Poems and Songs*. London: Jonathan Cape. 1993, p.370.

¹⁸⁴ Suffice to say there have been literally thousands of books, technical reports, conference papers, research theses and various other treatise written about and recording various human-induced effects on the natural environment.

¹⁸⁵ Major international meetings on issues of environment and development include: The United Nations Conference on the Human Environment, held in Stockholm, Sweden, in 1972 (resulting in the 1972 Stockholm Declaration); and the United Nations Conference on Environment and Development (i.e., the 'Earth Summit'), held in Rio de Janeiro, Brazil, 3 - 14 June 1992. The second Earth Summit (referred to as 'Rio+10') met in Johannesburg, South Africa, 26 August - 4 September 2002. On the agenda was a retrospective appraisal on whether the Rio summit proved effective in its many promises. For specific coverage of the Johannesburg summit, see the special issue/reports in the following international journals/magazines: Agyeman, J. and Evans, B. (eds.) "World Summit on Sustainable Development,

only outcome would be a colourful 'talk-fest', many positive actions have in fact resulted. Where international environmental treaties have been ratified and their signatory countries held accountable, mitigation measures and remedial actions have been implemented within nations' environmental legislation.¹⁸⁶ Although the Rio 'Earth Summit' did not meet everyone's expectations, it has, however, raised awareness of contentious undercurrents tugging at the 'environmental debate'.¹⁸⁷ These continue to be of major concern in the 'Earth Summit' hosted in Johannesburg in 2002.¹⁸⁸

The disparate views on the root causes of the environmental crisis have typically been separated into two dialectically opposed positions. Accusations continue to be fired back and forth on a battleground deeply divided along the lines of 'developed' and 'underdeveloped' countries. Non-government organisations, including significant environmental lobby groups and representatives of local communities of the 'underdeveloped' South, allege that the global environmental crisis is the result of large-scale industries and multinational corporations whose capitalist business ethos is based on

Johannesburg," [Special issue.] *Local Environment*. Vol.7, No.3. August 2002; Ainger, K. "Earth summit for sale," *New Internationalist*. Vol.347. July 2002, pp.20-28; Goldsmith, Z. (ed.) "Johannesburg World Summit," [Special report.] *The Ecologist*. Vol.32, No.7. September 2002; "How To Save The Earth," [Special issue.] *Time*. 2 September 2002; Klesius, M. "The State of the Planet," *National Geographic*. Vol.202, No.3. September 2002, pp.102-115; "Sustaining his development: What the Johannesburg summit could achieve," [Special section.] *The Economist*. Vol.364, No.8288. August-September 2002, pp.9, 55-57; Townsend, M. "The State We're In," *Geographical*. Vol.74, No.9. September 2002, pp.16-19.

¹⁸⁶ For example, New Zealand's major environmental legislation, *The Resource Management Act 1991*, with the sole purpose to "...promote the sustainable management of natural and physical resources." s.5(1). The Rio Earth Summit inspired many *Agenda 21* 'Sustainable City' initiatives worldwide. *Agenda 21* was produced as a strategy that sought to integrate social, environmental and economic principles in a practical guide for local governments and communities.

¹⁸⁷ An 'alternative' to the Rio summit was held in Québec, Canada (30 April-3 May 1992). The conference brought together a number of outspoken critics of 'development', and included grassroots activists and practitioners from development and aid organisations. Topics for discussion ranged from philosophical explorations of sustainable development; indigenous and alternative practices (including those stemming from within the West); cultural and environmental considerations in environmental development; and discussions on how to reconcile the requirements and expectations of grassroots groups and development practitioners. Intercultural Institute of Montréal. *Living with the Earth: Cross-Cultural Perspectives on Sustainable Development: Indigenous and Alternative Practices*. [Conference held at Centre d'Arts Orford, Québec, Canada. 30 April-3 May 1992.] Montréal, Canada: Intercultural Institute of Montréal. 1993.

¹⁸⁸ Among the notable absentees from the 2002 Johannesburg 'Earth Summit' was the President of the United States of America. George Bush has also refused to sign the Kyoto Protocol on Climate Change, despite the fact that America is a major emitter of carbon dioxide (e.g., industry and automobiles). Bush's uncompromising stance reflects that of his father who, as president, declared at the Earth Summit in Rio: "The American way of life is not up for negotiation!" The effectiveness of international environmental treaties is seriously jeopardised, especially when one of the major political powers with the highest rate of resource consumption per capita refuses to take responsibility for its environmentally destructive 'way of life'. Not surprisingly, U.S.A. is still an outspoken advocate for increasing Third World aid and

the Western model of industrialisation and acts to sustain the lifestyles of wealthy consumers. These critics of 'development' argue that resource-greedy corporations, having already outstripped the natural resources in the North and 'overdeveloped' their own countries, now turn to the South for cheap labour and easy access to a new supply of resources. Furthermore, these companies enter into financial alliance with the governments of the 'Third World' (e.g., tax-free deals and 'tied aid') which benefit only the highest economic echelon. This corruption acts to further exacerbate political and social unrest, widening social inequalities, accelerating the abuse of natural resources and their consequential devastating impacts on local cultures.

The 'developed' North, however, paints the picture of blame in a different light. They claim that an alarming increase in the total human population is placing excessive strain on 'natural capital'. Whereas the liberal rich nations have curtailed their population growth rate, birth rates continue to soar in the 'Third World' especially where poverty is prevalent. The era of development is justified, therefore, as a flow of goodwill from the North to the South: through delivering "technical assistance" to 'underdeveloped' nations, poverty may be alleviated and, hence, the direct dependency of local peoples on natural resources exploitation. This rationale finds further support from the political heads of a number of 'developing' countries.¹⁸⁹ Those political leaders scorn the concerns of the 'First World' over the fate of the planet as the privileged agenda of a 'patch-protective' rich elite. They allege that Westerners are threatened by the possible consequences of the world's majority (who are 'poor') 'catching-up' to their lifestyles, and that 'environmentalism' serves as a politically-convenient cover. For the 'Third World', their priorities stem from concerns over the fate of their citizens, involving basic needs such as hunger, access to fresh water,

'development': "Mr Bush offered \$5 billion for foreign aid during a recent conference in Monterrey, Mexico..." "A few green shoots," *The Economist*. Vol.364, No.8288. 31 August-6 September 2002, p.55.

¹⁸⁹ As a young environmental journalist, Anil Agarwal attended the 1972 Stockholm Conference, where he was witness to: "...our own Prime Minister, the late Mrs Indira Gandhi, worried that the environment could be used as an excuse to slow down the economic growth of developing nations, pointed out to the Conference, in an oft-quoted statement, 'poverty is the biggest polluter'." Years later, after being profoundly influenced by the Chipko movement, he reflects: "No longer would I ever believe ... that the poor cannot care for their environment. On the contrary, I have since lived with the abiding belief that it is the educated and the rich who are the most environment-illiterate. I also realised that dear Mrs Gandhi, as with many educated Indians like me, knew precious little about her own country and her own people. A concerned environmentalist undoubtedly, but like all rich people worldwide, her responses were still in a conservationist mould." Agarwal, A. "Satyagraha," pp.31-37, in: *The Right to Hope: Global Problems, Global Visions. Creative Responses to our World in Need*. London: Earthscan Publications. 1995, pp.32, 33.

health/medicine, literacy and shelter. The priority for these ‘developing’ countries is to secure *more development*.

‘SUSTAINABLE DEVELOPMENT’: Sustaining Communities *Not* Development

Core to the World Commission’s report on Environment and Development, *Our Common Future* (commonly referred to as the Brundtland Report), is the urgent request that every nation (both ‘developed’ and ‘developing’) and every business adopt “sustainable development” as central to their policies and practices. The report defines ‘sustainable development’ in the following terms: “*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*”¹⁹⁰ The Commission’s investigations reached the general consensus that in order to curtail the currently ‘unsustainable’ path of economic development whereby ‘needs’ are currently being compromised, the environment must be more proficiently managed – on a planetary scale. In reaching this conclusion, however, the report’s authors were careful to counsel that their promotion of environmental management was not an anti-development or ‘zero growth’ stance. To the contrary, they welcomed “...a new era of economic growth...”¹⁹¹, where technology and social organisation are both managed and improved in order to sustain development into the future:

“We came to see that a new development path was required, one that sustained human progress not just in a few places for a few years, but for the entire planet into the distant future. Thus ‘sustainable development’ becomes a goal not just for the ‘developing’ nations, but for industrial ones as well.”¹⁹²

This ‘new era’ calls for more effective management of the environment based on a stricter regulatory legislative framework that embraces more efficient technology, better environmental accountability and more socially equitable business praxis, and greater control by government institutions over natural resources development. Apparently, all this

¹⁹⁰ World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press. 1987, p.43. The Commission included government ministers, scientists, diplomats and law-makers from twenty one countries, headed by Norway’s Prime Minister Mrs. Gro Harlem Brundtland.

¹⁹¹ “Our report, *Our Common Future*, is not a prediction of ever increasing environmental decay, poverty, and hardship in an ever more polluted world among ever decreasing resources. We see instead the possibility for a new era of economic growth, one that must be based on policies that sustain and expand the environmental resource base. And we believe such growth to be absolutely essential to relieve the great poverty that is deepening in much of the developing world.” *ibid.* p.1.

¹⁹² *ibid.* p.4.

amounts to 'sustainable development' that is supposedly not business-as-usual. And yet this approach appears to be promoting *more* business than was usual. Who is to provide the latest 'eco-friendly' technological solution to feeding the world's poor if not the Western entrepreneur? Environmental management has led to a proliferation of plans, policies, rules, procedural standards, performance indicators, impact assessments, forecasting models, and enforcement payments. In this way, the 'environmental solution' has simply become an extension of the business *modus operandi*. Following this lead, what is sustained is not a sense of 'sustainable communities' (and interdependency with Nature) but, instead, an economically-driven desire for 'sustained development'.¹⁹³

'Sustainable development' seems to have been widely adopted as an appeasing answer to questions which, however, appear to have long since been forgotten. Perhaps the turning point forced by the awakening to a global environmental crisis is *not* a call for tighter ecological control and more humanist administration? Panikkar challenges: "Are we going to continue to blindly rush to find solutions before having grasped the nature and gravity of the problems?"¹⁹⁴ Contrary to common thought, even environmental reforms will not ensure a happy state of 'sustainability' in perpetuity, for reforms are only provisional.¹⁹⁵ While such reforms may temporarily soften the impact of development on the environment and cultures, unless there is fundamental questioning (leading to an equally fundamental reorientation in praxis) of the ideology of progress and the 'processive worldview' that drives development, 'sustainable development' may remain another farcical detour that only prolongs the agony.¹⁹⁶ As Panikkar so clearly outlines, the problem is a fundamental attitude toward what is real that has refused to be questioned:

¹⁹³ Indigenous peoples continue to remind those whose perceptions of sustainability are narrowly focused on 'development' that it is community and a way of life based on the land that are more important, as Winona LaDuke of the Anishinabeg band declares: "There is no such thing as sustainable development. Community is the only thing in my experience that is sustainable." LaDuke, W. "Voices from White Earth: Gaa-waabaabiganikaag," in: Hannum, H. (ed.) *People, Land, and Community*. *op. cit.* p.36. [emphasis added.]

¹⁹⁴ Panikkar, R. "The Discovery of the Metapolitical," *INTERculture*. *op. cit.* p.39.

¹⁹⁵ Panikkar warns: "Up until now, all major reform has proven itself to be inefficient and has done nothing but prolong the agony of a System which in the long run is non-viable. We are at a dead end." *ibid.* p.29.

¹⁹⁶ Latouche voices his impatience with so-called 'alternative development' that reflects only a shallow tinkering with the status quo: "I think that we must call the development bluff and realize once and for all that *there is no development but development*. ... To me, the debate between alternative development and the alternative to development is not just a matter of words." Latouche, S. *The Westernization of the World*. *op. cit.* p.xiv. [italics in original.]

“It is the mentality of progress, one which leads to not solving problems, i.e. not to dissolve them, but to postpone them. Instead of provoking their dissolution, one seeks an antidote, a neutraliser, a stronger adversary in an advancement, in progress, and never in a backtracking, in a salutary reflection, asking oneself whether one should not stop, change direction, repent.”¹⁹⁷

THE WAY OUT: Nature and Culture in a Post-Development Climate

‘Development’ has left in its wake very visible marks of its technological advances: whole landscapes have undergone radical changes under the acclaimed auspices of ‘progress’. Mirrored throughout the lands are images of Faust ‘The Developer’ who, in Goethe’s final scene, gazes with self-adulation over his homogeneous Creation. With the last remnants of the Old World removed piece-by-piece and the peaceful haven of the old forests where the spirits dwelled and children played now reduced to smouldering beds of ash, one is struck by the finality of this scene. When all is ‘developed’, there is no-thing left to ‘develop’. Thus it is the developer who strikes the final blow of his suicide (and our murder), for the developer can no longer ‘be’ when there is nothing left to ‘do’. Ultimately, development renders itself obsolete.¹⁹⁸ The situation facing the world today may best be described as the transition phase to a new era that is ‘post-development’.

(Mis)fortune tellers may speak of a day when ‘development’ is brought to a close in terms of an Armageddon-like doomsday. Yet, others look to this time as one of promise and the opening of new opportunities for ‘growth’ of a very different nature. The error of ‘development’ is not *growth* per se. ‘Post-development’ does not allude to the future as regression or a stand-still. (These misconceived fears stem from a dialectical mentality.) All living things grow, but grow organically according to their own inner rhythms and, indeed, will show how, if given the chance to let ‘be’. This includes many diverse communities who continue to ‘develop’, but in endogenous ways that draw inspiration from their autochthonous roots.¹⁹⁹ Worldwide, ‘non-subjects’ already celebrate the passing of the ‘era

¹⁹⁷ Panikkar, R. “The Discovery of the Metapolitical,” *op. cit.* p.33.

¹⁹⁸ Berman reflects on the final episode of Goethe’s *Faust* in terms of the ‘tragedy of modernisation’: “Ironically, once this developer has destroyed the pre-modern world, he has destroyed his whole reason for being in the world. ... Once the developer has cleared all the obstacles away, he himself is in the way, and he must go. ... Goethe shows us how the category of obsolete persons, so central to modernity, swallows up the man who gave it life and power.” Berman, M. *All That Is Solid Melts Into Air. op. cit.* p.70.

¹⁹⁹ See the *INTERculture* issue recording the inter-cultural concerns of the diverse participants attending the Colloquium addressing ‘tradition-based development’. Vachon, R. (ed.) “Endogenous Development?” *INTERculture*. Vol.17, No.3. Issue No.84. July-September 1984. pp.1-63.

of development'. Their very lives stand as testimony to the passing era/error of economics. One speaks here of conscious and courageous steps taken to reel the economic sphere (which threatens to conquer all relationships) into line with bio-physical and socio-cultural limits to growth.

Perhaps Western-based modern society is no longer privileged with the choice of a smooth transition to a 'post-development' future.²⁰⁰ The environmental crisis is resulting in disorder of a magnitude that some suggest is Nature's response to an abhorrent human greed: Mother Earth 'biting back'. There is now enough irrefutable (that is, scientifically verified) evidence that entire planetary life support systems are at risk and that critical thresholds are in danger of being irreversibly crossed. One response to the environmental crisis has resulted in the fixation on measuring outer 'limits to growth', leading to the enforcement of strict internal controls on resource use to within so-called 'sustainable' limits of consumption.²⁰¹ Precautions should be heeded, however, especially by post-modern environmentalists who may intend to deconstruct aspects of modernity yet carry out their critiques from positions that remain within the management-oriented framework of control.²⁰² 'Post-development' calls for limits but not obsessive restrictions; i.e., another intolerant regime, but this time regulated to environmentalist extremes where all is managed, measured, monitored. In this respect, Michael Zimmerman challenges environmentalism to remain 'radically' open:

²⁰⁰ Accepting 'post-development' means acknowledging the limits of illusions created by the Western cultural ideology of 'progress' from which the dominant 'development' praxis has thus far been sustained (to unsustainable levels). This leads to the similar realisation that it is this narrowly-defined economic promotion of growth and its universalistic appetite that is unsustainable.

²⁰¹ The Club of Rome argue that one of the reasons 'Why Technology and Markets Alone Can't Avoid Overshoot,' (pp.179-185) is that: "...the market and technology are merely tools that serve the goals, the ethics, and the time perspectives of the society as a whole. If the goals are growth-oriented, the ethics are unjust, and the time horizons are short, technology and markets can hasten a collapse instead of preventing it." p.180. Instead, they promote: "...controlled reduction of throughput [in the economy] by deliberate social choice." p.189. Meadows, D.H.; Meadows, D.L. and Randers, J. *Beyond the Limits: Global Collapse or a Sustainable Future*. London: Earthscan. 1992, see especially Chapter Seven; "Transitions to a Sustainable Society," pp.190-217.

²⁰² While acknowledging the importance of post-modernism in developing a critical theory of cultural dominance which attempts to demystify and deconstruct those hierarchies of domination, Dion-Buffalo and Mohawk urge that: "To encourage diversity of discourse, postmodern cultural studies must hear the ideas of communities of people distinct from themselves and therefore must promote the acceptance of divergent 'voices.'" Dion-Buffalo, Y. and Mohawk, J.C. "Thoughts from an Autochthonous Center," *op. cit.* p.35. What the authors encourage is *cultural pluralism* that "acknowledges many different versions of reality that are legitimate across a wide range of contexts." p.34. This should not be subverted to *cultural relativism*.

“The tragedy, however, is not so much that an arrogant species might be committing suicide by destroying its environment, but that if beings become revealed in ever more limited ways, eventually they will scarcely ‘be’ at all. Even if we somehow manage to avoid total environmental collapse, if we become frozen into a one-dimensional apprehension of beings, we will cease being human – for what is essential to our humanity is openness for novel and creative ways of apprehending what is.”²⁰³

What this amounts to is the necessary recognition that the ‘way out’ of the present morass is not simply through introduction of new, albeit ‘eco-responsible’ alternative technologies. The environmental crisis is not a temporary glitch in the ‘development’ agenda that the best technological expertise can ‘manage’ their way out of (on behalf of all humanity).²⁰⁴ There is growing realisation that the same expert knowledge systems which warn of this condition are also the sources of knowledge which led to it and, indeed, are failing to reverse it. Today’s problems cannot be solved using the same instruments or way of thinking that created them.²⁰⁵ Furthermore, the diagnosis of the environment crisis in terms that only acknowledge ‘ecological imbalance’ (i.e., as a matter of mismanaged environmental ‘matter’) avoids the questioning of deeper and darker issues inherent in the crisis facing all humanity today – that of a ‘cultural crisis’ resulting from a ‘culture in crisis’. Joe Holland is more direct in declaring that the cultural crisis of modern progress is, at root, *spiritual* (or, perhaps more telling of these modern, secular times: ‘anti-spiritual’).²⁰⁶

²⁰³ Zimmerman, M.E. “Toward a Heideggerean ‘Ethos’ for Radical Environmentalism,” *Environmental Ethics*. Vol.5, No.2. Summer 1985, p.105.

²⁰⁴ The response in *Time* magazine to the environmental crisis is typical of this attitude: “The fact is, it’s development – well-planned, well-executed sustainable development – that may be what saves our bacon before it’s too late.” Kluger, J. and Dorfman, A. “The Challenges We Face,” *Time*. 2 September 2002, p.22.

²⁰⁵ Shiva is adamant on this point: “...the crises that the maldevelopment model has given rise to cannot be solved within the paradigm of the crisis mind. Their solution lies in the categories of thought, perception and action that are life-giving and life-maintaining.” Shiva, V. *Staying Alive*. *op. cit.* p.46. This echoes the sentiment of Albert Einstein: “*Probleme kann man niemals mit der gleichen Denkweise lösen durch die sie entstanden sind.*” – “Problems can never be solved with the same manner of thinking as was used to create them.”

²⁰⁶ Joe Holland offers an American Catholic perspective on the crisis of modern ideologies and the search for post modern social and spiritual holism: “But the economic and political crises of the Third and Second worlds will not be overcome without facing the First World’s cultural crisis. For the roots of the modern culture are the original and deepest spiritual (or anti-spiritual) source of those destructive energies now being unleashed across the ecological, social, and religious fabric of global civilization.” Holland, J. *The Spiritual Crisis of Modern Culture*. Washington, D.C.: Center of Concern. 1984, p.3.

THE WAY IN: Rekindling Notions of ‘Self’ and ‘Other’

The environmental crisis might otherwise be viewed as the major impediment to ‘progress’; however, continuous progress is a myth. Unfettered development is rapidly approaching the ecological limits of economic expansion, and as it does so, the search for a ‘way out’ of the crisis is becoming more and more urgent. The response to the crisis is typically met with demands for direct and tangible remedial action – development aid and eco-efficient technology to ‘change the world’ and ‘save humanity’ (from disease, poverty, hunger, etc.). All this is motivated by a compulsive sense of having *to do* something. But it is precisely this active mode – the restless drive to progress, develop, advance to a more ‘desirable’ state – that has caused, and continues to accelerate, the environmental crisis.

It seems, therefore, that while a ‘way out’ may be sought in actions to restore and protect ecological systems, this is insufficient if we wish to come to terms with the crisis. What is at least as important is the challenge of facing ourselves and rediscovering a ‘way in’, because the ‘environmental crisis’ is not simply a crisis of ‘the environment’ as some sort of ecological state separate to human reality. Rather, the crisis is a manifestation of human relationships with Nature. For many moderns living in a metropolis, deeply estranged from undeveloped ‘natural’ surrounds, the connection between healing their psyches and healing the planet may appear so remote as to be irrelevant. Yet, the understanding that human health and well-being depend on the restoration of the health of the planet is not simply a conclusion: it must be *felt* if it is to lead to a real and lasting impact.

Seen from another perspective, the obsession with *doing*, so typical of the over-active Western ego, appears as yet another way of not facing ourselves, and avoiding the real challenge of finding a ‘way in’ – of entering a more truthful relationship with the world. The Earth Spirit advised Faust: “Get to know thyself. Live in peace with the world.” Perhaps, therefore, the real way out is really another way in – back to our true selves, our full humanness. For when we encounter the outer limits of the crisis, our ‘powerlessness’ forces us to recognise our predicament and accept our collective responsibility in creating it.²⁰⁷ Such a recognition is a mix of psychology – a discovery of the ‘self’ – and ecology –

²⁰⁷ “...the experiencing of our own powerlessness can lead us to encounter the kind of deep and redeeming suffering that provides entry to the world of compassion and discovery of our true limits and possibilities. It can also be the first step in the direction of starting a *truthful* relationship with the world, as it is.” Rahnama, M. “Afterword. Towards Post-Development: Searching for Signposts, A New Language and

the interdependency of the self with other selves, other beings. It is a way to be fully alive to those interconnections: to revere the place in which our being dwells. To be fully thankful for the world as it is, the world to which we belong:

“So don’t forget to say ‘thank you’, simply ‘thank you’. No great religion, no great complexity. Just humbly, honorably ‘thank you’ to all that is life. Our Creator made the most perfect world. And so I ask now that in the most powerful, humble way, we fill this room up here. Imagine it in our spiritual minds, our symbolic minds. Let us pile up our ‘thank-yous’ in a hundred layers. . . . Our Creator, who is our maker – your children today simply thank you. Our minds are one.”²⁰⁸

This is the wisdom to adopt an attitude that is humble, respectful, and fully appreciative of that we have been blessed with – it is the wisdom of humility.²⁰⁹

Like Narcissus, the Greek mythological figure of Ovid’s *Metamorphoses*, who fell in love with his own reflection in the waters of a spring, moderns appear unable to see beyond the thin veneer of a seemingly attractive technocratic existence. One’s reflection is mirrored, yet the depth of self-reflection is missing. Narcissus’ rejection of the love of Echo, the nymph²¹⁰, in favour of his infatuation with his own beautiful, youthful appearance led to his demise; he died grasping for the one thing he could never hold onto nor come to understand – the ever-evasive image of himself. And so modernity, trapped within the blinkered bounds of its own image, may also create the conditions for its own entrapment and downfall. Perhaps what may allow moderns to realise the folly of their own presumed superiority is to enter into a dialogue with the ‘other’, in which the modern Narcissus hears not the echo of his own words repeated in Echo’s voice but the true depth of meaning in her very being. The legend reads:

New Paradigms,” pp.377-403, in: Rahnama, M. and Bawtree, V. (eds.) *The Post-Development Reader*. *op. cit.* p.393. [italics in original.]

²⁰⁸ Porter, T. / Sakokwenionkwas. “Mohawk Welcoming Ceremony,” pp.17-26, in: Intercultural Institute of Montréal. *Living with the Earth: Cross-Cultural Perspectives on Sustainable Development: Indigenous and Alternative Practices*. *op. cit.* p.26. See also: Roszak, T.; Gomes, M.E. and Kanner, A.D. (eds.) *Ecopsychology: Restoring the Earth, Healing the Mind*. [Forewords by L.R. Brown and J. Hillman.] San Francisco: Sierra Club Books. 1995.

²⁰⁹ “The only wisdom we can hope to acquire/ Is the wisdom of humility: humility is endless.” Eliot, T.S. “East Coker,” *Collected Poems 1909-1962*. London: Faber and Faber. 1963, p.199.

²¹⁰ In Ovid’s *Metamorphoses*, Echo offended the goddess Hera by keeping her talking, thus preventing her from spying on an amour of her husband, Zeus. In punishment, Echo was deprived of speech, except for the power to repeat the last words of another. A hopeless love for Narcissus made her fade away to a voice only.

“The boy lay down, charmed by the quiet pool,
And, while he slaked his thirst, another thirst
Grew; as he drank he saw before his eyes
A form, a face, and loved with leaping heart
A hope unreal and thought the shape was real.
Spellbound he saw himself, and motionless
Lay like a marble statue staring down.
... How often in vain he kissed the cheating pool
And in the water sank his arms to clasp
The neck he saw, but could not clasp himself!
Not knowing what he sees, he adores the sight;
That false face fools and fuels his delight.
You simple boy, why strive in vain to catch
A fleeting image? What you see is nowhere;
And what you love – but turn away – you lose!
You see a phantom of a mirrored shape;
Nothing itself; with you it came and stays;
With you it too will go, if you can go!”²¹¹

²¹¹ Ovid. *Metamorphoses*. [Translated by A.D. Melville, with an introduction and notes by E.J. Kenny.]
Oxford: Oxford University Press. 1986, pp.63-64.

CHAPTER SIX – THE CASE OF THE WHANGANUI RIVER, TONGARIRO POWER DEVELOPMENT¹

Chapters Six and Seven together form the case study for the thesis – the Whanganui River in New Zealand. Chapter Six sets the scene by outlining the main ‘developments’ on the river that detrimentally affect the indigenous Maori people of the Whanganui River and impact upon riverine ecology. Chapter Seven then interprets the case study by relating and integrating the material presented in Chapter Six to the wider philosophical and theoretical themes discussed throughout the preceding chapters.

PERSONAL INTRODUCTION: Whanganui, 1990-1991

I was fifteen when I moved with my family to live in Wanganui (a provincial town of population approximately thirty-five thousand in the lower North Island of New Zealand). The day that my parents made the payment on the house was the same day that the Whanganui River flooded: 9 March 1990. I remember that day clearly, for our new back lawn sloped down to citrus and vegetable gardens and a bamboo, *harakeke* (flax) and weeping willow water-border with the river. We watched with amazement as the river level rose rapidly, creeping up the back lawn by the minute. The fury of the eddies spiralled with a ferocity that warned against stepping too close to the riverbank. Further downriver where the channel widened, Wanganui city residents were desperately sandbagging the burst flood control banks. Some were forced to abandon their houses, as thick viscous mud flowed through living rooms and out the back door. Never having lived right next to a river before, I was awe-struck. And yet I was also perturbed. I recall watching as a tree, perfectly upright and still connected to its rooted chunk of land, sped past at speed. Among the debris included fence posts, a few unfortunate cattle beast, and many, many large logs.

6 February 1990 was the commemoration of a hundred and fifty years since the signing of the Treaty of Waitangi. The Treaty was signed in 1840 by about five hundred Maori *rangatira* (chiefs, leaders) and a representative of the British Crown. Over the years since the signing, misunderstanding arising from different interpretations of the Treaty of Waitangi and its assumed (or neglected) political status has spurred much contention between Maori

¹ See the Glossary for translation of Maori words into English. Where a Maori word is first mentioned in the text, a translation will be suggested in parentheses. Note, however, that the English translation of important concepts in Maoridom often reduces the full meaning of those concepts. The depth of Maori words may only be fully appreciated in their own linguistic context (*te reo*) and through an understanding

and the Crown. For Maori, this misunderstanding remains an ongoing source of frustration and grievance. In 1990, however, even Queen Elizabeth II had made it to Waitangi to celebrate with the *tangata whenua* ('people of the land'), the politicians and other officials, and the less-than-celebratory protestors.² The festivities of that 'Waitangi Day' were also celebrated in style in Wanganui, with the community's focus centred on the river and the awesome presence of a large *waka* (canoe) with strong paddlers and *kaumatua* (elders) nestled within. The stroke of the paddles kept in time with the rising and falling of chants, making the *waka's* presence known before seen.

Later that year the local newspaper was filled with reports on the Wanganui River Minimum Flows Appeals court battle.³ At the centre of the dispute was the taking of water from the headwaters of the Whanganui to feed the Tongariro Power Development scheme. I quietly wondered what all the fuss was about: There certainly was enough of the brown liquid flowing past my house... The following year I undertook a geography assignment, choosing to centre my study on the Whanganui River. Through that introduction I became aware of the upriver land uses; mostly farming, forestry and small-scale industry, and the resource management concerns arising from their 'unsustainable' practices. Within the city, I questioned the design of buildings that back-ended the river – scrap metal and timber yards, the windowless concrete wall of a service station, and the tarmac of a shopping mall car park. Why was it that the Wanganui city residents had 'turned their backs' on the river?

At school in 1991 my friend Kate Gray returned from a summer canoeing trip on the Whanganui River. I remember a photograph she showed me; of her submerged in a pool under a small waterfall. For me, from then on, the upper reaches of the river swam with mystery and adventure. Later that year Kate, Nathan Redit and Allan Brewer were killed in a car crash. Grief gripped the entire community. Over the days leading to Kate's *tangi* (funeral), friends and families were invited to Kai Iwi *marae* (tribal/community meeting place) to share our suffering and the happy memories. I have never forgotten the warmth and generosity of spirit that enveloped me, embraced by Maori people to whom unconditional caring flows naturally. Falling asleep to the sounds of *waiata* (song) and guitar within a carved house that embodied tradition, the passing and celebration of life. Kate (a

of Maori culture and traditions. Further, the nuance of certain words take on slightly different emphasis according to different tribal interpretations.

² Queen Elizabeth II is the great-great-grand-daughter of Queen Victoria, in whose name the Treaty of Waitangi relationship with Maori was first established.

Pakeha/New Zealand European) was laid to rest on a hill top *urupa* (burial place) in view of all five mountains: Taranaki to the west; and Ruapehu, Ngauruhoe and Tongariro in the central plateau, with Pihanga to their north. No shadow has been cast over her.

MAORI AND WHANGANUI AWA

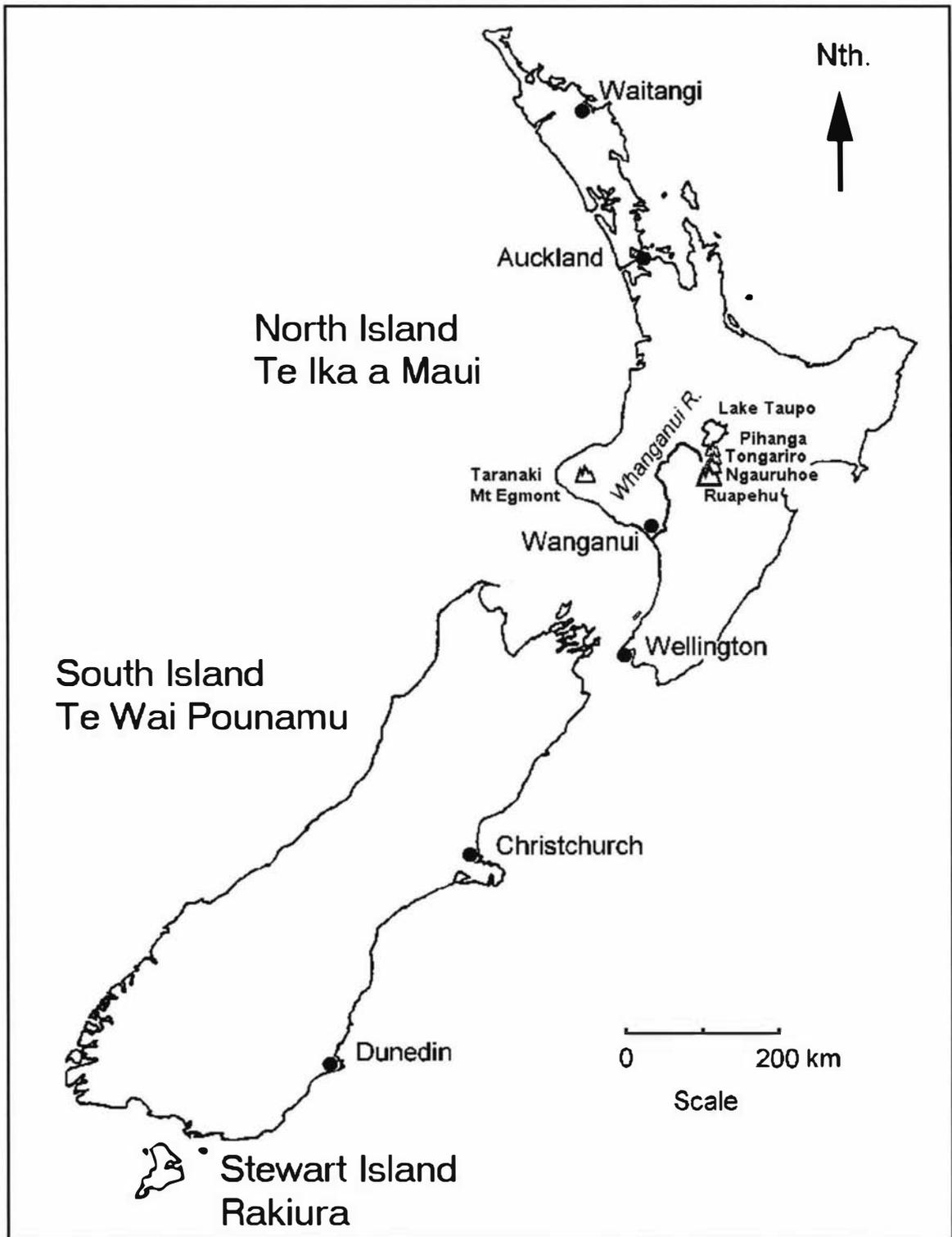
Centuries before Maori made their great migrations from their ancestral homelands in Hawaiki, the mighty mountains of Ruapehu, Ngauruhoe, Tongariro and Taranaki stood together in relatively harmonious coexistence. Close by was Pihanga, the maiden mountain, who had always been looked upon with affection, for such was her beauty. Tongariro had long since proven his might over the others and so taken Pihanga as his bride. Yet, Taranaki's affection for Pihanga never waned. One day he could no longer contain his admiration and thus attempted to seduce the maiden. Tongariro was enraged and launched a bloody battle with Taranaki. Wounded, angry and frustrated, Taranaki took off in the direction of the setting sun. In his wake he left a deep wound in *Papatuanuku* ('Mother Earth'). Taranaki did not rest until he reached the sea, and from there proceeded along the coast to the westernmost promontory where he remains today; alone and often cloaked in low cloud – a sign of his mourning for the loss of his loved one.⁴ From the flanks of Tongariro sprang healing waters that flowed down the channel carved by Taranaki. Today this path is known as the Whanganui River.⁵ See Figure 1: Map of New Zealand (over page).

³ For example: "Decision on river flows welcomed," *Wanganui Chronicle*. 31 October 1990, p.1.

⁴ Taranaki is also known as 'Mount Egmont', named by the English explorer and adventurer Captain James Cook on the 10th of January 1770, in honour of the Earl of Egmont (first Lord of Admiralty).

⁵ Note that this abridged account varies slightly according to different tribal recitations. It is not the only explanation for the existence of the Whanganui River, although it is the more well known among New Zealand public. Other versions acknowledge the river as existing prior to the battle of the mountains – Whanganui being the water course that enabled Taranaki to make his departure and "cool and cleanse his feet as he travelled to the ocean." The story recounted in the introduction to David Young's *Woven By Water* refers to the origin of the Whanganui River as one of the two tears that *Ranginui* ('Sky Father') laid at the feet of Ruapehu, who suffered in his loneliness. One of these tears became the Whanganui River. Hence, the headwaters of the Whanganui River originate with Ruapehu and pre-date Tongariro, who became guardian of the two tear drops. Young, D. *Woven By Water: Histories from the Whanganui River*. Wellington: Huia Publishers. 1998, p.xi. See also: Waitangi Tribunal. *The Whanganui River Report, Wai 167*. Wellington: GP Publications. 1999, pp.46, 57, 76.

Figure 1: Map of New Zealand



It was Kupe, the great explorer from Hawaiki, who first ‘discovered’ ‘Aotearoa’ New Zealand. His travels took him to the mouth of the Whanga-nui (great harbour) where he decided to land and explore.⁶ He paddled a short way up the river to find out whether people were already living there. The historian Thomas William Downes recounts: “Kupe heard some voices there – a weka (woodhen), a kokako (New Zealand crow), and a tiwaiwaka (fantail) – but as soon as he found the voices proceeded only from birds and not men, he returned to the mouth of the river, and then went on to Patea...”⁷ When Kupe returned to Hawaiki, his reports of the new land enticed others to make the same perilous voyage. Some generations later, the general migrations from Hawaiki set out for the shores of Aotearoa/New Zealand.⁸ One of the founding ancestors of the Whanganui River people was Haunui-a-Paparangi, who came out on the Aotea *waka* (about the year 1350). Yet, as T.W. Downes suggests, it is probable that the ‘original inhabitants’ (people of a much earlier migration) also helped to form the basis of the present tribes.⁹

In situations where it is appropriate to present an identity as a collective, the tribes of the Whanganui River unite as a ‘people’ or *iwi*, known by their ancestral name of Te Atihaunui-A-Paparangi.¹⁰ However, members of the river *hapū* (‘tribe’ or sub-tribal groups)¹¹ also

⁶ The travels of Kupe are remembered in Whanganui tribal histories because of Kupe’s interaction with the people already living in the area and because of his travels inland via the Whanganui River.

⁷ Downes, T.W. *Old Whanganui*. Hawera: W.A. Parkinson & Co. 1915, p.2.

⁸ Refer to Ranginui Walker’s chapter; “Nga Korero o Nehera. Canoe Traditions,” pp.44-62, Walker, R. *Ka Whawhai Tonu Matou: Struggle Without End*. Auckland: Penguin Books. 1990.

⁹ Downes writes: “One of the principal Whanga-nui tribes is called Nga-pae-rangi, and it is believed that this man, from whom the people take their name, was one of these people of the land or Tangata-whenua. Pae-rangi flourished about the time of the migration to New Zealand, and many families trace their descent from him.” Furthermore, “Though all the Whanga-nui people say that Kupe, on arrival here, found only certain birds, but no people; yet when questioned closely, the old men admit the existence of the tangata-whenua in the valley of the Whanga-nui. These were the descendants of Pae-rangi-o-te-Maunga-roa, whose ancestor came from Hawaiki five generations before the arrival of Turi in the Aotea canoe. He was brought here by his atua [god]; he had no canoe. There have been three men of the name of Pae-rangi, one of whom came in the Aotea.” Downes, T.W. *Old Whanganui. op. cit.* pp.2-3. [underline added.]

¹⁰ Also known as Atihaunui or Ngati Hau. The New Zealand public and media more often refer to the *iwi* in general terms as ‘Whanganui River Maori’ (as in the title used for the Whanganui River Maori Trust Board).

¹¹ In the nineteenth century there were at least fifty two Whanganui *hapū* whose relationships were often marred by rivalry. Yet, various Whanganui *hapū* would lay aside their differences and come together when confronted by an invading enemy from another region. In contemporary times, the representation as an *iwi* serves functional and political aims, such as with the negotiation of the Treaty of Waitangi claim (see discussion below). It is important to emphasise that by no means is *iwi*, as a collective ‘social unit’, to be mistaken as a homogenous or fixed entity, for Maori tribal identity is characterised by relationships which are, by nature, dynamic and culturally complex. The Waitangi Tribunal report acknowledges the dual social hierarchies: “Thus, many who spoke to us described how the people traditionally saw themselves, as one claimant researcher put it, ‘both as separate groups and as a collective whole.’” The various ‘levels’ of identity of a person (as an individual, family member, and as part of a collective whole) are not at all contradictory, but more akin to a ‘radial order’ or nonexclusive ‘holarchy’ (See

identify themselves with respect to three 'regional groupings'. These derive from the ancestral lines of the children of Tamakehu, a leading *rangatira* (chief), and his wife, Ruaka. Descendants of the three siblings; Hinengakau, Tamaupoko, and Tupoho, assert their spheres of influence roughly following geographic reference to the river's upper, middle and lower reaches (respectively).¹² Yet these *rohe* (tribal territories) were not defined by any means as exclusive or distinct 'boundaries'. Rather, they took form as complementary relationships of autonomy and cohesion.¹³ Such 'unity in diversity' is symbolised by "...the plaited rope of Hinengakau, composed of the three strands of the three ancestors of the river, living together in peace and harmony."¹⁴ This is reinforced through the tribal saying that the people are 'a spliced rope, entire from source to mouth'.¹⁵ This saying emphasises the interconnectedness of the people and their *Awa* (River), such that "...the river's flow was a reminder that the people, like the river, were still part of a whole."¹⁶

The Whanganui River is the longest continually navigable river in New Zealand. In former times it was of key strategic importance as the major 'highway' linking the western coast of the North Island to the interior. Around a hundred and forty *pa* (settlements) were located along the entirety of the river; many of these were large and permanent *kainga* (villages). Due to the precipitous nature of the surrounding terrain, *hapū* were relatively confined to the narrow margin along the river (especially in the middle reaches). A number of *pa* took advantage of cliff-top location, with their only access to the river being retrievable ladders made of vines. Yet this geographical isolation added to the tribes' combined strength and solidarity. For nearly a millennium, the *hapū* of the river have asserted their *rangatiratanga*

Chapter Three above). The Waitangi Tribunal report affirms: "Accordingly, we see the social and political structure as one where, in a very real sense, Maori interests existed at the three levels of the individual, the *hapū*, and the people." Waitangi Tribunal. *The Whanganui River Report. op. cit.* pp.30, 31.

¹² The Waitangi Tribunal reports adds: "While the river people may be seen in the three geographic divisions of upper, middle, and lower reaches, the divisions should not be overly emphasised, for there has been considerable movement of people between the three, and Maori claim interests or connections in all of them." *ibid.* p.2, fn.1. There is, in addition, another group (Tamahaki) who claim to be unconnected with those ancestors.

¹³ Traditional tribal 'boundaries' are shaped by *relationships*, not fixed delineation. Where the territories of other tribes overlapped with Atihaunui interests, inter-tribal marriages were sometimes arranged to strengthen ties between the tribes. The significance of relationships and the creation of connections between people remains central to Maori political and social interactions.

¹⁴ Evidence of Hikaia Amohia before the Planning Tribunal. 1988, para.12, p.3.

¹⁵ T.W. Downes explains: "Even if this people turn upon themselves – the seaward tribes against the inland – should a stranger attack Whanga-nui, they gather together as one people. They cannot be overcome by other tribes, but the strange tribes will suffer at the hands of Whanga-nui. Hence the saying, 'A spliced rope, if broken, is made whole again.'" Downes, T.W. *Old Whanganui. op. cit.* p.41.

¹⁶ Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.32.

(chieftainship) with respect to the Whanganui River; their *Tupuna Awa*.¹⁷ Formerly, their very physical welfare depended on the continued success and sustainability of food harvests and on fortitude against enemy war parties. In these ends, Atihaunui had proven excellence.

Today, numerous *marae* (community meeting places) still line the river's shores: most are now accessible by road, with the exception of Tieke Marae and other *marae* sites in the middle and upper reaches which are entirely dependent on river transport.¹⁸ Although the majority of tribal members live away from their ancestral 'homes' and even reside outside the *rohe* (tribal territory), many return on a regular basis to participate in important *hui* (gatherings, discussions on *marae*) and family celebrations. The Whanganui River remains of utmost importance to Whanganui River Maori; even those who no longer have daily contact with the river speak of their 'river consciousness' and feelings of deep connection. Even though few continue to depend on the river as their sole means of physical and economic support, the river's importance as a spiritual nurturer and healer remains paramount. Furthermore, the very identity of Te Atihaunui-A-Paparangi as a people is tightly woven with the river's flowing wisdom. A *kaumatua* (elder) explains:

“The Whanganui River is of utmost importance to Maori people of the Whanganui Iwi. It unites our people by its Mana (prestige; authority), as the centre of our tribal rohe ('territory'). With this is pride, prestige and dignity of a people. The Whanganui River holds the memory of our people's history from the time of our first settlement.”¹⁹

Even before the first European settler attempted to penetrate upriver, the Whanganui River *hapū* proudly asserted their independence and guarded their *matauranga* (traditional knowledge and wisdom). Today this remains a constant dilemma: to retain traditional 'core values' and tribal identity while engaging with, and in, the modern 'outside world' with its dominant secular attitudes and economic imperatives.

¹⁷ “There is ... a double metaphor in the 'tupuna awa' as the river that is an ancestor. While it gives vent to creation beliefs, it stresses that, just as an ancestor brings people together, so also does the river.” *ibid.* p.31. [*Tupuna*: Ancestor; *Awa*: River.]

¹⁸ See Morvin Simon's introduction to *marae* (community meeting places) throughout the Whanganui region. Simon, M.T. *Taku Whare E. My Home My Heart: He Mauri Tu, The Spirit Dwells Still*. Wanganui: Wanganui Regional Community College. 1986.

¹⁹ Evidence of Taitoko Rangiwahakateka Tawhiri before the Planning Tribunal. 1988, para.2.3.

THE TREATY OF WAITANGI 1840

In February 1840, over three hundred Maori chiefs and tribal members, select dignitaries of the British Crown, officers of HMS *Herald*, missionaries, and numerous settlers, gathered at Waitangi in the Bay of Islands, Northland (see Figure 1). They had been called together by William Hobson, Consul and Lieutenant-Governor of New Zealand, to take part in the signing of a treaty between the British Crown and the indigenous Maori tribes of New Zealand (see Appendix A).²⁰ Although contact between Europeans and Maori had been established for at least seventy years prior to the signing of *Te Tiriti o Waitangi* (the Treaty of Waitangi) on 6 February 1840, there was no signed document legally validating British claims to first colonial rights of occupation.²¹

Five years earlier (in 1835), a Declaration of Independence had been signed by thirty-four Maori chiefs²², under the persuasion of the Resident James Busby. The Declaration proposed a Maori independent state of “United Tribes of New Zealand” with powers to frame laws and dispense justice (see Appendix B). Thus: “All sovereign power and authority within the territories of the United Tribes of New Zealand is hereby declared to reside entirely and exclusively in the hereditary chiefs and heads of tribes in their collective capacity...”²³ The Declaration also sought to secure the continued support of the King of England as “parent” and “Protector” against attempts upon Maori independence (French intervention was considered a major threat by Maori at the time). The Declaration of Independence 1835 was acknowledged by King William IV and duly recognised in Britain, as well as internationally. However, this recognition of Maori sovereign status posed a legal problem for British colonial intervention. Thus, the Treaty of Waitangi 1840 was penned to counter the Declaration and the possibility of a Maori-led state.²⁴

²⁰ Following the 6 February 1840 ceremony, Hobson and others took the Treaty around New Zealand to convince other Maori chiefs to sign. In total, five hundred and thirty nine Maori chiefs signed the Treaty of Waitangi.

²¹ The Dutch explorer Abel Tasman and his crew were the first Europeans to sight New Zealand (in 1642). However, it wasn't until 1769, with Captain James Cook's explorations in the south pacific, that a European set foot on the islands of New Zealand. Cook's 'discovery' did not in itself officially validate territorial claims of the British. Other colonial empires had also made their presence, including American whaling and trading ships and French catholic missionaries. Those interests posed a threat to British supremacy. When William Hobson was sent to New Zealand in 1839 as consul, it was considered timely that British sovereignty and status be secured officially by treaty.

²² By 1839, fifty-two Maori chiefs had signed the Declaration of Independence.

²³ 'He Wakaputanga O Te Rangatiratanga O Nu Tirene': 'Declaration of Independence of New Zealand'. (Appendix B)

²⁴ Mason Durie comments: “There might never have been a Treaty at all were it not for the Declaration of Independence signed five years earlier in 1835. Having recognised Maori sovereignty and independence

The Treaty of Waitangi comprises a preamble and three articles. The Treaty was drafted in English and then translated into Maori text. However, since neither version is an exact rendering of the other, to this day there remains a wide variation in interpretation.²⁵ In fact, it may be argued that the two versions give emphasis to almost contradictory guarantees. In Article One of the English text, Maori chiefs: "...cede to Her Majesty the Queen of England absolutely and without reservation all the rights and powers of Sovereignty..." [underline added]. In return, Article Two guarantees to Maori chiefs and tribes: "...the full exclusive and undisturbed possession of their Lands and Estates Forests Fisheries and other properties ... so long as it is their wish and desire to retain the same in their possession." The second part of Article the Second grants an exclusive pre-emptive right to the Crown in the purchase of Maori lands,²⁶ while the third article extends "Her royal protection" to Maori and imparts to every individual the "...Rights and Privileges of British Subjects."²⁷

In the English version of the Treaty of Waitangi, Maori chiefs ceded sovereignty in return for a degree of protection over those "properties" that they did not wish to sell. In the Maori version, however, it was not 'sovereignty' that was ceded, but "*Kawangatanga*" ('governorship'); a term coined by missionaries and first used in early biblical translations.²⁸

then, Britain needed a mechanism to justify imposing its own will on Maori and assuming governance." Durie, M.H. *Te Mana, Te Kawangatanga: The Politics of Maori Self-Determination*. Auckland: Oxford University Press. 1998, p.176.

²⁵ Claudia Orange outlines significant events and discussions leading up to the signing of the treaty at Waitangi. She contends that the choice of terms by Henry Williams (the principal translator of the Treaty into Maori text) may not have been 'entirely accidental', and suggests that: "It is possible that he chose an obscure and ambiguous wording in order to secure Maori agreement, believing (as did most missionaries at the time) that Maori welfare would be best served under British sovereignty." Orange, C. *The Treaty of Waitangi*. Wellington: Allen & Unwin. 1987, p.41.

²⁶ At the time, the extension of British law and order to New Zealand was generally accepted among Maori as a positive move, since it justified British intervention to control unruly settlers and promised to put a stop to further dubious land purchases. The latter, in particular, targeted the 'New Zealand Company' whose activities depended on acquiring cheap land for sale at a high price in order to make a profit for shareholders and to fund colonisation.

²⁷ In the third and least controversial of the articles, humanitarian concerns were given expression through the extended status and protection to all Maori individuals as 'British Subjects'. Such a formal commitment was unusual in British colonial practice at that time. However, it might also be seen as a diplomatic move, for it helped to secure Maori and missionary cooperation as more and more British settlers arrived and required lands for pastoral farming. As Orange notes: "...with the exception of 'savage practices' ... Maori custom was to be tolerated until Maori could be 'brought within the pale of civilized life'." Orange, C. *The Treaty of Waitangi. op. cit.* p.30.

²⁸ '*Kawana*' is a simple transliteration of 'governor' invented by missionaries and used extensively in the Maori translation of the Bible in 1820. The use of *kawana* in the Bible described the authority of notable figures such as Pontius Pilate. The suffix '-tanga' extends the meaning to 'governorship'. Peter Cleave explains: "Kawangatanga in 1840 meant governorship not government. The knowledge and expectations of Maori with respect to this distinction are of critical importance..." Cleave, P. *The Sovereignty Game:*

The full meaning of sovereignty (which, effectively, was to result in annexation) was misrepresented both in the chosen translation and in the explanatory speeches that accompanied the ceremonial signing of the Treaty in 1840.²⁹ It may be argued that only one word could have encapsulated the full meaning of sovereignty, and that was *mana*.³⁰ In fact, in the Declaration of Independence 1835, *mana* was chosen to describe “all sovereign power and authority” held by Maori.³¹ But, as the translators of the Treaty were well aware, no Maori chief would ever voluntarily renounce his *mana*.³²

Just as the real intent behind *kawanatanga* was not fully revealed, conversely Article Two was stressed to the chiefs as the guarantee of: “...te tino rangatiratanga o o ratou wenua o ratou kainga me o ratou taonga katoa”, translated literally as: the Queen of England consents to Maori “...the full chieftainship (rangatiratanga) of their lands, their villages, and all their possessions...” [underline added]. Thus, the treaty was presented to Maori chiefs in such a way that it appeared as if the relationship of the British Crown to Maori was one of a ‘protectorate’ between two sovereign nations. A contemporary commentator on the Treaty asserts: “What can be stated with precision, is that the ‘sovereignty’ ceded by Article I was strictly limited in its scope by the ‘rangatiratanga’ retained to the Maori in Article II of the

Power, Knowledge and Reading the Treaty. Wellington: Victoria University of Wellington. 1989, p.4. [emphasis added.]

²⁹ Orange explains: “The Treaty was presented in a manner calculated to secure Maori agreement. The transfer of power to the Crown was thus played down. Maori suspicions were lulled by official recognition of Maori independence, by the confirmation of a degree of that independence under British sovereignty, and by the extension of Crown protection and other rights. Maori were told that the Crown needed their agreement in order to establish effective law and order – primarily for controlling Europeans, or Pakeha as they were called. Finally, the benefits to be gained from the treaty were stressed, rather than the restrictions that would inevitably follow.” Orange, C. *The Treaty of Waitangi*. *op. cit.* p.33. [underline added.] For further explanations of the ceremonial events and speeches delivered at Waitangi on 6 February 1840, refer to Orange’s Chapter Three; “The Treaty at Waitangi,” pp.32-59.

³⁰ Orange, however, disputes this point. She argues: “Whatever Williams [the translator] intended, it is clear that the treaty text, in using *kawanatanga* and *rangatiratanga*, did not spell out the implications of British annexation. Nor would the translation of ‘sovereignty’ with the single word ‘mana’ have been helpful, as some argue; *rangatiratanga* and *kawanatanga* each has its own *mana*. As John Hobbs (a participant in the 1840 events) later pointed out, a chief’s *mana* was his *rangatiratanga*.” *ibid.* p.42. [italics in original.] *Mana* refers to: respect, dignity, status, influence, power, prestige. A chief may be said to have *mana*, and so may a tribe, a river, the land. However, *mana* can also be diminished.

³¹ Durie surmises: “...although in 1835 *mana* had been used to indicate sovereignty (or at least Maori sovereignty), in 1840 the word *kawanatanga* had been selected. The choice remains puzzling, and may have been a deliberate deception.” Durie, M.H. *Te Mana, Te Kawanatanga*. *op. cit.* p.2.

³² The Waitangi Tribunal arrived at the following conclusion: “...Williams (the missionary responsible for translating the Treaty) was careful to avoid using ‘mana’ for ‘sovereignty’ in the Treaty; for due to its spiritual and highly personal connotations no person could cede it. Thus he used ‘Kawanatanga’ for ‘sovereignty’ and ‘rangatiratanga’ for the Maori authority though to Maori, *mana* would have described both.” Waitangi Tribunal. *The Orakei Claim, Wai 9*. Wellington: GP Publications. 1987, para.11.5.6.

Maori text.”³³ Today, heated debates continue in political forums, on *marae*, and at Waitangi Day events, as to the nature of the relationship between ‘sovereignty’ and ‘te tino rangatiratanga’.³⁴

In 1975 the Treaty of Waitangi Act was passed by Parliament. This legal recognition of the Treaty came nearly a century after Chief Justice James Prendergast, in 1877, ruled the Treaty to be “a simple nullity.”³⁵ The Treaty of Waitangi Act 1975 established the Waitangi Tribunal; a semi-judicial body set up specifically to investigate Maori tribal claims against the Crown with regard to violations of the Treaty of Waitangi. The Tribunal’s earlier reports focused on environmental infringements of detriment to Maori culture, and recommended development alternatives for consideration by local government authorities.³⁶ In 1985, an amendment to the legislation extended the Waitangi Tribunal’s powers and permitted the examination of claims dating back to 1840.³⁷ The extensive historical research and careful consideration of a wide source of evidence has resulted in Waitangi Tribunal reports of great value to both Maori and the Crown, and to those among the general public who wish to be informed.

³³ Barns, M. *Resource Management Law Reform: A Treaty Based Model – The Principle of Active Protection*. (Working Paper No.27.) Wellington: Ministry for the Environment. 1988, section 2.100.

³⁴ Maori and Pakeha views on the social, political and economic questions surrounding Maori sovereignty issues have also stimulated debate within New Zealand communities. The following two books, accessible to the general public, were released in conjunction and together cover a cross-section of opinions (from thirty-six contributors) on Maori sovereignty and its implications for race relations. Archie, C. *Maori Sovereignty: The Pakeha Perspective*. Auckland: Hodder Moa Beckett. 1995. And: Melbourne, H. *Maori Sovereignty: The Maori Perspective*. Auckland: Hodder Moa Beckett. 1995. For an examination of the Treaty of Waitangi in the present socio-political climate, see: Hill, R. *The Treaty of Waitangi Today*. Wellington: Treaty of Waitangi Research Unit. 2000.

³⁵ In the *Wi Parata v Bishop of Wellington* Supreme Court decision of 1877. Chief Justice Prendergast and Justice Richmond concluded that the Treaty of Waitangi had no bearing on the aforementioned case since treaties with ‘primitive barbarians’ lacked legal validity. The disregard to the Treaty as a ‘simple nullity’ helped convince successive governments and judges that the Treaty of Waitangi was of little consequence or legal relevance. This view prevailed for nearly a hundred years. Indeed, Orange refers to the period between 1870 and 1930 as: “...when European New Zealand suffered a loss of memory over the treaty...” Orange, C. “The Treaty of Waitangi – A Historical Overview,” *Public Sector*. Vol.11, No.4. 1988, p.2.

³⁶ Durie notes: “...the Waitangi Tribunal was the first formal mechanism available to Maori to seek redress on non-statutory Treaty grievances. Initially it attracted little attention, but after the 1983 Motunui case [see fn.90 below], it was evident that the Tribunal, with or without the powers to make binding recommendations, had the potential to influence the government’s attitude and policy.” Durie, M.H. *Te Mana, Te Kawanatanga. op. cit.* p.184.

³⁷ Prior to this amendment, the Waitangi Tribunal’s powers only allowed investigation of grievances since 1975. The extension of the historical period back to 6 February 1840 saw the number of enquiries to the Tribunal increase from thirty six (between 1975 and 1986) to a total of six hundred and thirty three claims by 1997.

A recent approach favoured by Parliament and the courts is to take account of ‘Treaty principles’ in preference to the actual words of the Treaty.³⁸ This preference is partly justified by the seemingly irreconcilable differences between the two versions. As Judge Sir Robin Cooke (President) announced, it is the ‘spirit of the Treaty’ that is important, for the Treaty is an evolving, ‘living document’ of contemporary relevance.³⁹ It was further proposed that the main principle of the Treaty was ‘partnership’, which required that the ‘Treaty partners’ act towards each other “reasonably and with the utmost good faith”.⁴⁰ Generally, however, Maori do not favour the recent emphasis given to ‘principles’ which some argue are too vague and subject to political persuasion.⁴¹ Furthermore, there appears little doubt among Maori tribal leaders as to which version of the Treaty of Waitangi should be accorded ‘preferential’ treatment: five hundred Maori chiefs placed their signature marks on the Maori version of the Treaty of Waitangi (alongside William Hobson’s signature), whereas only thirty nine chiefs signed the English text.

³⁸ Reference to the ‘principles of Treaty’ has been included in various environmental statutes in New Zealand, including: the Environment Act 1986, the Conservation Act 1987, the Resource Management Act 1991, as well as the State-Owned Enterprises Act 1986 and the Treaty of Waitangi Act 1975. Treaty principles have been defined by the Waitangi Tribunal, the High Court, and the Court of Appeal. These can be summarised and grouped generally as: The Essential Bargain; Tribal Self-Regulation; The Treaty Relationship (‘Partnership’); Active Protection. For further explanation and specific resource management examples, see: Crengle, D. *Taking Into Account the Principles of the Treaty of Waitangi*. Wellington: Ministry for the Environment. 1993, especially pp.10-20.

³⁹ Obviously, this overthrew Prendergast’s decision (of 1877) on the Treaty as a ‘nullity’ and affirmed the status of the Treaty of Waitangi as more than simply a ‘historic document’ relevant only to 1840, as some *Pakeha* (New Zealand Europeans) vehemently argue. For example, David Round, a university lecturer in law and a ‘conservationist’ who takes an extreme racial position, provides the following opinion on the Treaty: “The Treaty was a modest little document, with a limited and political purpose. It promised no-one any fundamental rights. ...Attempts to make the Treaty law will divide the country racially, will obscure and muddy the law, and take power from the [Pakeha] people to give to the judges.” Round, D. *Truth or Treaty? Commonsense questions about the Treaty of Waitangi*. Christchurch: Canterbury University Press. 1988, p.130. [insert added.] It could be argued that if the Treaty “promised no-one any fundamental rights”, as Round asserts, then the lawful basis for European presence in New Zealand would not exist.

⁴⁰ Court of Appeal case: *New Zealand Maori Council v Attorney General* [1987] 1 NZLR 641.

⁴¹ Barns asserts: “Judicial reference to the Treaty as an embryo and continuing statutory preference for the ‘principles of the Treaty’ as opposed to its plain words, have provided room for the Courts to rewrite and moderate the actual terms of the Treaty. ...it is not the Treaty itself which is embryonic, it is the Pakeha response to it.” Barns, M. *Resource Management Law Reform*. *op. cit.* section 2.200.

EUROPEAN 'DEVELOPMENT' OF WANGANUI ⁴²

The first recorded landing of a party of European men at Wanganui was in 1831.⁴³ Early encounters between Europeans and Whanganui River Maori might best be described as 'mixed'. In May of 1840, the Treaty of Waitangi was brought to Wanganui and signed by fourteen chiefs. The Reverend Henry Williams visited Wanganui in December 1839 and hurriedly sought the signatures of local Maori chiefs for a sale of land which he intended to be secured in trust for their benefit alone. Soon after, however, when Edward Jerningham Wakefield (operating on behalf of the 'New Zealand Company') met Whanganui Maori chiefs at Pakaitore in May 1840, he made the spurious arrangement to trade a number of items (including military weaponry and clothing) for the 'purchase' of forty thousand acres of land which he then assigned for British settlement.⁴⁴ Thus, when the schooner *Elizabeth* arrived from Wellington on 27 February 1841 with her first shipment of new settlers to Wanganui, they came under the belief that their settlement rights had been legitimated. In the following months, more boats arrived and the pioneers industriously set to work in the

⁴² Confusion over the spelling and pronunciation of 'Wanganui' and 'Whanganui' derive from misunderstanding of Maori dialect. H.W. Williams' explains: "Wh represents the voiceless consonant corresponding with w, and is pronounced by emitting the breath sharply between the lips. It is a mistake to assimilate the sound to that of f in English, though this has become fasionable in recent years with some of the younger Maoris." Williams, H.W. *Dictionary of the Maori Language*. [Seventh Edition, Reprinted.] Wellington: GP Publications. 1997 [1844], p.484. [bold and italics in original.] In 1991, the Minister of Lands announced that the official spelling of the 'Whanganui River' should revert to its correct original. The city, however, remains misspelt as 'Wanganui'. According to Whanganui River Maori, the absence of the letter 'h' takes away the word's meaning. The perpetuation of this misunderstanding remains a point of contention which sometimes manifests in race relations disputes. See, for example: Stowell, L. "Tupoho seek 'h' in new name for Ucol," *Wanganui Chronicle*. 31 October 2002, p.1.

⁴³ This party was led by whaler and trader, Joseph Rowe, who operated and profited as a 'middleman' in the sale of dried tattooed heads of Maori chiefs (killed by enemy Maori and sold to Europeans and then on-sold to collectors in England). Rowe eventually met his fate in 1831 at Wanganui by a Maori party from Taupo who sought retribution for Rowe's (mis)deeds. Accordingly, Rowe's head was also dried. A member of Rowe's party, Andrew Powers, was taken captive and became the first European to view the upper Whanganui River. His Maori captors later traded him for a quantity of tobacco. Other early Europeans to the Whanganui region included the Scottish whaler John Nicol ("Scotch Jock") who traded on the river in 1834.

⁴⁴ Edward Jerningham Wakefield, the only son of Edward Gibbon Wakefield (the founder of the New Zealand Company) was only nineteen when he made the Whanganui land deal. Among the traded items (estimated to be worth £700) were military weaponry (muskets and gunpowder, etc.), blankets, tobacco, clothing (including red night caps, umbrellas, handkerchiefs), Jews' harps, and such like. Local historians Maxwell Smart and Arthur Bates reflect: "It is questionable if in point of law, such a bargain could be accepted as a legal transaction even in those days as the Maoris [sic] did not understand the European system of land tenure. This sale concluded by Edward Wakefield marks the beginning of all the land troubles which were soon to follow. The foundation on which to establish a settlement were rather insecure. The New Zealand Company however proceeded with its plans to found its second settlement at Wanganui." Smart, M.J.G. and Bates, A.P. *The Wanganui Story*. Wanganui: The Wanganui Newspapers Ltd. 1972, p.51. The authors further note: "When the Wanganui land was finally open for selection, the

slow process of ‘developing’ Wanganui: clearing the forests, draining wetlands, ploughing and tilling the soil.

Already by 1843 disputes over land tenure were becoming more frequent and some Maori who had at first been accommodating of the new settlers began to resent their presence and land clearance practices. Yet, Maori allegiances were divided. Maori of Putiki *pa* (in the lower river reaches) had formed amicable trading relationships with Europeans and were referred to as ‘loyal’ or ‘friendly Maoris’: also called ‘*kupapa*’ (neutral; ‘one layer’).⁴⁵ The more remote tribes (such as those upriver), whose association with Europeans had been restricted, were warily opposed to European encroachment and had restrained from land sales. These so-called ‘hostile natives’ formed a real and formidable threat to settler security. The government, in response to a request for help, sent to Wanganui five officers and one hundred and eighty men of the 58th Regiment. The Rutland Stockade was built (with aid by Maori) and, in 1847, an attack was made on the stockade. A few months later, a second major battle between Maori warriors and European troops took place (at ‘St. John’s Wood’) where the result is said to have been ‘indecisive’.⁴⁶

Those who did make a strong presence upriver were the early missionaries. In 1839, Reverend Henry Williams became the ‘first’ European to journey upriver.⁴⁷ Following Williams’ enthusiastic reception, Rev. John Mason and his wife took permanent residence (from 1840 until his untimely drowning in 1843) and established a mission station at Putiki (near the mouth of the Whanganui River). Arriving with his family in Wanganui in 1843, Rev. Richard Taylor was the second missionary appointment. During his tenure he made a significant contribution in converting Maori to Christianity throughout his extensive

Government, who had not approved of the sale, issued a warning to colonists against settling at Wanganui because of doubt over land tenure.” p.52. [Refer to fn.26 above.]

⁴⁵ ‘*Kupapa*’ is the Maori word for those ‘friendly Maori’ who allied themselves with the Pakeha government and troops in the 1860s land wars.

⁴⁶ Smart and Bates comment: “The result was indecisive, there being no victory to either side, but had the Maori attack been successful the result would have been disastrous for the settlement of Wanganui. When considering these incidents we must remember that the Maori population had grounds for distrusting the newly arrived white people, and they had their own age-old competitive tribal system of land tenure in the district.” Smart, M.J.G and Bates, A.P. *The Wanganui Story. op. cit.* pp.74-75.

⁴⁷ As noted above, Andrew Powers was the first European to travel the Whanganui River in 1831. Whanganui River Maori had already encountered the influence of Europeans during the musket wars of the 1820s and 1830s when Te Rauparaha and his allies made attacks on their region. Obtaining muskets had by then become a priority and, indeed, necessity. Trade with other Maori brought not only guns, but also Christianity. When Reverend Williams travelled the Whanganui River in 1839, Christianity was already widely evident.

parish.⁴⁸ With Taylor's assistance, a Government employee, Donald McLean (Interpreter and Assistant to the Native Protector), visited Wanganui in 1848 and spent three weeks 'sorting out' land boundary issues. He 'purchased' eighty thousand acres of land for the Government in exchange for one thousand pounds in silver: a bargain indeed.⁴⁹ The seven turbulent years that followed Wakefield's spurious deal, were, for the time being, eased by this 'legitimate' Government land sale. This enabled a more peaceful period of European settlement in Wanganui.

During the 1860s, however, as land wars broke out in Waikato and Taranaki, the new faith of *Hauhau* (based on the religion of *Pai Marire*) quickly gained support among many upriver Whanganui Maori.⁵⁰ As a direct result of land confrontations and the increasing number of immigrants arriving to the new 'British colony', the position that *Hauhau* followers took was one of antipathy toward European settlement. Animosity between Maori of the lower reaches of the Whanganui River (who were 'loyal' to Europeans) and the upriver followers of the *Hauhau* faith reached a climax on 14 May 1864 with the 'Battle of Moutoa Island'.⁵¹ Numerous casualties were suffered by both sides. Eventually the 'loyals' (*kupapa*) gained the upper hand and the *Hauhau* retreated upriver. Following the days of battle, the *niu* poles

⁴⁸ Smart and Bates note: "Taylor was one of the main peaceful forces which directed the progress of Wanganui along the channels it followed. His mana with the Maori was very great indeed." *ibid.* p.61. Taylor also kept diaries from 1825 until his death and wrote books which give an important insight into the events and thoughts of his day. His books include: *Te Ika A Maui, or, New Zealand and Its Inhabitants*. London: Wertheim and Macintosh. 1855; *Our Race and Its Origin*. Auckland: Geo. T. Chapman. 1867; and *The Past and Present of New Zealand: With Its Prospects for the Future*. London: William Macintosh. 1868. The widespread adoption of biblical placenames throughout the Whanganui River valley attests to the extent to which Christianity was embraced by Whanganui River Maori. These include: Koriniti (Corinth), Atene (Athens), Hiruharama (Jerusalem), Peterehema (Bethlehem), as well as Ranana (London) and Kawana (Governor).

⁴⁹ Indeed, the buyers did receive a bargain, even by comparison with Wakefield's settlement price. Smart and Bates comment: "The £1000 was carefully not referred to as 'purchase' money, the reason for this would be either because the Government's conscience would not allow this sum to be considered a just price or because the New Zealand Company had already bought and paid for 40,000 acres of the same land with goods worth, on Wakefield's own estimate, about £700." Smart, M.J.G and Bates, A.P. *The Wanganui Story. op. cit.* p.78. McLean later played a key role for the colonial government in persuading two hundred Maori chiefs who attended the important Kohimarama Conference in July 1860 that the benefits of the Treaty of Waitangi outweighed the transfer of sovereignty.

⁵⁰ *Pai Marire*, also known as 'Hauhauism', was founded by the prophet Te Ua Haumene of Taranaki in 1862. It was a syncretic religion combining traditional Maori religion and the Maori versions of Christianity as well as Te Ua's personal touches. For a brief assessment of the influence of *Pai Marire*, and on the New Zealand Wars in both general and detail, see James Belich's *The New Zealand Wars, and the Victorian Interpretation of Racial Conflict*. Auckland: Penguin Books. 1986, pp.204-206.

⁵¹ For a background explanation to the Battle of Moutoa, refer to: Young, D. *Woven By Water. op. cit.* Chapter Four; "Midstream," pp.51-73.

that were raised by the *Hauhau* at strategic *pa* on the upper river were joined by a reconciliatory ‘peace pole’ at Marekowhai.⁵²

Thereafter the settler population in Wanganui steadily increased and Maori resistance was either overcome or forced to retreat even further up the river. By the 1860s, Wanganui had become a thriving trading port and was reputedly one of the busiest coastal ports in the country. Navigation, however, proved a problem for larger vessels with obstacles such as partially embedded logs and sand bars near the harbour entrance. The newly established Wanganui Harbour and River Conservation Board commissioned an engineering opinion on the matter. The engineer’s report, of 1876, recommended the construction of a breakwater and training walls to confine and deepen the river channel. In response, Major Kemp (a Maori chief of Putiki) wrote a letter opposing the engineer’s plans and stating in no uncertain terms his concerns about altering the course of the river and therefore interfering with Nature: “...I advise you, let the waters seek their ancient outlet by the direct channel of my ancestor, Rere o Maki, to nature’s outlet.”⁵³ These early engineering works, however, pale to insignificance in comparison to the engineered changes that the Whanganui River was to face in the years to come.

Prior to the development of rail and road transport, the river was the major ‘highway’ not only for Maori but also for European access to the interior and ‘backblocks’. Alexander Hatrick founded the Whanganui River steamer service (‘A. Hatrick and Company’), and from 1891 provided trading and supply services for pioneering farming families living upriver.⁵⁴ Furthermore, Hatrick was an astute business entrepreneur and quickly capitalised on the tourist appeal and ‘scenic splendour’ of the upper Whanganui River’s bush-clad deep gorges. The river became notable nationally among travellers and was advertised abroad as “New Zealand’s Rhine” and “The Rhine of Maoriland.”⁵⁵ Also in 1891, the Wanganui River Trust was created (by legislation) to assist navigation on the Whanganui

⁵² At Marekowhai (just downstream from the confluence of the Ohura River and Whanganui), two *niu* poles remain standing. The war pole ‘rongo niu’ was erected as a gathering place for Hauhau warriors in 1864. It is constructed with cross arms and carved hands outstretched to the four directions, thus beckoning warriors to come together to fight for their lands. After the fighting ended, a peace pole ‘rerekore’ was erected to counter the influence of the war pole.

⁵³ Quoted in: *ibid.* p.99. Te Keepa Te Rangihiwini Taitoko (otherwise known as ‘Major Kemp’) was the son of Rere O Maki; one of only five women to sign the Treaty of Waitangi in 1840.

⁵⁴ At its height of popularity, Hatrick’s service included twelve steamboats (of varying sizes), three motorised canoes, a houseboat for overnight accommodation, and Pipiriki House. In addition, Hatrick held the influential position of Mayor of Wanganui from 1897-1904.

River through clearing log jams, deepening river channels, straightening and ‘taming’ the more formidable rapids. On a number of occasions, dynamite was used to blast the offending ‘obstruction’.⁵⁶ Included as an ‘obstruction’ to navigation were *pa tuna*, the numerous eel weirs erected and used by Whanganui River *hapū* for customary fishing.⁵⁷

Already by the turn of the twentieth century, the effects of widespread forest clearance were resulting in visible scars on the landscape, such that Hatrick felt impelled to write a letter (in 1907) to the Tourist Department outlining the destructive impact that forest removal was having on the river and environs. Interestingly enough, Hatrick made the ecological connection between the removal of riparian vegetation and its effect on the quantity of water in the Whanganui River (as well as contributing to the problem of debris and log jams in the river which interfered with safe steamboat passage). However, he appeared blind to the very fact that at the same time the Wanganui River Trust (whose activities supported his business ventures) was dramatically altering the very character of the Whanganui River (not to mention the devastation to Maori fisheries and cultural relationships with their ancestral river). While the essence of Hatrick’s letter expresses an important environmental message, it appears somewhat hypocritical with respect to his own vested business interests. A passage in his letter reads:

“If a hand is not taken quickly the river will be ruined, not only from a scenic point of view but irretrievably for ever.

In the summer months, there are miles of river over which there is not more than 20 inches of water... The river hillsides require every acre of undergrowth and foliage to hold the rainfall and allow it, spongelike, to feed the river till next rain.

Once the hillside growths are removed navigation is gone. The very people who are destroying this river side bush are at the same time destroying their means of ingress and egress. They are literally burning their bridges behind them.”⁵⁸

⁵⁵ Campbell, R.D. *Rapids and Riverboats on the Wanganui River*. Wanganui: Wanganui Newspaper Ltd. 1990, p.7.

⁵⁶ An account in 1912 by an engineer on one of Hatrick’s steamboats includes the following description of the large Tarepokiore whirlpool rapid, which was soon after dynamited by the River Trust: “To me the whirlpool was a frightening thing to see, a great sucking, swirling, almost animate thing that moved restlessly about its high-walled enclosure like some voracious animal pacing its cage.” Quoted in: Bates, A.P. *A Pictorial History of the Wanganui River*. Wanganui: Wanganui Newspapers Ltd. 1986, p.146. Following his discussion of the same event, David Young adds: “In the name of progress, such was the fate of the *taniwha*.” Young, D. *Woven By Water*. *op. cit.* p.208.

⁵⁷ Prior to 1890, there were over three hundred and fifty *pa tuna* (eel weirs set in the centre of the river) and ninety two *utu piharau* (lamprey weirs set on the side of the river). By the turn of the century, many of these had disappeared. In 1886-88, five hundred and one Whanganui *iwi* members signed a petition to Government claiming that the steamers were destroying *pa tuna* and *utu piharau*. *Atihaunui* were also concerned about the damage caused to the riverbed, its banks, rapids and fisheries.

⁵⁸ Quoted in: Bates, A.P. *A Pictorial History of the Wanganui River*. *op. cit.* p.200. [underline added.]

Those activities that led to Wanganui's 'development' continued unabated into the twentieth century with large tracts of forest cleared in the upper river catchment. Tales of early pioneering days recall genuine hardships, in particular those of the First World War returned servicemen who were granted government parcels of land to 'develop' (i.e., clear the land, cut and burn native forest, build homesteads, grass, fence, and stock their land): all this only to be forced off land which proved too formidable to farm economically.⁵⁹ In other places, however, the pioneering farmers were rewarded with rich soils on rolling hill country, and the many streams and tributaries feeding into the main arterial waterway provided ample stock-water (a source) and easy disposal for effluent and farm wastes (a sink). Today, much of the hinterland surrounding Wanganui supports sheep and beef farming. Unfortunately, for a majority of cases, farming attitudes toward water appear to have changed little from those held in pioneering days, despite the benefits today of environmental education and hindsight.⁶⁰

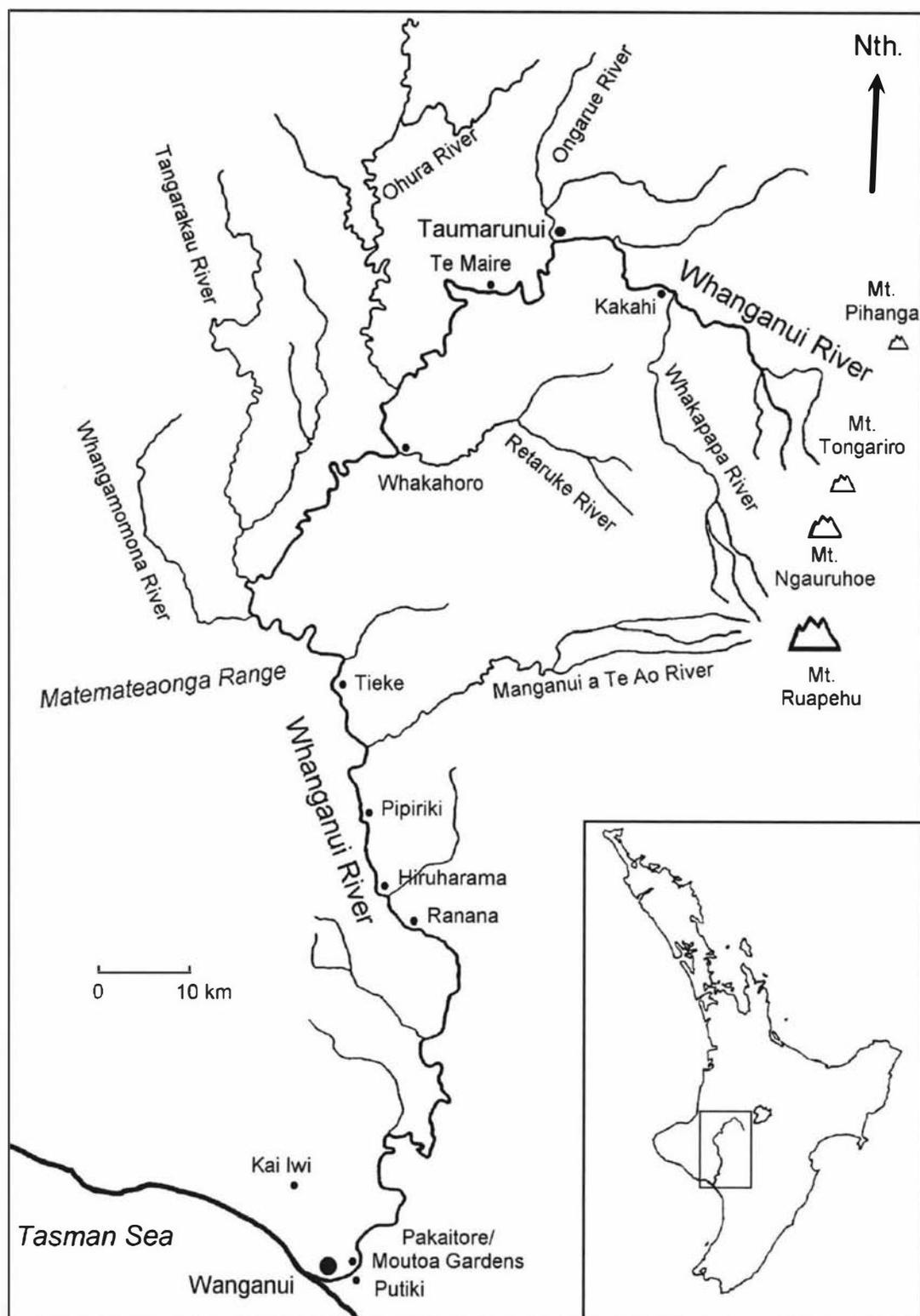
As settlements, such as Wanganui township near the coast and Taumarunui situated inland (see Figure 2, over page) grew, issues of sewage disposal were dealt with by local authorities whose mindset was: 'the solution to pollution is dilution'.⁶¹ Similarly, industries along the river (such as the freezing works) slipped easily into the 'out of sight, out of mind' riddance of their by-products. Not only was the river being 'added to' with pollutants and increased run-off of farm fertilisers and sediment (a result of the deforestation and exacerbated erosion); it was also 'taken from' by mining operations. Large quantities of gravel were extracted from the bed of the river (from 1903 until 1989) and used for road construction materials and other 'public works'.

⁵⁹ Factors that contributed to the abandonment, by the 1940s, of many farm holdings (such as the Mangapurua Valley settlement) included the depressed economic conditions of the 1930s and problems of isolation, rugged terrain, floods, erosion, regeneration of native forest, decreasing soil fertility, and high cost of transport. For memories of early settler history, refer to the anecdotes and diary expositions recorded in: Bates, A.P. and Thomsen, P. (eds.) *Whanganui River Memories*. Auckland: Heritage Press Limited. 1999.

⁶⁰ See the *Whanganui Catchment Strategy* (1997) and *Whanganui Catchment Water Quality Monitoring Progress Report* (1998) undertaken by the Manawatu-Wanganui Regional Council. Both reports target unsustainable land use (i.e., farming on steep, erodible hill country) as the major factor in poor water clarity and quality in the Whanganui River; i.e., due to sediment and bacterial contamination in overland run-off from animal pasture. A factual pamphlet produced by the council suggests that twenty six percent of the land in the Whanganui catchment is being used beyond its capability, and recommends that this large area of land be reafforested.

⁶¹ Today, the upgrading of sewage treatment systems in Wanganui and Taumarunui are signs of the communities' commitment to achieving improved water quality in the Whanganui River.

Figure 2 Whanganui River and Major Tributaries



The consequence of this accumulation of degrading pressures was that the 'natural character' of the Whanganui River was rapidly changing. Yet, the biggest and arguably the most devastating impact on the river was still to come. Adding to the cocktail of environmental abuses and cultural offences, the Tongariro Power Development scheme was concocted in the late 1950s. Dams across the Whanganui headwaters and its mountain tributary streams were included in the grand scheme. Plans were drawn – almost entirely in the secrecy of central government offices – and construction began soon after. The processes for seeking public involvement in these decisions and plans were, as will be discussed later, severely limited.

DAMMING THE WHANGANUI RIVER

In 1958, by government-issued Order in Council, the Minister of Electricity was granted permission to dam the Whanganui River as part of the proposed Tongariro Power Development scheme.⁶² Under this scheme, water from three major catchments draining from the mountains Ruapehu, Tongariro and Ngauruhoe (in the central North Island) is now diverted to feed two hydroelectric power stations (see Figure 3). The power scheme covers a total catchment area of twenty-six thousand square kilometres.⁶³ Rivers from the eastern and southern sides of the mountains are diverted to the Rangipo Power Station, which generates one hundred and twenty megawatts of electricity. Rivers from the western side of the mountains (constituting the 'Western Diversion') feed the Tokaanu Power Station, which generates two hundred and forty megawatts of electricity.

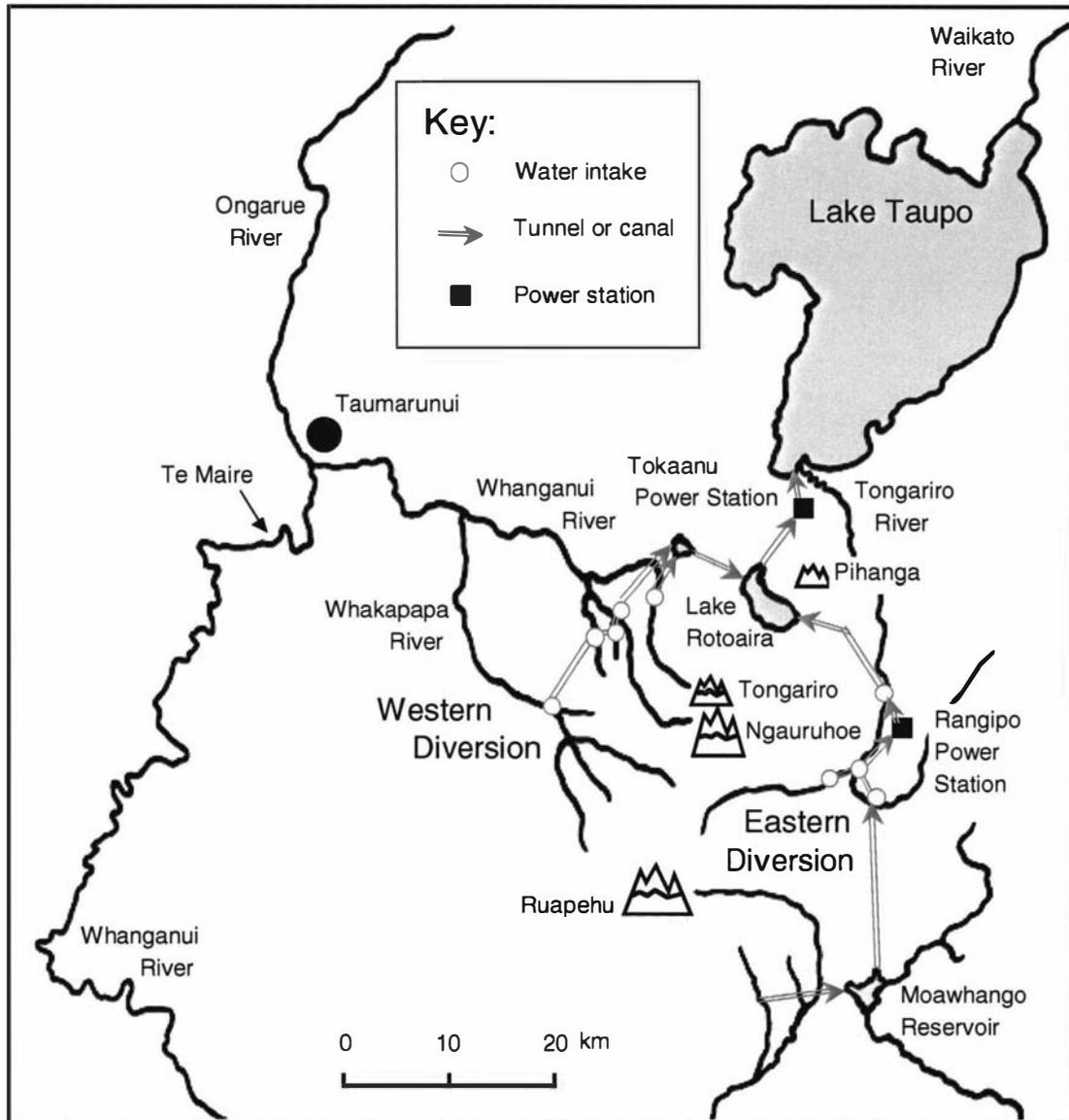
Waters of the Western Diversion enter intake structures and are diverted via concrete pipes into Lake Rotoaira. There they mingle with waters originating from the eastern and southern sides of the mountains; i.e., those discharged from the Rangipo Power Station and 'transferred' to Lake Rotoaira via the Poutu canal. Lake Rotoaira is connected by a six kilometre-long tunnel through Mount Tihia to the Tokaanu Power Station. Eventually, all the waterways diverted into the Tongariro Power Development scheme empty into Lake

⁶² Investigations into the grand hydroelectricity scheme had been undertaken since the early 1950s. The scheme was formally authorised by the Order In Council, issued by the Governor-General on 29 October 1958, pursuant to section 311 of the Public Works Act 1928. Order in Council, 29 October 1958, *New Zealand Gazette*. No.66, Vol.3. 1958, p.1463.

⁶³ For a general overview of the Tongariro Power Development scheme, refer to: ECNZ. "Tongariro: A Guide to the Tongariro Power Scheme," [Information booklet 3/93.] Wellington: Electricity Corporation of New Zealand Limited, Public Relations Group. 1993, 14pp.

Taupo which ‘naturally’ (now regulated by control gates) drains into the Waikato River, itself host to eight hydroelectricity dams.⁶⁴

Figure 3: Tongariro Power Development Scheme



⁶⁴ The additional water in the Waikato River is used for cooling at geothermal and thermal power stations. The pay-off seems to be this: “The Tongariro Power Development has allowed for more concentrated development of the Waikato River for hydro generation, leaving other rivers undeveloped (at least in the meanwhile)...” Planning Tribunal. *Planning Tribunal Decision on Wanganui River Minimum Flow Appeals*. Wellington. 1990. Chapter Six; “Electricity Generation,” p.171.

Rivers draining from the western side of the mountains include the headwaters of the Whanganui and Whakapapa Rivers (which converge near the settlement of Kakahi) and their mountain stream tributaries. The mountain streams intercepted by Tongariro Power Development intake structures include the Okupata, Taurewa, Tawhitikuni and Mangatepopo streams, and the Whakapapa River which is fed by pure mountain stream waters originating on the flanks of Mount Ruapehu.⁶⁵ *Originally, one hundred percent of the Whanganui River headwaters was diverted for power generation.*⁶⁶ This included all waters from the tributary streams. With respect to the Whakapapa River, ninety-five percent of its flows were diverted. A negotiated minimum flow restriction was placed on the Whakapapa, due to its status among anglers as a reputable river for trout.⁶⁷

The Whanganui River and its tributaries, instead of draining from the western slopes of the mountains and meandering south-west (initially the river winds from the mountains to the north-west and then ‘bends’ south near the town of Taumarunui), is now engineered to run via pipes, tunnels and turbines, to the north. Water from the headwaters of the Whanganui used to follow its natural course to the Tasman sea adjacent to Wanganui city (see Figure 2). Due to the intervention of the Tongariro Power Development scheme, however, the waters of the Whanganui River eventually spill into the Waikato River – now a mixed tumble of many river systems. This ‘mixing of waters’ is, in itself, a cultural affront to a number of Maori tribes. This is considered offensive because each water body has its own *mauri* (‘life force’, essence) which is unique to it.⁶⁸ To mix different waters (and, even more

⁶⁵ It is not only the Whanganui River *proper* (as deemed by topographic map) that is of great spiritual and cultural significance to Atihaunui, but *all* the tributary headwaters.

⁶⁶ In effect this meant that for much of the time there was zero discharge of water downstream at any of the diversion intercept sites. Only when flows exceeded the intake capacity, which is twice the mean annual flow (i.e., in flood conditions), were waters released.

⁶⁷ The Waimarino Acclimatisation Society requested a minimum flow on the Whakapapa River to ensure the water temperature was safe for fish. The Minister of Electricity authorised a minimum flow limit of 0.57 cumecs (to be measured at the Whakapapa Footbridge).

⁶⁸ *Mauri*: “...interpenetrates all things to bind and knit them together...”, such that “...Mauri acts as the bonding element creating unity in diversity.” *Mauri* is not restricted to sentient beings alone, as Reverend Maori Marsden and T.A. Henare explain: “*Mauri Ora* is life-force. All animate and other forms of life such as plants and trees owe their continued existence and health to mauri. When the mauri is strong, fauna and flora flourish. When it is depleted and weak those forms of life become sickly and weak.” Marsden, M. Rev. and Henare, T.A. *Kaitiakitanga: A Definitive Introduction to the Holistic World View of the Maori*. Auckland: University of Auckland. November 1992, pp.9, 22. [italics in original, underline added.] This explanation holds true also with respect to the *mauri* of waterways such as the Whanganui River.

culturally offensive, to discharge effluent into a waterway) is to ‘contaminate’ the *mauri* of one waterway with that of another.⁶⁹

The Tongariro Power Development Scheme, 1958

The Tongariro Power Development scheme was conceived at a time when post-World War Two New Zealand faced frequent energy shortages and power blackouts. Hydroelectricity generation was heralded as a ‘clean’ and renewable energy source, particularly when contrasted with other viable alternatives considered at the time, i.e., thermal (in particular, coal) generation. In this era of central government control over public works and decision-making, emphasis was placed on the national economic interest and ‘big development’ that would supposedly enable New Zealand to become energy self-sufficient. The then deputy Prime Minister and Minister of Works and Development, Hugh Watt, eulogised the power development, stating that:

“The development of hydro-electric power in New Zealand has been, in its way, a triumph over natural obstacles, over the lack of a heavy engineering industry and large capital requirements, and the story of the skills and tenacity of a small nation living in a rugged and isolated country.”⁷⁰

In the late 1950s and through to the mid-1960s there were no legal requirements for the approval of water rights/resource consents, consultation with Maori, recognition of the Treaty of Waitangi, or consideration of non-economic values. Nor, for that matter, were there mandatory requirements to evaluate environmental and other impacts of the proposed scheme.⁷¹ In short, non-quantified values were acknowledged by government

⁶⁹ Among the first major claims brought before the Waitangi Tribunal were concerns about sewage disposal into waterways. For example, in the 1984 case brought by Ngati Pikiao in objection to a proposal to discharge effluent into the Kaituna River, the Maori claimants “...emphasised that the river had spiritual and economic associations; sewage discharge into the river would create both biological and cultural pollution, thereby reducing the material circumstances of the iwi and insulting their mana. To them, the Kaituna river had its own wairua (soul) which should be kept apart from other waters. To mix the polluted waters of Lake Rotorua, contaminated by human waste, with the waters of the Kaituna, used for fishing, would be highly offensive. The Tribunal agreed and suggested alternative ways of disposing of sewage, principally on land.” Durie, M.H. *Te Mana, Te Kawanatanga. op. cit.* p.25. Land-based sewerage treatment schemes are generally ‘standard practice’ for New Zealand towns today.

⁷⁰ Watt, H. “Foreword,” in: Ministry of Works and Development. *Tongariro Power Development: New Zealand’s Latest Power Story*. Wellington: Ministry of Works and Development. 1974, 52pp.

⁷¹ Environmental investigations during the initial proposal stages of the Tongariro Power Development were restricted to fisheries aspects. While the advantages of development were seen to outweigh any disadvantages, six were considered: effects on fishing activities, jet boats for commercial operation, the Taumarunui township facilities, the harbour at Wanganui, and sites of archaeological significance to the Tuwharetoa tribe. Compensation was negotiated with each affected group and a minimum flow was set

decision-makers in a cursory manner only and, in any case, were accorded little statutory priority with respect to the focus on the national economy and ‘development’ interests. In fact, when the Tongariro Power Development was proposed (the mid- to late 1950s), objections to the scheme anticipated by the New Zealand Electricity Division were avoided through government fast-tracking of special legislation.⁷² Today, however, these considerations are all key features of current resource management legislation and planning practice in New Zealand (i.e., under the Resource Management Act 1991, see discussion below).⁷³

The first time that Whanganui River Iwi were officially made aware of the Tongariro Power Development scheme was in 1968 at a public meeting called by the Taumarunui Borough Council.⁷⁴ The Minister of Electricity was invited to ‘inform’ the public of the developments already under way. During this meeting, Maori objections to the project were silenced. Te Atawhai Archie Taiaroa emphasises the significance of the blatant neglect by the government of the day to consult with Whanganui River Iwi, which remains a source of grievance to the people of the Whanganui River:

“At no time during the Diversion Hearings was any attempt made to consult the Whanganui River Maoris. In fact, at a public meeting in Taumarunui [in 1968] at which the late Mr Shand, then Minister of Electricity, was present a Maori person

for the headwaters of the Whakapapa River to protect fishing interests. The sixth disadvantage (effects on river scenery/aesthetic values, recreation and tourism) was considered by the Ministry of Electricity to have “no adverse effect”. For further discussion, see the Waitangi Tribunal’s *Whanganui River Report*. *op. cit.* pp.236-238.

⁷² For example, where structures were to be sited on Maori-owned land, the government overrode the permission normally required by the affected landowner. The Waitangi Tribunal Report verifies: “Automated water-level recorders, cableways, and footbridges were ready for installation [as part of the Tongariro Power Development], but some of the gauging stations had to stand on Maori land. To obviate anticipated delays in obtaining owner approvals, a further Order in Council was issued in 1958 enabling work to be undertaken without giving prior notice or obtaining consents.” *ibid.* p.236. [Order in Council, 29 October 1958, *New Zealand Gazette*. No.66, Vol.3. 1958, p.1463.]

⁷³ In the 2001 planning hearings for the renewal of consents for the Tongariro Power Development scheme, the planner submitting on behalf of the Wanganui District Council offered his professional opinion that if the scheme was proposed today, under present legislation, it would not have been approved. This opinion, however, did not seem to have infiltrated to the decision-making committee who have granted the renewal of resource consents to the applicants for a further 35 years (subject to certain conditions). See discussion in section below: “Genesis Resource Consents Hearing, 2000-2001”.

⁷⁴ Although compensation was negotiated with the Tuwharetoa Maori Trust Board [Tuwharetoa are the *iwi* (tribe) whose tribal territories include the mountains] for damages to fisheries in the Tokaanu Stream, “Atihaunui were not consulted and received no compensation.” Waitangi Tribunal. *The Whanganui River Report*. *op. cit.* p.237. [underline added.] It is inconceivable that the then government would not have been aware of the *mana wai* status of Te Atihaunui-A-Paparangi with respect to the Whanganui River. Atihaunui had been active in petitioning Parliament since 1887 and their long-standing claim to ownership of the riverbed was first brought before the courts in 1938.

(Mr Amohia) ... on questioning the Whanganui River Maori's role in all their deliberations was told to 'sit down, that he was out of order'.⁷⁵

Soon after the Western Diversion was commissioned (in the early 1970s), the environmental effects of the reduced flows became readily obvious to the river's numerous users. In 1977, a national canoeing fraternity successfully lobbied the National Water and Soil Conservation Authority to fix a minimum flow for the Whanganui River, owing to its non-navigability in parts. The request was referred to the Rangitikei-Wanganui Catchment Board for investigation. Recommendations were then delivered to the Authority who, in 1983, fixed minimum flow limits (expiring in five years) to be measured at Te Maire (a flow gauge station was constructed seventeen kilometres downriver from Taumarunui township).⁷⁶ The limits were set at twenty-two cumecs⁷⁷ during the summer period from 1 December until 14 February and again at Easter (a popular holiday time for recreation). For the remainder of the year, the levels were reduced to a minimum flow of sixteen cumecs. *This amounted to an annual abstraction rate of ninety-seven percent from the Whanganui River and its tributaries* (as opposed to the previous one hundred percent take).

It is poignant to reflect that it was the pressures of, first, an angling society (with respect to the Whakapapa River) and then a recreational group (New Zealand Canoeing Association, with respect to the Whanganui River) that led to the first conscious acts to curb the impact of the Tongariro Power Development scheme on the Whanganui River environment. In contrast, the concerted efforts of Te Atihaunui-A-Paparangi – the people of the River – to draw attention to the destructive environmental changes brought about by incremental 'developments' within the River catchment (many introduced without their consent or

⁷⁵ Evidence of Te Atahawai Archie Taiaroa before the Planning Tribunal. 1988, p.10. (Also discussed in the Waitangi Tribunal's *Whanganui River Report*, p.238.) This dismissal is significant in more ways than one: such treatment of a *kaumatua* may well have been interpreted as trampling on the *mana* of the whole tribe, given that Hikoia Amohia rose to voice concerns on behalf of Whanganui River Iwi. However, it is plausible that the Minister, chairman and members of Taumarunui Borough Council were not aware of this cultural nuance, especially given that political meetings usually followed a pre-determined agenda and (in those days) 'informing' the public would not have included opportunity for opinions from the floor. On a positive note, today there is a much improved awareness of Maori culture and *tikanga* (customary correct practices); noticeably in political and judicial settings, and among the public service organisations.

⁷⁶ It could be argued that the siting of the minimum flow gauge station at a site seventeen kilometres downriver of Taumarunui township is not an accurate measurement of flow levels from the Whanganui River and tributary streams, given that the Ongarue River (a large water body) merges with the Whanganui River at Taumarunui. Perhaps this testifies that the minimum flows regulation was initially installed for recreational purposes for which water *depth* is most important. The minimum flow regime does not adequately reflect other values, such as the spiritual relationships and the 'cleansing' properties of the mountain streams, that only a return of the headwaters can assure.

⁷⁷ 'Cumecs' is a measure of cubic metres of flow per second past a fixed point. Also written: m³/s.

prior knowledge) were ignored (and sometimes openly dismissed) by a succession of government decision-making authorities.⁷⁸

WANGANUI RIVER MINIMUM FLOWS APPEALS, 1989-1990⁷⁹

Five years after the first minimum flows were set on the Whanganui and Whakapapa Rivers, their water permits came up for review (they were due to expire on 31 October 1988). At that time, the Rangitikei-Wanganui Catchment Board was empowered by statute to renew or otherwise alter existing water permits and therefore set the minimum flow regime with respect to those waterways.⁸⁰ The Catchment Board prepared an initial report investigating 'technical aspects' of soil and water management in the Whanganui catchment. As required of the planning process, public submissions were sought. The request was met with a significant response (approximately one thousand, two hundred and fifty submissions). The submissions indicated not only a local/regional interest in the Whanganui River but recognition of its national importance and value as more than just an 'economic asset'.

Following seven days of public hearings and the consideration of numerous relevant issues that stemmed from a wide range of values, the Catchment Board fixed a new water management regime for the Whanganui catchment. The minimum flows recommended by the Board in 1988 were considerably more environmentally stringent than those fixed in 1983. Importantly, the Catchment Board recommended that the *total natural flow of the headwaters of the Whanganui River be reinstated*, and that tighter restrictions be placed on the

⁷⁸ The Waitangi Tribunal's *The Whanganui River Report* provides more than sufficient evidence of the sometimes dubious treatment of Te Atihaunui-A-Paparangi by the Crown and its agencies. The report also cautions against the misconception that Maori protests against Government 'interference' were motivated by 'anti-development' sentiments. Rather: "Their protests were not against the Government, the Europeans, or development as such but against the assumption that things could be done without Maori agreement. They show a concern for Maori participation in district development, as well as a continuing unwillingness to cede their river interests and rights of control. In a word, they were about mana." Waitangi Tribunal. *The Whanganui River Report*. *op. cit.* p.179.

⁷⁹ Only when specifically referring to the full title of the 'Wanganui River Minimum Flows Appeals' and 'Wanganui city' will this spelling be used. In all other case, the correct spelling of the Whanganui River is used. See earlier explanation in fn.42.

⁸⁰ From 31 March 1988, the National Water and Soil Conservation Authority ceased to exist. An amendment to National Water and Soil Conservation Act 1967 (section 20J) empowered the Rangitikei-Wanganui Catchment Board to fix "...the minimum acceptable flow and minimum standard of quality of the natural water of any river or stream... [within their jurisdictional area]"

diversion of the Whakapapa River headwaters.⁸¹ This directive, however, did not extend to the other mountain stream tributaries feeding into the Whanganui River; these, following the Board's recommendations, were permitted to be diverted in their totality to the Tongariro Power Development scheme. Overall, the 1988 minimum flow level recommendations would have significantly reduced the amount of water diverted for the power scheme to *an allocation of fifty-seven percent on an annual basis*.

However, the Rangitikei-Wanganui Catchment Board decision was subsequently appealed to the Planning Tribunal.⁸² Two separate appeals were lodged, representing claims from opposite ends of a 'spectrum of values'. At one extreme, 'Electricorp' (which took over administration of the power scheme in 1986) argued for the reinstatement of the 1983 minimum flow regime. The other appellant, the Whanganui River Maori Trust Board (established by statute in 1988)⁸³ sought the return of all waters: full flows from the headwaters of the Whanganui River *and* all its tributary headwaters (i.e., termination of the Western Diversion). While the Trust Board acknowledged the decision of the Catchment Board to return full flows to the headwaters of the Whanganui River itself, Whanganui River Maori argued that that recommendation only partially rectified the wrong done to the spiritual *mana* of the River and its people as a consequence of the Tongariro Power Development scheme. The *mauri* of their *Awa* could only be restored when *all* the sacred headwaters were returned to their full and natural flows.

The Whanganui River Maori Trust Board were joined in their appeal to the Planning Tribunal by numerous others who opposed (to varying degrees) Electricorp's taking of water from the headwaters of the Whanganui River and its tributaries. The opponents included confederated environmental and recreational groups, local government authorities, regional commercial and tourism enterprises, and a wide spectrum of concerned community citizens. The Whanganui River Flows Coalition represented a significant 'public voice' in opposition to the diversion of headwaters for the power scheme; 'significant' in that it claimed a delegation of sixty-five thousand! In addition, the Department of Conservation (recently established under the Conservation Act 1987) has a

⁸¹ The minimum acceptable flow of the Whakapapa River was changed to 8.5 cumecs for 1 December to 30 April and 4.2 cumecs for the remainder of the year (with conditions).

⁸² The Planning Tribunal is a judicial body chaired by a planning judge and two lay members.

⁸³ The Trust Board is a statutory body established under the Whanganui River Maori Trust Board Act 1988 to negotiate all outstanding claims relating to customary rights and usages of the Whanganui iwi in respect of the Whanganui River.

statutory role to advocate for conservation values. As a result of scientific investigations into the environmental effects of the power scheme on the hydrological system, the Department advocated that the Whanganui River diversion intake be closed and that minimum flows be established at all intakes to aid restoration of a more 'natural rhythm' to river flows. The Whanganui River Flows Coalition supported this position.⁸⁴

However, a lot more was at stake than simply the setting of minimum flow limits.⁸⁵ The case gained a national profile because it signified a change in the way resource management decisions were made in New Zealand. The submissions presented to the Planning Tribunal involved a much wider range of values and interests than had been previously 'considered' (in reality, 'dismissed') when the Tongariro Power Development scheme was initiated in the 1950s. As such, the Planning Tribunal hearings were seen as a 'test of values' that reflected New Zealand society (as it was in the late 1980s). The assumed and assured predominance of economic interests was being challenged by a much wider range of values and ethical positions that included spiritual, intrinsic, conservation, cultural, and aesthetic. Competing interests were also highlighted in the question of the appropriate *scale* at which benefits should accrue and trade-offs be negotiated: local and regional versus the so-called 'national interest'.⁸⁶ A changed public perception in favour of greater environmental protection was reflected in calls for improved public participation in resource management decision-making and planning processes.

A typical response by planning authorities is to treat *tangata whenua* submissions as another 'environmental interest group' or to generalise them as 'Maori interests'. However,

⁸⁴ "The proportion of water sought by the [Wanganui River Flows] Coalition was 70% downstream and 30% to Electricorp." "It is recognised that a 70% proportional flow differs from the Department of Conservation's recommended flow, but we concur with the Department's view that the headwaters should run naturally – albeit with some water taken out." Evidence of Keith Chapple (on behalf of the Wanganui River Flows Coalition) before the Planning Tribunal. 1988, para.22, p.12; para.25, p.13.

⁸⁵ Dr. George Habib, a submitter in support of the Whanganui River Maori Trust Board's appeal, stated the 'issue' emphatically: "In my interpretation of the Maori view, the issue, in the first instance, is not whether the indigenous fisheries have been reduced, whether the Whanganui River's former pristine qualities have been detrimentally affected, or whether there should be this, that or some other flow regime in the River. These are all Pakeha approaches to the problem. In the Maori view, the issue is whether there should be a Diversion at all." Evidence of George Habib before the Planning Tribunal. 1988, para's.119 & 120, pp.29-30 [underline added.]

⁸⁶ For example, regional tourism and aesthetic appreciation of the local environment versus national economic development. The issue of *scale* can be magnified to the world stage in the clash of 'development' versus environment or community/social issues. A popularised slogan calls for citizens to "think globally, act locally" as a 'solution' to the global environmental crisis. Others, however, retort that the 'environmental crisis' is the result of gross social injustices, such that a more realistic maxim might

Whanganui Iwi continue to assert the uniqueness of *their* interrelationship with the Whanganui River.⁸⁷ Their stance challenged the Planning Tribunal committee to consider the legitimate values of a completely other cultural worldview.⁸⁸ The Tribunal could not dismiss Maori interests, especially in light of recent (1987) high-profile legal cases. Case law had established precedents with respect to the importance of the Treaty of Waitangi, Maori cultural concerns and spiritual values in resource management issues.⁸⁹ In addition, a number of major claims brought before the Waitangi Tribunal in the 1980s had relevance to the Whanganui River. These claims had similarly dealt with Maori tribal concerns about inappropriate 'development' with respect to the *mauri* of certain water bodies, and the effects of "cultural pollution" on the *mana* of the people.⁹⁰

The 1980s was a significant period in New Zealand's environmental policy, involving widespread changes in both the reorganisation of local government and a massive reform of resource management law.⁹¹ At the time of the Whanganui River Minimum Flows Appeals Hearing (which began in September 1989 and was completed in May 1990), the Resource Management Bill was before Parliament (the Resource Management Act became

reveal: "local village, global pillage". (Refer to Chapter Five: "'Sustainable Development' Or 'Sustained Development'?)")

⁸⁷ The historical and cultural uniqueness of the Whanganui River Maori relationship with their *Tupuna Awa* (Ancestral River) has been acknowledged in the Waitangi Tribunal's *The Whanganui River Report* (1999). However, the depth and profoundness of the interrelationship can only best be articulated by Te Atihaunui-A-Paparangi themselves.

⁸⁸ The Planning Tribunal heard evidence of Maori cultural and spiritual matters at the Putiki Marae.

⁸⁹ Those cases included the High Court decision of *Huakina Development Trust v Waikato Valley Authority* (1987) 12 NZTPA 129, and the Court of Appeal case in *New Zealand Maori Council v Attorney General* [1987] 1 NZLR 641.

⁹⁰ These claims included the Te Ati Awa case (1983) on the pollution of reefs by the discharge of sewage and industrial waste at Motunui; the Ngati Pikiiao case (1984) in respect of the Kaituna River (as discussed above); the claim regarding the pollution of the Manukau Harbour and destruction of customary Maori fisheries and its consequent demeaning for Ngati Te Ata (1985); and the Manganui sewage claim (1987) with respect to a proposal to dispose sewage over land of spiritual significance to Ngati Kahu. For further commentary on the cases, refer to: Durie, M.H. *Te Mana, Te Kawanatanga: The Politics of Maori Self-Determination. op. cit.* pp.24-27.

⁹¹ The Local Government Amendment Act (No.2) 1989 resulted in the complete restructuring of New Zealand's local government framework. Over six hundred special-purpose units of local government were either abolished or replaced by thirteen regional councils and seventy-four territorial authorities with clearly-defined statutory functions. In conjunction, the Resource Management Law Reform 1988 involved a comprehensive overhaul of the laws governing the environment (over 54 statutes and more than 20 regulations were repealed by the Resource Management Act 1991). Sir Geoffrey Palmer, former Prime Minister of New Zealand and Minister for the Environment, explains: "A major problem was that land, air and water were not managed in any integrated, consistent way. Pollution laws were very ad hoc and disconnected. The interests of Maori people were overlooked, and their expectations in relation to the Treaty of Waitangi were unfulfilled. Monitoring the law was uneven, and enforcing it was a real headache." Palmer, G. *Environmental Politics: A Greenprint for New Zealand*. Dunedin: John McIndoe. 1990, p.92. For an analysis of environmental policy in New Zealand from a public policy perspective,

operative from 1 October 1991). It is not possible to state the extent to which this Hearing directly (or indirectly) influenced the Resource Management Bill. However, the ‘battle’ between Electricorp and its opponents was of major national significance. The Hearing lasted eighty-four days; evidence was presented by one hundred and five witnesses; and over seventy-five thousand pages of evidence were presented before the Planning Tribunal.

In October 1990, the Planning Tribunal arrived at the following decision for managing water allocation of the Whanganui River: “The new minimum flows from 1 June 1991 are 3 cumecs at the Whakapapa footbridge throughout the year; and 29 cumecs at Te Maire from 1 December to 31 May every year [i.e, during the summer half of the year].”⁹² Effectively, this reduced Electricorp’s take for the Western Diversion from ninety-seven percent (as had been granted under the 1983 regime) to *seventy-eight percent*. In reaching their decision, the Tribunal sought a compromise between submitting parties and their various interests, although they acknowledged that the New Zealand Electricity Division (Electricorp’s predecessor) had been accorded a privileged position with respect to the 1983 minimum flow and in their operation prior to that decision.

The 1988 decision of the Catchment Board to restore the headwaters of the Whanganui River branch to its full flows (out of concern for the spiritual and cultural values of the Whanganui River Maori) was overturned by the Planning Tribunal. Although the cultural and spiritual concerns of Whanganui River Maori were considered by the committee members, the Tribunal justified its decision-making role as having to “...follow a process of evaluating and balancing all relevant considerations.”⁹³ Therefore, according to the Tribunal’s interpretation of legislation, Maori cultural and spiritual values were not to be accorded priority over other water users.⁹⁴ The outcome sought by the Whanganui River Maori Trust Board in their appeal to the Planning Tribunal – *to close down the Western Diversion altogether* – was interpreted almost as ‘selfish’, according to the summary in the Tribunal’s report:

refer to: Bihrs, T. and Bartlett, R.V. *Environmental Policy in New Zealand: The Politics of Clean and Green?* Auckland: Oxford University Press. 1991.

⁹² Planning Tribunal. *Planning Tribunal Decision on Wanganui River Minimum Flow Appeals*. Wellington. 1990. See Chapter Eight: “Summary,” p.208.

⁹³ *ibid.* p.200.

⁹⁴ “There is nothing in the Water Act to justify giving priority, or placing special extra weight or a bias, in favour of Maori values and interests, or Maori rights under the Treaty of Waitangi, or the relationship of the Maori people with the Wanganui River.” *ibid.*

“The Trust Board’s proposal would involve closing all the diversions. If there were no claims to the water resource competing with the claims of Maori cultural and spiritual interests, they would justify fixing the minimum flow as the whole of the natural flow. However, there are competing interests, and the law intends that there ought to be sharing.”⁹⁵

Not satisfied with Planning Tribunal’s outcome, Electricorp again appealed the decision (on a point of law) and raised the stakes even higher – to the High Court.⁹⁶ However, upon further legal investigation, the High Court overrode Electricorp’s objections and upheld the Planning Tribunal decision. Electricorp had ‘lost’, at least for the time being. The corporation’s legal costs were estimated at between seven to fifteen million dollars. Both the Whanganui River Maori Trust Board and Department of Conservation had also incurred considerable expenses (the latter spent over seven hundred thousand dollars; a considerable chunk of its legal budget). The nation-wide environmental organisation, The Royal Forest and Bird Protection Society, was forced to withdraw from the ‘legal race’ as a consequence of the financial burden. Environmental critics accused Electricorp of ‘bully tactics’.⁹⁷ Such adverse publicity led to Electricorp changing its corporate name to ‘ECNZ’ (the acronym for Electricity Corporation of New Zealand).

Economic Benefits to the Nation: Electricorp’s Case

Not only were the 1980s significant with respect to the major reform of environmental policy in New Zealand, but the fourth Labour government (elected into office in 1984) also introduced dramatic changes to the economic direction of the country.⁹⁸ The massive

⁹⁵ *ibid.* p.207.

⁹⁶ Electricorp argued that the Planning Tribunal had not given sufficient weight to the national interests (of energy generation) in reaching its decision. The Whanganui River Maori Trust Board, Department of Conservation and the Whanganui River Flows Coalition all opposed Electricorp’s appeal.

⁹⁷ Keith Chapple, Chairman of the Whanganui River Flows Coalition, interpreted Electricorp’s decision to appeal in the following terms: “In Electricorp’s sad case, it is difficult to escape the conclusion that it is pursuing a private agenda: that is, to burn off the opposition using every legal avenue available; to send a message to regional councils and others of what they can expect if they oppose its single-minded mechanical view of the world, and to maintain the privileged corporate position its current economic power has given it.” Chapple, K. “Bandits on the Whanganui,” *Terra Nova*. Issue 7. July 1991, p.44. It should also be pointed out that during the period 1988-1992 when appeals on the minimum flows case were being heard, Electricorp continued to operate under the 1983 minimum flow regime. Thus, the corporate was ‘rewarded’ with considerable financial advantage right up to 1 December 1992 when the Planning Tribunal’s decision was to take effect, as affirmed by the High Court.

⁹⁸ In response to a national debt crisis (of the 1970s and 1980s), radical changes in New Zealand’s economic policy were introduced from 1984. Previously, the New Zealand economy was relatively sheltered by a welfare state, underpinned by Keynesianism and the imposition of the social democratic consensus through ‘authoritarian statism’. From the mid 1980s, the ideology of the ‘libertarian right’ asserted the supremacy of the market and the privatisation of goods and services (as opposed to the public

changes embraced monetarist principles and practices throughout the whole public sector.⁹⁹ Treasury had an influential part to play in the introduction of the 'New Right' philosophies of commercialisation, corporatisation and privatisation.¹⁰⁰ In 1986, Electricorp was created under the State Owned Enterprises Act. The corporation took over administration of the nation's entire electricity generating system from the former New Zealand Electricity Division (under the jurisdiction of the Minister of Electricity). The idiom of the day favoured: 'less government in business; more business in government'. This was reflected in the statutory purpose of the state-owned enterprises which required them to operate as successful businesses primarily to make a profit.¹⁰¹

The State Owned Enterprises Act 1986, however, further defined a "successful business" as one that "...exhibits a sense of social responsibility by having regard to the interests of the community in which it operates..."¹⁰² Furthermore, the statutory imperative to consider Maori interests was one of the strongest and clearest legislative clauses of any Act of Parliament at that time: Section 9 of the Act requires that the Crown does not act in a manner that is inconsistent with the principles of the Treaty of Waitangi. In transferring Crown assets to the state-owned enterprises, Maori raised concerns about the Crown's responsibility to fulfill its obligations under the Treaty of Waitangi.¹⁰³ The concern led to an

sector) and a preference for the ('free' and competitive) individual over the collective good. See: Armstrong, N. "State," pp.114-131, in: Spoonley, P.; Pearson, D. and Shirley, I. (eds.) *New Zealand Society: A Sociological Introduction*. Palmerston North: Dunmore Press. 1990.

⁹⁹ New Zealand's public management reforms "...represent a paradigmatic shift or a fundamental recasting of the instruments of governance. ...Although other OECD countries, most notably Australia, Britain, Canada, and the USA, have embarked upon major public sector reforms since the early to mid 1980s, none have matched the scope, scale, and speed of introduction to those in New Zealand. Significantly, too, New Zealand's reforms were not undertaken in isolation but formed part of wider economic, social, and constitutional changes..." Boston, J.; Martin, J.; Pallot, J. and Walsh, P. *Public Management: The New Zealand Model*. Auckland: Oxford University Press. 1996, p.351.

¹⁰⁰ "Broadly speaking, it [Treasury] favoured private ownership and non-ministerial organisational forms." *ibid.* p.80.

¹⁰¹ The principal objective of the Minister of Electricity and the New Zealand Electricity Division was to supply electricity at the cheapest cost and greatest security to the community. The main objective of Electricorp (and all state-owned enterprises) was 'to get the best return for the tax payers' dollar', as indicated in the State Owned Enterprises Act 1986, Section 4(1): "The principal objective of every State owned enterprise shall be to operate as a successful business and, to this end, to be - (a) As profitable and efficient as comparable businesses that are not owned by the Crown; and (b) A good employer; and (c) An organisation that exhibits a sense of social responsibility by having regard to the interests of the community in which it operates and by endeavouring to accommodate or encourage these when able to do so." [underline added.]

¹⁰² see: *ibid.*

¹⁰³ The concern was taken to the Court of Appeal in *New Zealand Maori Council v Attorney General* [1987] 1 NZLR 641. In essence, the decision ruled that rights and properties held or managed by state-owned enterprises should not be passed to private ownership until the mechanism provided in the Treaty of Waitangi (State Enterprises) Act 1988 was in place. That required a notice against the title, in the event that a claim was lodged to the Waitangi Tribunal with respect to the *taonga* (treasured resources).

appeal to the Court of Appeal (*NZ Maori Council v Attorney-General*) which also resulted in the enunciation of several principles of the Treaty of Waitangi.¹⁰⁴ Legal counsel for Electricorp (in their submission) cited this case as evidence that: “Maori values have been recognised specifically in the agreement between the Crown and the Corporation...”, and further assured the Planning Tribunal that it would undertake “considerable consultation” with Whanganui Maori tribes.¹⁰⁵

Electricorp emphasised the benefits of the Western Diversion to the nation as a whole in terms of supplying energy to New Zealand homes and industries. While they acknowledged that some regional users had been affected by the Tongariro Power Development operations, they insisted that these effects had already been financially compensated for.¹⁰⁶ The corporation pointed out that if natural flows were returned to the Whanganui, two percent of the nation’s electricity would be lost (i.e., equivalent to that used by Wellington city, as at 1988).¹⁰⁷ A cost-benefit analysis concluded that the net economic cost of closing the Western Diversion would result in a loss of two hundred and twenty five million dollars.¹⁰⁸ Given that possibility, Electricorp claimed that a new facility would need to be

Electricorp responded to the concern about the corporation holding rights to use water in perpetuity (as per the 1958 Order in Council) and agreed in its ‘asset transfer agreement’ to apply instead for water rights with fixed terms.

¹⁰⁴ The judges in the aforementioned case agreed that the overriding principle of the Treaty of Waitangi is that of *partnership* which requires the Treaty partners to *act towards each other reasonably and with the utmost good faith*. Another principle determines that the duty of the Crown is not merely passive but extends to *active protection* of the Maori people in the use of their lands and other guaranteed *taonga* (treasures) to the fullest extent practicable.

¹⁰⁵ Evidence of R.J. Somerville (Counsel) for the Electricity Corporation (‘Electricorp’) before the Planning Tribunal. Part IV, para.2, p.7.

¹⁰⁶ See fn.71 above.

¹⁰⁷ Scotts, R. (ed.) “Water Rights: Will the tap be turned off on Electricorp?” *Energywise*. [Publication produced by the Ministry of Energy.] September 1988, p.4. This begs the question that if Wellington city (one of the largest urban centres in New Zealand) uses only two percent of the nation’s electricity, then who are the major users? Who is really benefiting from the Tongariro Power Development scheme?

¹⁰⁸ *Planning Tribunal Decision on Wanganui River Minimum Flow Appeals 1990*. “Chapter Eight: Summary,” p.205. The neo-classical economics tool of cost-benefit analysis, however, is widely criticised (by ecological-economists, social theorists, and others) as an incomplete measure of ‘costs’. Cost-benefit analyses do not take account of qualitative values (i.e., those difficult to value in numerical/monetary terms), such as spiritual and intrinsic values. See: Blamey, R. and Common, M. “Sustainability and the Limits to Pseudo Market Valuation,” pp.165-205, in: Bergh, J.C.J.M. van den and Straaten, J. van der. (eds.) *Toward Sustainable Development: Concepts, Methods and Policy*. Washington, D.C.: Island Press. 1994. Dore, M.H.I. “The Problem of Valuation in Neoclassical Environmental Economics,” *Environmental Ethics*. Vol.18, No.1. 1996, pp.65-70. In a collective submission, citizens of Taumarunui highlighted this conflict: “It is accepted that the power generated as a result of the water diverted via the western diversions has a monetary value of about \$30 million dollars per annum; however, the [Taumarunui District] Alliance contends that the intrinsic value of this resource far outweighs this figure in manifold loss of values to the regional community and the residents of the river valley.” Wildlife Services New Zealand Limited. “Submission to Rangitikei-Wanganui Catchment Board – Wanganui River Minimum Flow Regime Special Hearing on behalf of Taumarunui District Alliance,” 1988, p.15.

built elsewhere; effectively shifting the 'environmental trade-off' to another catchment. The implication of this assertion was that submissions in opposition to Electricorp were motivated by self-interests: the so-called 'NIMBY' ('Not In My Back Yard') syndrome. Opposing submitters retorted that Electricorp had failed to realistically consider energy conservation measures.¹⁰⁹ This failure was not surprising, however, considering that the state-owned enterprise *was* principally a profit-making business; thus highlighting its own inherent 'conflict of interest' (and, it could be further suggested, those conflicts inherent to modern society itself).

Electricorp cautioned the Planning Tribunal against giving too much weight to 'environmental issues', claiming: "There are many environmental aspects present in this case, but that does not mean that all environmental issues are of equal or any significance."¹¹⁰ In comparison to other energy resources (e.g., fossil fuels, such as coal), Electricorp asserted that "...the use of water for hydro-electricity power also has environmental advantages."¹¹¹ They claimed this because hydroelectricity utilises a constantly renewing energy source (available 'indefinitely'), and produces very little pollution.¹¹² If more stringent low flows were to be introduced on the Western Diversion, Electricorp threatened that they would be forced to make more use of their thermal stations. The environmental and political implications of such a move would clearly be unwise with respect to increased 'greenhouse gas' emissions and global climate change. Not surprisingly, the corporation was seen by its environmentalist opponents as using 'dirty

¹⁰⁹ Peter Horsley, legal spokesperson for the Whanganui River Flows Coalition, summarised that argument: "The Trust Board, DoC [Department of Conservation], and the Flows Coalition all argued that Electricorp could make up, by energy conservation measures, the loss of generating capacity from the return of the river waters to the catchment. The Tribunal stated that conditions do not yet exist in New Zealand for energy conservation to reduce electricity demand... The problem is compounded because of Electricorp's strong promotion of energy use." Horsley, P. "Wanganui Flow-Ons," *Terra Nova*. Issue 2. 1991, p.15.

¹¹⁰ Evidence of R.J. Somerville (Counsel) for the Electricity Corporation ('Electricorp') before the Planning Tribunal. Part III, para.2, p.5.

¹¹¹ *ibid.* Electricorp pointed out that they had created environmental and social opportunities such as the man-made Lake Otamangakau; now a prized trout fishery. Furthermore, they had provided for public access to rivers within the scheme.

¹¹² Electricorp neglected to discuss the full gamut of environmental and social effects of hydroelectricity dams on the river ecosystem and its communities. Comprehensive international reports were available at the time, such as the three volume report presented to The European Ecological Action Group investigating *The Social and Environmental Effects of Large Dams*. [Volume One: Overview, 1984. Volume Two: Case Studies, 1986. Volume Three: A Review of the Literature, 1992. Series editors; Edward Goldsmith and Nicholas Hildyard.]

tactics' in order to turn the tables on those who favoured stricter environmental controls for the Whanganui River system.¹¹³

Community, Conservation, Recreation and Tourism Interests

Community Concerns:

For many of the small towns nestled along the Whanganui River, the waterway provides a focal point for the community; Maori and Pakeha alike. Although environmental responsibility has not always been taken seriously in the past by a number of those townships (formerly, both Taumarunui and Wanganui discharged sewage into the Whanganui River; and 'unsustainable' farming practices continue to overload the water with sediment resulting from accelerated erosion)¹¹⁴, the river was still enjoyed by many for its unique amenity values and recreational opportunities. A submission on behalf of the Taumarunui District Alliance; a group of interested and concerned organisations and individuals from the Taumarunui region (which combined one thousand and ninety individual submissions), conveyed the special place that the Whanganui River holds in the heart of the community:

“At Taumarunui, young and old alike once swam in the Wanganui River adjacent to the township. The Domain at Mananui, immediately upstream of Taumarunui was a favoured and popular picnic, swimming, casual canoeing, and barbecuing area. [Community] groups appreciated the river as a centre for their activities. This is now not so. The diversion of water from the Wanganui river headwater systems has reduced flows in the vicinity of Taumarunui by about 50%. This has seriously affected the Taumarunui community, and its quality of life. The right to enjoy their river has been taken from them.”¹¹⁵

¹¹³ W. Russell Howie, an environmental advisor for Electricorp, redefined the more obvious conflict of 'development versus conservation' to that of a conflict between two choices of 'energy generation', each with relative environmental trade-offs. In an article intended for an audience most at variance with Electricorp's stance, Howie posed the following dilemma: "Are the environmental benefits of leaving water in the Wanganui River more important than the environmental benefits of conserving fossil fuels and minimising air and other emissions? The debate is between conflicting environmental values and it is important to get the rules straight for resolving this conflict." Howie, R. "Why Low Flows Means High Court," *Terra Nova*. Issue 2. February 1991, p.27. Tactics such as these could be seen as an attempt to shift the burden of 'environmental guilt' onto the pro-conservation lobby.

¹¹⁴ As previously mentioned, residents of Wanganui city have made a long-term commitment to rates increase to enable improvement to the sewage scheme (i.e., separated stormwater and sewage pipes). Sustainable land use management in the Whanganui catchment is also actively encouraged by the Manawatu-Wanganui Regional Council.

¹¹⁵ Wildlife Services New Zealand Limited. "Submission to Rangitikei-Wanganui Catchment Board – Wanganui River Minimum Flow Regime Special Hearing on behalf of Taumarunui District Alliance," p.11.

The value of these experiences for strengthening bonds within families and among the wider community, and in illustrating connections between humans and Nature, should not be underestimated. It is a sad reflection on sectors of modern society today that the relationships basic to any sense of community are lacking in a ‘real’ (i.e., in computerised terms: non-‘virtual reality’!) sense. ‘Community’, in its full and original meaning, extends beyond one’s private interest or hobby groups to include a much wider ‘sense of belonging’ to the social whole and the natural sphere. The artificial narrowing of interactions to a relatively homogeneous peer group is particularly evident among city-raised, technologically-addicted teenagers. If today’s youth do not ‘grow up’ with the river (or are not exposed to other ‘outdoor’ experiences), then it is quite plausible, and of genuine concern, that environmentally-based know-how and an ethic of respect for Nature will not be passed on by them to their descendants.

Conservation Values:

Whilst poor water quality results from numerous incremental ‘developments’ throughout the Whanganui catchment, locals are rightly concerned that the degraded quality of water has become further exacerbated due to the sustained ‘unnatural’ low flows experienced since the interception of the headwaters by the Tongariro Power Development scheme. Without a sustained supply of snow-melt and pure, spring-fed waters sourced from the mountains and rich with ‘cleansing’ properties, the Whanganui River has taken on a very different character. This has become obvious to those who live close to the river and, through frequent association, have come to know its varying moods. Locals are alarmed at the numerous changes they have observed in the river’s colour (from greenish to muddy brown)¹¹⁶, clarity, smell and feel. Overall, the results are rather “unpleasant”. Jock Erceg, a farmer, fisher and boater on the river for over fifty years, expressed his grave concern at the changes he has observed since the headwaters were diverted in the 1970s:

¹¹⁶ Out-of-town visitors to the Wanganui region often make comments on the ‘dirty brown river’. Such remarks undermine locals’ pride in their natural setting. Furthermore, they are deeply hurtful and detrimental to the *mana* of Whanganui River Maori. While the Whanganui River is to some extent naturally affected in colour and silt content by the papa (mud/sandstone) bedrock through which it flows, the notoriously poor water clarity and cloudy brown colour (the result of land clearance and consequent erosion) is exacerbated by reduced water volume in the Whanganui River. Reflecting over thirty years of experiences on the river, a local resident comments: “Years ago, the river had a clear look about it. It was a natural greenish colour, reflecting the banks, bush and countryside around it. Quite a different look to the clear blue of some of the South Island rivers. When I first started jet boating in 1958, my recollection is of lovely clear grey shingle rapids, and greenish water, clear to a depth of about 9 feet. It is my belief that the quality and colour of the Wanganui river water has been most affected by the loss of the Whakapapa [River headwaters]. It is this glacier fed water that improves the colour.” Evidence of John Erceg before the Planning Tribunal. 1988, para’s.E2, E3, p.3. [underline added.]

“The natural river smells of the past were never unpleasant. The river had a fishy smell at low water, which was quite pleasant, and a strong fresh muddy smell when the river was in flood. There were different smells when the river was at different levels, but none were unpleasant.

The low water smells we are getting now are totally different. During low flows the river is quite rotten. I believe the change is due to a rise in temperature and decaying algae.”¹¹⁷

Of particular concern is the loss of coarse volcanic sand that used to perform a valuable function in ‘flushing’ the finer silt sediments downriver. Now, however, the intake structures act as a physical barrier to the movement of these materials. As a result of reduced sand content and restricted shingle movement, silt and ‘suspended mud’ have accumulated in places. The consequent ‘cementing’ of riverbed stones has made the habitat less suitable for the insect larvae which are an important food source for the *tuna* (eel), *whio* (blue duck) and other species that are also part of the river ecosystem.

Furthermore, the standardisation of mean flows (at consistently low levels) has disrupted the natural freshes that enable the ecosystem to self-organise and replenish itself. Some claim that the river has plunged into a “fever condition” with a disposition that is “sluggish”.¹¹⁸ Some claim that the river no longer seems able to ‘absorb’ further abuse, almost as if its ‘resilience’ has been pushed too far...¹¹⁹ In the opposite extreme, during periods of high rainfall when water pours over the intake structures, the floods are now quite dangerous; giving tangible expression to what might be described as a ‘wild water rage’. The rapids, the pools and shingle fans are, in some places, now virtually unrecognisable to Maori whose knowledge of each rapid is intimate and long-standing. Perhaps, one might observe, the very ‘footprint’ of the Whanganui River is out-of-step?¹²⁰

¹¹⁷ *ibid.* para’s. F1, p.3; F3, p.4. [underline added.]

¹¹⁸ Evidence of Iain Trousdell (on behalf of the Flow Design Research Association) before the Planning Tribunal. 1988, p.5.

¹¹⁹ In presenting a case for protecting ‘intrinsic values’ (see discussion below) of the Whanganui River, David Young acknowledged the catchment-wide stresses on the river through historical and continued human interventions. Those activities have degraded the ‘water vitality’ and thus severely impaired the ability of the Whanganui River to function as a natural entity. Their accumulative impact is placing the ‘resilience’ of the river ecosystem at risk: “Even before the diversion of its waters, every one of these qualities had been heavily modified on the Wanganui, to the extent that the river’s intrinsic qualities were at risk. The diversion placed additional strains on the river causing a further loss of its intrinsic value. The river as a consequence is now heavily stressed and the conservation of it to protect its intrinsic value means that stress should now be relieved.” Young, D. Evidence presented before the Planning Tribunal. para.5.1. [underline added.] Refer to Chapter Four: “The Culture of Ecology and the Ecology of Culture” for a discussion of C.S. Holling’s definition of ecological ‘resilience’.

¹²⁰ See comments by John Tahuparae in the Waitangi Tribunal *Whanganui River Report. op. cit.* p.76.

Scientists employed by the Department of Conservation confirmed what many in the community feared: that the ecological structure and functioning of the Whanganui River had undergone dramatic and ‘undesirable’ change.¹²¹ The scientists held grave concerns for the native fish and bird species that depend on the river ecosystem. In particular, the rare native blue duck (*whio*) was being placed in further danger through the despoliation of its original habitat on the Whakapapa River. Other wildlife was affected: the scientists’ studies confirmed anglers’ anecdotal observations of drastic reductions in fish numbers immediately downstream of the intake structures.¹²² This could only have detrimental ‘flow-on’ effects throughout the entire river ecosystem. In order to understand the full environmental impact of the power scheme, some ventured that an ‘ecosystem approach’ be adopted.¹²³ This approach would require the Whanganui River minimum flow regime to be set at the ‘ecological bottom line’.

However, scientifically-verified information on the river’s ecology was scant. Prior to the construction of the Tongariro Power Development scheme, a comprehensive scientific study of the environment had not been undertaken. Therefore, the Department of Conservation scientists were considerably disadvantaged in their ability to monitor and measure changes due to the lack of ‘baseline’ data. Local knowledge was therefore extremely important, although arguably not fully valued in the legal battlefield that tends to favour ‘experts’ and ‘technical’ evidence.¹²⁴ Many individuals (‘lay people’) came forward to

¹²¹ It is important, once again, to emphasise that it is not change *per se* that is undesirable – for Nature is dynamic, evolving, unpredictable (as a complex systems perspective of ecosystems reveals; see Chapter Four above). From an ecological point of view, the Department of Conservation advocated the return of: “A hydrological regime that reflects the uncertainties and variabilities of nature so that natural processes are not distorted by a man modified regime. Particularly this means artificially elongated periods of constant flow, are to be avoided. This is especially so at critical low flows.” Evidence of J.K. Guthrie and A.F.D. Cameron (Counsel for the Department of Conservation) before the Rangitikei-Wanganui Catchment Board. 7 July 1988, p.8. [emphasis added.]

¹²² Data collected by the Department of Conservation reveals that: “...fish numbers in the Whakapapa River [tributary of the Whanganui River], previously one of the best trout fishing rivers in New Zealand, have fallen by 90 percent below the intake and 60 percent further downstream.” Scotts, R. (ed.) “Water Rights: Will the tap be turned off on Electricorp?” *op. cit.* p.4.

¹²³ The ‘ecosystem approach’ is advocated by environmentalists as a problem solving technique with considerable benefits for resource management. It is preferred over other planning techniques that may be criticised as ego-centred, piecemeal, or emphasising environmental factors to the exclusion of human systems. The Catchment Board’s proposed integrated catchment management scheme was commended, being an indication that the ecosystem (i.e., the catchment of the river) was the most appropriate scale for ‘managing’ the Whanganui River in its entirety. [Note that at this time, the ‘ecosystem approach’ was understood in equilibrium terms as was James Lovelock’s Gaia hypothesis and related notions of ‘holism’, ‘health’ and ‘stability’. See discussion in Chapter Four of the complex systems understanding of ecosystems as self-organising, open, adaptive, hierarchical systems.]

¹²⁴ Experts are typically favoured over the lay person for their ‘objective’ scientific and professional opinion. Yet, in the hearing of evidence on hydrological aspects of the Whanganui River catchment, two

present personal observations of changing conditions on the quality of the Whanganui River environment (or made them known to the representative interest groups). These testimonies reflected a highly attuned local knowledge developed over a lifetime of close association and, in many cases, dependency on the Whanganui River.

Impacts on Tourism and Recreation:

Operators of jet boat enterprises also complained of low river levels and its direct impact on the ability to navigate their vessels. They pointed to instances where the Whanganui River was virtually non-navigable, especially upriver of Taumarunui township. This was particularly noticeable during the summer period (December to May) when the tourism demand peaked and the flows on the river were naturally lower. Some operators even demanded a compensation for lost income and inability to fully 'capitalise' on the river as a 'tourism resource'. Other recreational users (such as canoeists and rafters) made similar claims that their thrill-seeking adventure experience was degraded through the 'taming of the rapids'. In addition, offensive smells and the general unpleasantness of apparent algae and thick, slimy mud were noted by visitors who came to the Whanganui River to enjoy its unique scenic qualities and recreational opportunities.

The value of the Whanganui River, however, is not restricted to activities that benefit private incomes or the pleasure-seeking pursuits of adventurers. Nor, for that matter, is the sense of 'wilderness' of the Whanganui River environment reducible to that of a 'psychological outlet' for those who wish to escape from the excessive pressures of urban life. The river does display magnificent inspirational scenery, providing picturesque scenes for painters and rich imagery for poets, but it is much more than the sum of these and countless other diverse attributes. James K. Baxter, one of New Zealand's preeminent poets established a 'community' at Jerusalem (on the Whanganui River) in 1969. He was well positioned to speak and write about the wide disparities in cultural, spiritual, and economic values in New Zealand society.¹²⁵ His sonnet alludes to this conflict of values:

expert witnesses provided quite different interpretations of the same data and catchment (one expert was called for the Department of Conservation and the other was employed by Electricorp). As a 'solution' to their inconsistency, the judge requested that the two hydrologists retire to a private room in order to negotiate a compromise. Refer to: Heerdegen, R. and Rosier, J. "Knowledge and the Environmental Planning Process," *SITES*. Issue No.22. Autumn 1991, pp.5-20.

¹²⁵ The community for non-conformist 'delinquents' established by James K. Baxter ('Hemi') at Jerusalem (Hiruharama) on the Whanganui River was often chastised by mainstream society as a 'hippy' refuge for adolescents under the influence of illegal substances. Baxter, however, sought to establish a community founded on a "...spirit of poverty, that is, a spirit of detachment that expresses itself in the

“The brown river, te taniwha, flows on
Between his banks – he could even be on my side,

I suspect, if there is a side – there are still notches worn
In the cliffs downstream where they used to shove

The big canoes up; and just last week some men
Floated a ridge-pole down from an old pa

For the museum – he can also be
A brutal lover; they say he sucked under

A young girl once, and the place at the river-bend is named
After her tears – I accept that – I wait for

The taniwha in the heart to rise – when will that happen?
Is He dead or alive? A car goes by on the road

With an enormous slogan advertising
Rides for tourists on the jetboat at Pipiriki.”¹²⁶

Protecting ‘Intrinsic Values’: Widening the Circle of Ethical Concern

One appellant struck a different chord when he asked the Planning Tribunal: “Who speaks for the river, as it used to be?”¹²⁷ The question suggests that the Whanganui River has a ‘natural character’ (i.e., “as it used to be”, prior to interference by ‘development’) that should be spoken for alongside the human-centred, value-laden interests presented before the Planning Tribunal. Such a question, while challenging as it is, might itself be questioned; for it implies that a person – a valuer – has ‘rights’ to speak *for* the river.¹²⁸

sharing of material and mental possessions.” In many ways, the community at Jerusalem provided a ‘decompression chamber’ for a youthful counter-culture who rebelled against the culturally conservative and materialist beliefs of their mostly wealthy, middle-class families. Baxter was outspoken in his criticism of mainstream society, referring to it as: “civilised darkness”. In ‘fathering’ this community-of-sorts, Baxter affirmed the generosity and tolerance of the local Maori community and, through the use of *korero* (discussion), became sensitive to and respectful of their concerns. Baxter, J.K. *Jerusalem Daybook*. Wellington: Price Milburn. 1971, p.1. See also pp.50-51.

¹²⁶ Baxter, J.K. “Poem for Colin (25),” *Jerusalem Sonnets. Poems for Colin Durning*. Dunedin: University of Otago, The Bibliography Room. 1970, p.25. Pipiriki is the most northern settlement accessible by the river road, located in the ‘middle reaches’ of the Whanganui River. See discussion below of *taniwha*, which Baxter describes as a ‘water spirit’. *Pa* is a Maori village.

¹²⁷ Evidence of Iain Trousdell (on behalf of the Flow Design Research Association) before the Planning Tribunal. 1988, p.1. One of the aims of Trousdell’s submission was: “To provide a voice for the river itself.....not just for people’s desires to boat, canoe, fish or enjoy lovely sights, all of which should be considered fairly of course. Who speaks for the river, as it used to be?”

¹²⁸ This might imply a closely related enquiry into whether the river has moral consideration akin to legal standing rights. According Nature with ‘legal rights’ is advocated by some environmentalists (mainly in the United States of America) in legal cases where the environment is otherwise defenceless against development pressures. Stone asserts: “It is not inevitable, nor is it wise, that natural objects should have

Indeed, for Te Atihaunui-A-Paparangi the question of who has authority and *mana* to make decisions with respect to the Whanganui River is of fundamental importance, but for reasons that extend far beyond utilitarian function or ‘instrumental value’ (see definitions below). Because the Planning Tribunal interpreted its decision-making role in the judicial process as having to balance the many competing interests and therefore arrive at a compromise between the numerous interest groups, there was a justifiable fear that values independent of human ‘uses’ would be given lesser priority. A case was presented for recognition of the Whanganui River as having value *in and of itself*, that is: ‘*intrinsic value*’.

Much traditional philosophical reasoning is based on a sense of morality; it considers what is right or wrong with respect to concerns arising from human relationships (e.g., the ‘rights of the individual’ versus their ‘duty to society’). However, when the issue(s) extends to environmental concerns, human-centred moral reasoning is limited. Here, philosophical consideration raises ethical concerns that are, at heart, about *values*. Environmental ethics further distinguishes between ‘instrumental value’ and ‘intrinsic value’. The former is anthropocentric (human-centred) such that Nature-as-‘object’ is valued only when it can be put to beneficial use. The most overt expression of instrumental value is economic rationalisation based on utilitarian principles. However, the conservation movement similarly restricts ethical concerns to instrumental value when arguments are presented for the protection of so-called ‘natural resources’ *because of the benefits to be derived for humans* (e.g., clean water benefits human health and well-being, biodiversity conservation/species protection may potentially provide medicinal or agricultural uses).¹²⁹

no rights to seek redress in their own behalf. It is no answer to say that streams and forests cannot have standing because streams and forests cannot speak. Corporations cannot speak either... Lawyers speak for them...” Stone, Chr.D. “Should Trees Have Standing? Toward Legal Rights for Natural Objects,” pp.153-162, in: Nelissen, N.; Straaten, J. van der and Klinkers, L. (eds.) *Classics in Environmental Studies: An Overview of Classic Texts in Environmental Studies*. The Hague: International Books. 1997. While I acknowledge the merit of this approach (given the limitations of rationality that define the System and society within which it operates), I am less comfortable with the implicit acceptance of rights-based individualism and the legal battlefield as appropriate for giving ‘voice’ to Nature through so-called ‘speaking rights’. Indeed, streams and forests *do* speak – not through lawyers!, nor through legislatively-created ‘guardian’ authorities – but to those who retain the abilities to *listen* and who pay attention. In indigenous cultures, shamanic relationships attest to this. In Western philosophy, the tradition of ‘phenomenology’ (the study of direct experience) has been developed through the insights of Edmund Husserl, Martin Heidegger and Maurice Merleau-Ponty.

¹²⁹ A recent example is *The New Zealand Biodiversity Strategy* (2000). The first page states: “Sustaining New Zealand’s biodiversity will benefit the whole community, through the clean air and water and biological productivity that come from healthy ecosystems, the pride and profit we get from New Zealand’s distinctive biological and green branding, and the enjoyment and sense of identity we derive from our natural world.” Department of Conservation and Ministry for the Environment. *The New Zealand Biodiversity Strategy*. Wellington. February 2000, p.1. This strategy fulfills part of New Zealand’s commitments under the international Convention on Biological Diversity.

Intrinsic value differs from other ethical considerations in that it is recognised as a value intrinsic to the 'thing' itself and not dependent on a human valuer as such: "Some things we value because we recognise them in a moral, spiritual, symbolic, aesthetic, or cultural importance. We value them for themselves, for what they mean, for what they stand for, for what they are, not for how they are used."¹³⁰ Advocates for environmental ethics call for the extension of moral considerations beyond those centred solely on humans to that of a moral value of Nature (i.e., from an 'ego-centric' to an 'eco-centric' perspective). The writings of naturalists and early ecologists, such as Aldo Leopold (1887-1948) in his much-acclaimed "The Land Ethic" essay (1949), have had an enormous influence on the (principally Western-driven) environmental movement.¹³¹ Leopold challenged the notion of land as "property", instead arguing for an enlarged ecological respect for land as a "biotic community" of which humans are a "plain member" among other species.¹³² A new set of morals based on the land ethic would reason that: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."¹³³

Those who argued for protection of the natural character of the Whanganui River urged the Planning Tribunal to consider the Wanganui River Minimum Flows Appeals case in the wider context of the alarming environmental degradation occurring throughout the planet. They asserted that their stance with respect to the Whanganui River should not be considered in isolation, but as part of a growing worldwide movement to support ethical obligations and constraints in guiding Human-Nature relationships. Peter Horsley, a lecturer in planning law, cited international environmental law where ecosystem values had been accorded greater weighting over powerful economic forces.¹³⁴ He also hinted at the

¹³⁰ Des Jardins, J.E. *Environmental Ethics: An Introduction to Environmental Philosophy*. [Second Edition.] Belmont, California: Wadsworth Publishing Company. 1997, p.129.

¹³¹ Aldo Leopold advocated a 'land ethic' based on the respect for *all* biotic organisms. He was critical of conservation efforts that sought only to protect species of economic value: "To sum up: a system of conservation based solely on economic self-interest is hopelessly lopsided. It tends to ignore, and thus eventually to eliminate, many elements in the land community that lack commercial value, but that are (as far as we know) essential to its healthy functioning. It assumes, falsely, I think, that the economic parts of the biotic clock will function without the uneconomic parts." Leopold, A. "The Land Ethic," pp.217-241, *A Sand County Almanac. With Other Essays on Conservation from 'Round River'*. [Illustrated by C.W. Schwartz.] New York: Oxford University Press. 1949, pp.229-230.

¹³² "In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such." *ibid.* pp.219-220. This understanding of the interrelatedness (and embeddedness) of human beings with all aspects of the natural world is central to indigenous peoples' ways of life.

¹³³ *ibid.* p.240.

¹³⁴ Horsley, P. "Intrinsic Values, Ethics, and the Law," *Terra Nova*. Issue 4. April 1991, pp.37-38.

inclusion of “intrinsic values of ecosystems” as part of the Resource Management Bill (enacted after the appeals hearing). The new legal interpretation of intrinsic values included not only biological and genetic diversity, but also the integrity of ecosystems and their functioning, form, and resilience.¹³⁵ This points to a much greater acceptance of ecological philosophies and systems thinking (i.e., with respect to natural entities as dynamic, complex and adaptive ecosystems).¹³⁶

There was a risk, however, that the intrinsic value debate could fall into a simple dialectic of: ‘environment versus development’ interests, or, ‘intrinsic versus instrumental’ values. Yet, the belief that Nature can only exist in a state of ‘naturalness’ when humans are excluded is not universal, but is a cultural construct reinforced by those conservation movements that advocate extreme isolation/preservation policies and actions. This approach is very different to that taken by many indigenous peoples.¹³⁷ For example, Whanganui River Maori explain that they do not talk *to* or *about* the Whanganui River but, rather, they talk *with* their *Tupuna Awa*. The distinction is important because they see themselves as an essential part of the river: “*Ko au te Awa, Ko te Awa ko au*” – “I am the River, and the River is me”.¹³⁸ David Young, a journalist and historian whose interests had brought him into direct, personal contact with respected Whanganui River Maori spiritual leaders, spoke from his considered experience and insightful awareness when he suggested a link between intrinsic values and the values and reverence Maori traditionally hold for Nature:

¹³⁵ Under the Resource Management Act 1991: “...all persons exercising functions and powers under it [the Act], in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to – ... (d) Intrinsic values of ecosystems.” [Section 7. ‘Other matters’] (see Appendix C). The Act further defines: “‘Intrinsic values’, in relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including – (a) Their biological and genetic diversity; and (b) The essential characteristics that determine an ecosystem’s integrity, form, functioning, and resilience.” [Section 2. ‘Interpretation’.]

¹³⁶ See Chapter Four discussion of ecosystems as complex adaptive systems.

¹³⁷ This cross-cultural difference was illustrated in 1993 with the application for a Water Conservation Order over the Whanganui River lodged by the Royal Forest and Bird Protection Society. The environmental group sought the Water Conservation Order to preserve the Whanganui River’s natural state through a method that imposes restrictions or prohibitions relating to the quantity, quality, rate of flow, or level of the water body (ss.199, 200; Resource Management Act 1991). However, Whanganui River iwi did not support their application because they regarded the conservation order hearing as an imposition on their *mana* over the river, and a breach of the Treaty of Waitangi. This application prompted Atihaunui to lodge their urgent Treaty claim to the Whanganui River with the Waitangi Tribunal. For discussion on this issue, see: Young, D. “Treaty Rights and Water Ways,” *Pacific World*. No.51. December 1998, pp.34-36.

¹³⁸ From the *whakatauki* (proverb): “E rere kau mai Te Awanui mai te Kahui Maunga Ki Tangaroa; Ko au te Awa, Ko te Awa ko au. The River flows from the Mountain to the Sea; I am the River, and the River is me.”

“Traditionally the Maori saw themselves as part of nature, and indeed as a part of this river. But the values and the technology held by the Maori in regard to the river were such that they appear to have allowed the Whanganui to retain its natural characteristics. So for me it is clear that the term ‘intrinsic’ can be inclusive of Maori values. To me, ‘intrinsic values’ are those qualities that go to make up a river’s special character.”¹³⁹

Cultural and Spiritual Concerns of Whanganui River Maori

The effects on Whanganui River Maori of the damming and diversion of the headwaters of the Whanganui and its tributary streams are severe. The ‘attack on Nature’ has resulted in manifold, destructive effects. Several submissions for the Whanganui River Maori Trust Board highlighted the impacts of the Tongariro Power Development scheme on indigenous fish species and their habitats. The overall reduction in the mean level of the river has altered the habitats of indigenous fish to such an extent that some of those habitats are now exposed as ‘dry land’. For example, banks where *kakahi* (freshwater mussels) could be found are now permanently above the water level, and the deep pools where eels were once caught are too shallow and warm for the *tuna* to survive. Fish populations have dropped drastically and some species have been entirely lost from the river.¹⁴⁰ Where once the numbers and variety of fish had been prolific, forming the staple diet of the river communities, they are now no more than an occasional treat supplementing a store-bought grocery list.

For Atihaunui, astute observers and protectors of their river environment, the declines in fish numbers and variety are indicators of wider ecological disturbances.¹⁴¹ This loss has an even deeper effect on the people than a change of food source. With the loss of fish go the

¹³⁹ Evidence of David Christopher Young presented before the Planning Tribunal. p.2, para.3.3. The definition of “intrinsic values of ecosystems” suggested in the Resource Management Bill initially included a third clause in its interpretation: that of the Maori concept of *mauri*, translated as: ‘an abiding life force, essence or principle’.

¹⁴⁰ “[Previously,] Many tens of thousands of eels were taken along the river in a season, at weirs located at most of the major rapids along the source of the Whanganui. Today, perhaps half a dozen [weirs] survive.” Evidence of George Habib before the Planning Tribunal. 1988, para.’s 69 & 70, p.17. Dr. Habib’s submission provides a comprehensive account of customary fishing on the Whanganui River and the changes to the native fishery following the construction of the Tongariro Power Development scheme. Other interventions have also had a disastrous effect on the fisheries and obstructed the customary use of fishing weirs; most notably the dynamite blasting of snags and rapids by the River Trust to clear channels for safe navigation (see discussion above).

¹⁴¹ The detrimental environmental effects of low water flows in the Whanganui River is not restricted to fish, but has also been observed among bird life, insects and flora that form part of the riverine environment. Given the close customary relationship of Whanganui River Maori with fish, changes in the

traditions of fishing. These traditions include the specialised skills involved in the making of nets and their day-to-day maintenance, the setting and placement of the weirs, and the *karakia* (prayers) and ritual ways of ensuring that proper relationships with the river, ancestors, and fish are upheld. A knowledge of this harmony is integral to the ongoing ‘sustainability’ of the river’s myriad interconnections. In these and many other ways, the river is far more than a ‘resource’.¹⁴²

Among other things, the river is a teacher and a retainer of traditions. The river is like a school of life, where learning is lifelong and the prepared mind is always tested. Julie Te Turi Ranginui, *kuia* (respected older woman) and lifelong fisher-woman from Matahiwi (a small settlement accessed by the Whanganui River Road), expresses deep concern with respect to the now seriously hampered ability of the present generation to pass on their river traditions and practices to the younger generations (who, when their time comes, are also expected to fulfill their intergenerational responsibilities to future generations). Her concern is founded on observations that the river she grew up with, and acquired cultural knowledge and experiences from, has changed so dramatically that it is virtually unrecognisable in its present, degraded character.¹⁴³ She laments:

“It is my deepest concern that because of the lack of water, these teachings will not be able to continue. This is robbing our future GENERATION, that special part of OUR WHANGANUI RIVER IWI culture, to the extent that it would affect them by the lack of knowledge sustained from the teachings of their ancestors.”¹⁴⁴

The reduced quantities of fish harvested by traditional fishers have contributed to a general diminishing of the Iwi’s *mana* (prestige as a people). Not so long ago (within the adult

relative abundance and diversity (variation of species) form a useful indicator of the physical health of the river as a provider and sustainer of life.

¹⁴² The Waitangi Tribunal’s *The Whanganui River Report* confirms: “For the Atihaunui people, the river is a doctor, a priest, a larder, a highway, a moat to protect their cliff-top pa, and, with the cliffs, a shelter from winds and storms. It was, as the [Waitangi] Tribunal said in its interim report, ‘the aortic artery, the central bloodline of that one heart’. ...Even the centrality of the river to the people’s lives is insufficient to explain how they think of it. It is tied as well to the Polynesian comprehension of the environment, where a river can be described as a tupuna [ancestor] or matua [parent] as with a caring parent. This points beyond personification to fundamental beliefs.” Waitangi Tribunal. *The Whanganui River Report*. *op. cit.* p.38.

¹⁴³ Arthur Anderson reflects on his childhood challenges on the River: “In my younger days there used to be a challenge to cross the river from one bank to the other. We used to take up this challenge to swim across and when we got across it was something to us younger people and we had to be good swimmers to get across. Today I can walk across this same place. I would say that this is solely because of the diversion.” Evidence of Arthur Tukiri Anderson before the Planning Tribunal. para.12, p.3.

¹⁴⁴ Evidence of Julie Te Turi Ranginui before the Planning Tribunal. 1988, para.29, p.7. [capitals in original.]

memories of the present generation!), river fish (both fresh and in its traditionally-preserved form) was shared widely with distant relatives living inland, and with neighbouring tribes and visitors to Whanganui *rohe* (tribal territory). River fish are a delicacy of the Whanganui to be shared as gifts, which, in turn, endow the hosts with the *mana* that accompanies such generous hospitality. Greed, especially avarice through individual accumulation, was an affront to cultural relationships and brought shame on the family of the selfish individual. This 'gift economy', which underpins a culture and community raised on the ethic of reciprocity and communal caring for one's *whanaunga* (relatives), has been seriously undermined by the accumulated effects of numerous development projects.¹⁴⁵ It is not difficult to understand the point of view of Maori, who object to the diversion of the Whanganui headwaters and tributaries as the latest attempt to destroy their culture and Whanganuitanga.¹⁴⁶

In their formal submissions, speakers on behalf the Whanganui River Maori Trust Board tended to emphasise their cultural concerns with respect to the loss of customary uses as a result of physical changes to the river. Those concerns included the detrimental effects of water diversion on indigenous fish populations, the river ecology as a whole, and locals' income generation (e.g., from jet boat tours), as well as wider influences on other cultural values, tribal beliefs and traditions. The first three reasons were also strongly supported by the Department of Conservation scientists and concerned residents. The reason why these 'physical' (that is, tangible) concerns were accorded more attention was because they are more easily comprehensible (i.e., subject to rational reasoning) by a European audience, typified by the Planning Tribunal committee itself.¹⁴⁷ *Yet, by far the gravest and most important concern to Whanganui River Maori is the devastating effect that the 'cutting off of the head' of the Whanganui and tributary headwaters has had on the Awa as a spiritual entity.*¹⁴⁸ On the metaphysical realm, only Whanganui River Iwi have the *mana* to speak with respect to their *Tupuna Awa*.

¹⁴⁵ Not to mention the stark contrast with the individualistic rights-based demands of modern, capitalist society (e.g., market competition in pursuit of private monetary profit). In this way, 'development' appears to be an extended exercise in 'colonisation'. (See Chapter Five.)

¹⁴⁶ "The so-called technological development resulting from the diversion of the Awa Headwaters severely impedes and INTERFERES with the very intrinsic values of our Maoritanga as a Maori Hapu, as a Whanganui Tribe. Take away the water, we take away all the spiritual teachings of our Maoritanga." Evidence of Julie Te Turi Ranginui before the Planning Tribunal. 1988, para.30, p.7. [underline added.]

¹⁴⁷ Peter Horsley pointed out this potential bias: "The Whanganui hearing was essentially a matter of which values (economic, environmental and cultural) should prevail. The Tribunal should have a wider membership that reflects a broader range of interests – a lawyer, an engineer and a surveyor represent only one segment of our society." Horsley, P. "Whanganui Flow-Ons," *op. cit.* p.25.

¹⁴⁸ A *kaumatua* (elder) of Atihaunui described the water diversion in these terms: "Diversion of the headwaters and source of the Whanganui River is like cutting off the head of a person or an eel. It

To Whanganui River Iwi, their *Awa* (River) is a *taonga* – a treasured and highly valued possession. The *Awa* is, in a very real sense, the historical thread that at once embodies both the *tupuna*, those ancestors passed, and the *mokopuna* (grandchildren) yet to come. Every bend, every rapid and even the quiet pools are reflected in the oral history of the river people.¹⁴⁹ *Kaitiaki* (guardians) and *Taniwha*¹⁵⁰ are resident throughout, guarding and guiding the safe passage of river journeyers and those attuned to things spiritual. These ‘ethereal creatures’ evoke reverence, utmost respect and also fear.¹⁵¹ There is now a very real fear, affirmed in some cases by *tohunga* (spiritual leader/healer), that the *taniwha* are disappearing (or leaving). This is most certainly as a result of desecration to the habitats in which they dwell and the *taonga* (treasures, including ‘natural resources’) that they protect and guard over (see discussion of ‘*kaitiakitanga*’ below). This continues to be a serious concern, as reported in the Waitangi Tribunal’s *The Whanganui River Report*:

“Some of the claimants saw the taniwha as under threat, just as the people are threatened in their river control. It was said, in a matter-of-fact way, that certain taniwha have shifted on account of river pollution or the loss of river flows through water abstractions for hydroelectric and other schemes. Some said the taniwha had not been seen for many years. Whatever the situation, however, this much is clear – the taniwha are part of the rich tapestry of history and lore that the river brings to mind. They are part of the mix that binds the people and the river together.”¹⁵²

becomes lifeless like the River is now.” Evidence of Taitoko Rangiwahakateka Tawhiri before the Planning Tribunal. 1988, section para.2.6.

¹⁴⁹ Photographer Fraser Harding expresses: “The river is the thread that binds Whanganui Maori to this land. It provides a sense of place and history for river families, who trace their origins to this bend or that tributary. This is their tupuna awa – their ancestral river – and to be in its moody waters is to be connected to all that has gone before.” Harding, F. “The Family at Tieke,” *New Zealand Geographic*. No.43. 1999, p.117.

¹⁵⁰ ‘*Taniwha*’ has been translated in English as: “A fabulous monster supposed to reside in deep water” or, worse still, as a ‘ghastly creature’. Williams, H.W. *Dictionary of the Maori Language*. *op. cit.* p.377. Such translations appear derogatory, as if *taniwha* are simply ‘mythical’ creations of a superstitious people. For the reason that no translation is adequate nor, perhaps, even appropriate, I prefer not to attempt any explanation of these ‘spiritual beings’.

¹⁵¹ Some *taniwha* are held in great fear, such as Tutaeporoporo, the shark who was transformed into a *taniwha* and travelled up the mouth of the Whanganui River to terrorise river travellers, seeking bloody revenge for the death of his human master (see Wiremu Kauika’s story, published in 1904 and translated by S. Percy Smith, in: Orbell, M. *Traditional Maori Stories*. Auckland: Reed Books. 1992. Chapter 10: “A taniwha in the Whanganui River,” pp.52-62.) Others provide assistance to humans in times of dire need, such as the *taniwha*, Tutangata kino, who safely guided the *tohunga*, Titi Tihu, who, as a youngster, was sent on a mission alone on the river at night to seek help from the next village (see Young and Foster reference below). All *taniwha*, however, are deserving of respect, as represented by the actions of river users (both Maori and Pakeha) who continue to place a green branch on the rock of the aforementioned *taniwha* as an offering of respect and good will. Young, D. and Foster, B. “Wanganui: Waters of Life,” pp.11-32, *Faces of the River: New Zealand’s Living Water*. Auckland: TVNZ Publishing. 1986, pp.11-12.

¹⁵² Waitangi Tribunal. *The Whanganui River Report*. *op. cit.* p.44.

The fear of transgressing the sacred, natural laws is a very real concern to Maori. While the whole river as a totality is upheld as *tapu* (sacred), some places (for example, where a battle was staged and lives lost) require even greater attention. To break the laws of *tapu* is to invite disharmony. To do so deliberately and then neglect to remedy the transgression through following corrective spiritual advice, is to tangle foolishly with the possibility of death. In diverting the headwaters of the Whanganui, the laws of *tapu* have been broken. Hikaia Amohia, *kaumatua* (elder) of the Whanganui people, stated this in no uncertain terms:

“...Any interference with NATURE, including the RIVER, breaks the LAW OF TAPU; breaks the IHI or sacred affinity of our Maori people with the river; and, reduces the MANA and soul of the Whanganui River, to what it is becoming regarded of today, to being nothing more than a product for commercialisation or, a product for purely aesthetic appreciation. The Whanganui River is far more than that.”¹⁵³

In its current state, the river is ‘sick’. Detailed reports by hydrologists, biologists, zoologists, ecologists, sedimentologists, and other scientific analysts, provide substantial evidence of the tremendous changes undergone by the river ecosystem as a physical entity. According to scientific appraisal, the numerous signs of ecological change indicate that the river, in its current state, is ‘ecologically unhealthy’.¹⁵⁴ While Atihaunui do not disagree with the conclusion drawn by those scientific investigations, they simply state that the *mauri* (the abiding ‘life force’) of their *Awa* is severely degraded and that they suffer the consequences as a people whose *mana* and *mauri* are also weakened.¹⁵⁵ The interrelationship of the people and the river is so entwined that an interference with one sends ripples of deep discontent within the *wairua* (spirit, soul) of the other. So long as the river remains ecologically defiled and desecrating activities continue, the spiritual, emotional and physical wellbeing of Whanganui River communities will suffer, as Hikaia Amohia explained:

¹⁵³ Evidence of Hikaia Amohia before the Planning Tribunal. 1988, para.35, p.7. [capitals in original.]

¹⁵⁴ The connection between human health and ecosystem health has become an important research focus for a number of ecologists, philosophers, and economists. See, for example: Costanza, R.; Norton, B. and Haskell, B.D. (eds.) *Ecosystem Health: New Goals for Environmental Management*. *op. cit.* It should be noted that many indigenous and tribal peoples have always drawn close links between the health of the land, forests and waters and the (physical, mental and spiritual) health of their communities. Furthermore, their understanding of ‘health’ includes interconnections with the spiritual world which, for many indigenous peoples, have never been severed.

¹⁵⁵ A *kaumatua* (elder) of Atihaunui put forward the following ill-fated prognosis: “Its slow death at the greed of others affect the feelings and thoughts of our Maori people. The Mana that is our people’s is being taken away by others’ ‘progress’.” Evidence of Taitoko Rangiwhakateka Tawhiri before the Planning Tribunal. 1988, section para.2.3.

“Physical pollution of the Whanganui River affects its SOUL, its WAIRUA; its supernatural and divine power, its MANA; and, through the sacred affinity of this sacred place to our people affects us, mentally, physically, and, spiritually. No chemical combatants will reduce or eliminate this effect, nor will it alter the breach of TAPU.”¹⁵⁶

KAITIAKITANGA VERSUS ‘RESOURCE MANAGEMENT’

By way of *whakapapa* (genealogy), all phenomena are interrelated and interconnected.¹⁵⁷ This understanding underpins Maori cosmology, as follows: In the beginning, the primal parents (*Rangi* and *Papa*) were united in close embrace.¹⁵⁸ Their bond was such that no light entered – all was in darkness; an indiscriminate ‘oneness’. Their children, much as they loved their parents, knew that life could not flourish without space and light to grow. So, they devised a plan to separate their parents. *Tane*, their son and the deity who holds domain over the forests (personified as *Tane Mahuta*, god of the standing forest), placed his hands on ‘Mother Earth’, *Papatuanuku*, and pressed his feet against *Ranginui*, ‘Sky Father’. He pushed until his body was strong and full, like the great *Kauri* tree in the forest. Eventually, Sky and Earth were prised apart and light flooded in: *Te Ao Marama* – ‘let there be light’!

From the red clay of Kurawaka at Hawaiki (the ancestral homeland of Maori), *Tane* moulded an earth figure, thus giving shape to the first woman; *Hineahuone*. He then blew into her nostrils and she sneezed into life: ‘*Tihei Mauri Ora*’!¹⁵⁹ Thus, the earth-maiden was brought to life through the breath of the *atua* (deity). Their child, *Hinetitama* (the Dawn Maid) united with *Tane* so that the human species would continue. Maori are

¹⁵⁶ Evidence of Hikaia Amohia before the Planning Tribunal. 1988, para.36, p.7. [capitals in original.]

¹⁵⁷ Mere Roberts *et al.* explain: “...everything in the universe, inanimate and animate, has its own whakapapa [genealogy], and all things are ultimately linked via the gods to Rangi and Papa. There is no distinction or break in this cosmogony, and hence in the whakapapa between supernatural and natural. Both are part of a unified whole. ... Every Maori shares this descent from gods, goddesses, guardians and superhumans.” Roberts, M. *et al.* “Kaitiakitanga: Maori perspectives on conservation,” *op. cit.* p.9.

¹⁵⁸ Note: This is a generalised version of Maori cosmogony which varies slightly between tribes’ recitations. Further, this version is a necessarily brief and foreshortened account of creation events which ‘begin’ genealogically in the realm of *Te Korekore* (‘chaos’ or ‘nothingness’; of ‘potential being’) where the supreme being, *Io*, dwelt. For a deeper understanding, see: Marsden, M. Rev. “God, Man and Universe: A Maori View,” pp.191-219, in: King, M. (ed.) *Te Ao Hurihuri: The World Moves On. op. cit.*

¹⁵⁹ “*Tihei Mauri Ora*” – “Sneeze, breath of life!”, also interpreted as: “I breathe, I am alive!” John Patterson highlights the ongoing importance of this expression in Maoridom today: “As with any important Maori tradition, this expression forms a part of current living, so that a new venture, and particularly a formal speech, might be initiated by repeating these words. ... There is a sense in which, when words such as *Tihei mauri ora!* [sic] are uttered by appropriate people on appropriate occasions, these events are, literally, re-enactments of the occasion upon which the words were first uttered.” Patterson, J. “Respecting Nature: The Maori Way,” *The Ecologist*. Vol.29, No.1. 1999, p.33.

autochthonous, that is, formed of the Earth itself. The name *whenua* means both ‘land’ and ‘placenta’. Reverend Maori Marsden and T.A. Henare confirm: “Just as the foetus is nurtured in the mother’s womb and after the baby’s birth upon her breast, so all life forms are nurtured in the womb and upon the earth’s breast. Man is an integral part therefore of the natural order and recipients of her bounty.”¹⁶⁰

Kaitiaki are the spiritual beings who protect and guard over particular tribal *taonga* (those ‘treasured possessions’ that include ‘natural resources’).¹⁶¹ Marsden and Henare explain: “The ancient ones (*tawhito*), the spiritual sons and daughters of Rangi and Papa were the ‘*Kaitiaki*’ or guardians. ... Different *tawhito* had oversight of the various departments of nature.”¹⁶² Contemporary applications of *kaitiakitanga* (the practice of guardianship, conservation, fostering, protecting, sheltering¹⁶³) include people as *kaitiaki*. Although *tangata whenua* may take on the physical role of guarding *taonga* from others’ exploitation, their actions are guided by the spiritual *kaitiaki*. It is those *kaitiaki* who indicate when a ‘natural resource’ is suffering and it is through the special skills of a *tohunga* (spiritual leader/healer) that a corrective course of spiritual and ecological restoration is initiated. The Waitangi Tribunal explain:

“Tohunga (priests) were trained to cope with and placate necessary spiritual infringements and perform purificatory rites. ... Development was achieved through tohunga who had to ensure that it could be done with harmony and balance, equity and justice in accordance with ancient lore.”¹⁶⁴

The responsibility to care for *Papatuanuku* and to protect the natural domains over which her children (the various *atua*, ‘superhuman’ deities) reign, is not a duty that human ‘guardians’ take lightly. The obligation to ensure that the gifts of the *atua* are not abused or misused stems from a much greater need than simply that of securing a plentiful supply of

¹⁶⁰ Marsden, M. Rev. and Henare, T.A. *Kaitiakitanga: A Definitive Introduction to the Holistic World View of the Maori. op. cit.* p.16.

¹⁶¹ Nganeko Minhinnick explains: “The *Kaitiaki* is the tribal custodian or guardian who can be spiritual, (the tribal *taniwha* (plural and singular) can be the *kaitiaki* of water ways, or of specific areas within certain tribal lands) or physical whose role is to protect all tribal *taonga*.” Minhinnick, N.K. *Establishing Kaitiaki*. Auckland: The Print Centre. 1989, p.4.

¹⁶² Marsden, M. Rev. and Henare, T.A. *Kaitiakitanga. op. cit.* p.18. [italics in original.] Traditionally, *kaitiaki* were limited to *atua* and *taniwha*. Different *atua* guarded over the ‘various departments of nature’: Tane was the *Kaitiaki* of the forest; Tangaroa of the sea; Rongo of herbs and root crops; Hine Nui Te Po of the portals of death, and so on.

¹⁶³ The term ‘*tiaki*’ includes the ideas and principles of guardianship, care, wise management, resource indicators (where resources themselves indicate the state of their own *mauri*).

food and materials for shelter. Food may be gathered and materials may be acquired only *after* the deity concerned is approached correctly through ritual and permission sought by *karakia* (prayer).¹⁶⁵ Most importantly, the responsibility of *kaitiaki* is one of retaining harmonious relationships among all things (as indicated in the Waitangi Tribunal quote above). Such relationships are not restricted to physical entities and their dynamic interactions but, more essentially, their spiritual connections.¹⁶⁶ It follows that a respectful attitude and erring on the side of caution when taking and using *taonga* are key in the Maori praxis of *kaitiakitanga*. These culturally-enforced practices have been observed by Maori for generations.¹⁶⁷

The modern practice of 'resource management' differs in a number of ways from the traditional values and cultural practices of Maori *kaitiakitanga*. A thorough examination of resource management and the science of ecology will not be discussed in depth here (refer to Chapter Four).¹⁶⁸ In summary, Table 2 contrasts Maori *kaitiakitanga* with the modern, Western-based resource management (underpinned by the dominant scientific approach). The table highlights the almost opposing characteristics of the scientific approach and Maori indigenous approach in terms of epistemology, *tikanga* (cultural practices), and the values attributed to knowledge and the bearer or 'keeper' of such knowledge. It is hoped that a better understanding of the cultural differences may contribute to improved relations between resource managers and *tangata whenua*.

¹⁶⁴ Waitangi Tribunal. *Report of the Waitangi Tribunal on the Manukau Claim, Wai 8*. [Second Edition.] Wellington: Waitangi Tribunal, Department of Justice. 1989 [1985], p.58. [emphasis added.]

¹⁶⁵ This is illustrated in the mythology of Rata who went into the forest to fell a tall totara tree to make into a *waka* (canoe). In his haste to construct, Rata neglected the proper chants to Tane (Kaitiaki of the Forest). Rata worked by day, but by night the multitude of creatures; insects and birds (called *Te Tini o te Hakuturi*) undid his work and restored the tree to its unfelled state. In his third attempt to carve the tree into a *waka*, Rata confronted the *Hakuturi* and then, to his shame, recognised his folly and the consequences of his disrespectful actions. He was deeply and sincerely apologetic. Thereafter, the *Hakuturi* helped him in completing his task. Retold by: Alpers, A. *Maori Myths and Tribal Legends*. Auckland: Longman Paul. 1964, pp.125-127.

¹⁶⁶ It is important to emphasise, once again, that Maori (like many other indigenous peoples) do not draw a discrete distinction between the 'supernatural' and 'Nature' (as if it were physical matter only).

¹⁶⁷ For example, when fishing the Whanganui River, there was a custom of releasing the first fish as respect to the *atua* and as an antidote to greed. Restraints (such as a *rahui*; temporary prohibition or 'closed season') were placed on fishing when stocks were low in order to allow their numbers to recover. Smaller sized fish were always put back. Endemic limits to resource consumption were culturally-enforced so that what was taken was 'sufficient' for tribal needs and not excessive, despite the fact that fish populations were plentiful and open to exploitation if such resource conservation measures were not instilled. See discussion of traditional customary fishing practices in the Waitangi Tribunal's *The Whanganui River Report. op. cit.* pp.59-67.

¹⁶⁸ Refer to Chapter Four: "The Culture of Ecology and the Ecology of Culture."

Table 2: Contrasting Resource Management and Kaitiakitanga¹⁶⁹

Resource Management (dominant scientific approach)	Kaitiakitanga (Maori indigenous approach)
secular (tending to profane)	sacred (<i>tapu</i>) & common (<i>noa</i>) elements
objective, human/Nature duality	human/Nature interrelated
universal, theoretical, rational	local, place-centred, non-rational ¹⁷⁰
experiments logical and replicable	unique cultural expressions
individual specialists at 'work'	tribal responsibility and learning
'experts' with qualifications	elders' wisdom respected
future-oriented, bias toward 'new' information	ancestral obligation across generations (continuity)
lag between theory and practice	cosmology – belief and action linked

Kaitiaki are those who hold *mana whenua* (i.e., traditional status with respect to the land) and trace their connection by virtue of *whakapapa*. The obligation of *kaitiakitanga* is ancestral and inalienable: it is not an 'interest' that can be transferred to others or appointed by others (e.g., Crown agency conservation initiatives).¹⁷¹ Nor can *kaitiaki* duties be dismissed without consequences. As affirmed in the Whanganui River Rights Charter, *Kaitiakitanga* is an intergenerational responsibility that *hapū* and *iwi* have inherited to ensure that they pass on to their descendants an environment which has been enhanced by their presence and their efforts.¹⁷² However, the full expression of *kaitiakitanga* duties is still limited by the powers of local government authorities elected and representative of ratepayers who are

¹⁶⁹ See: Šunde, C. "Contrasting Scientific Paradigms with Indigenous Maori Views of Water in Aotearoa/New Zealand," *Sustainable Development of Energy, Water and Environment Systems*. Conference Proceedings [Compact Disc]. Dubrovnik, Croatia. 2-7 June 2002.

¹⁷⁰ Note: 'non-rational' does not imply 'irrational'.

¹⁷¹ "Clearly the lineal *kaitiaki* role is traditional and inalienable, *Kaitiaki* cannot be filled by a group from anywhere. The status of *kaitiaki* stems from long tribal associations. Only *tangata whenua* ['people of the land'] can be *Kaitiaki*, can identity *Kaitiaki*, can determine the form and structure of *Kaitiaki*." Minhinnick, N.K. *Establishing Kaitiaki*. *op. cit.* p.4.

¹⁷² *Iwi* water rights were the subject of a *hui* (meeting) hosted by *Atihaunui* in 1993. Following the *hui*, the Whanganui River Maori Trust Board published a charter setting out principles in response to issues of ownership, use, and management of the Whanganui River. These include: (1) The Principle of *Tino Rangatiratanga* and *Kaitiakitanga* (Intergenerational Responsibility); (2) The Principle of *Hapū/Iwi* Determination; (3) The Principle of Interdependency; (4) The Principle of Collectivity; (5) The *Mauri* Principle; (6) The Principle of Development; (7) The Principle of Use Management.

seldom willing to relinquish ‘democratic rights’ (in decisions about resource management) to what they perceive as a group derived from ‘ethnic exclusivity’.

Kaitiakitanga is included in the Resource Management Act 1991 [Section 7(a)] as an ‘other matter’ that all persons exercising functions and powers under the Act “shall have particular regard to” (see Appendix C). *Kaitiakitanga*’ is defined in section 2 of the Act as: “...the exercise of guardianship; and in relation to a resource, includes the ethic of stewardship based on the nature of the resource itself.” The definition was met with considerable Maori opposition. A collective submission on the Resource Management Bill made jointly by three national Maori authorities stated: “The definition is new and unknown to Maori. Maori are of the view that it is inappropriate for the Crown to define by statute, an important Maori spiritual and cultural dimension.”¹⁷³ However, the definition was upheld. *Kaitiakitanga*’ was defined in terms easily understood by the majority New Zealand European population; as akin to the Judaeo-Christian ethic of ‘stewardship’. That (mis)interpretation narrows the full ‘cosmotheandric’ interconnections of Human, Nature and the Divine to one where Humans dominate Nature. Marsden and Henare explain their unease with this newly defined version of ‘*kaitiakitanga*’:

“*Kaitiakitanga*’ is defined in the Resource Management Act as guardianship and/or stewardship. Stewardship is not an appropriate definition since the original English meaning of stewardship is ‘to guard someone else’s property’ apart from having overtones of a master-servant relationship, ownership of property in the pre-contact period was a foreign concept. The closest idea to ownership was that of the private use of a limited number of personal things such as garments, weapons, combs. Apart from this all other use of land, waters, forests, fisheries, was a communal and/or tribal right. All natural resources, all life was birthed from Mother Earth. Thus the resources of the earth did not belong to man but rather, man belonged to the earth. Man as well as animal, bird, fish, could harvest the bounty of mother earth’s resources but they did not own them. Man had but ‘user rights’.”¹⁷⁴

Resource Management Act 1991

The Resource Management Act 1991 is the principal environmental legislation in New Zealand for nearly all resource use (excluding minerals and fisheries). The Act has a single

¹⁷³ National Maori Congress; New Zealand Maori Council; New Zealand Maori Womens’ Welfare League. *A Collection Submission on Supplementary Order Paper No.22 Resource Management Bill*. May 1991, p.10.

¹⁷⁴ Marsden, M. and Henare, T.A. *Kaitiakitanga*. *op. cit.* p.18. [italics in original, underline added.]

purpose: "...to promote the sustainable management of natural and physical resources" [section 5(1)]. "Sustainable management" means that the use, development and protection of natural and physical resources be managed in a way (or at a rate) that enables people and communities to provide for their well being (inclusive of social, economic and cultural dimensions), health and safety. This is to be balanced with respect to the needs of future generations; the safeguarding of the life-supporting capacities of air, water, soil, and ecosystems; and the avoidance, remediation or mitigation of adverse effects of activities on the environment. [Appendix C: 'Part II, Purpose and Principles' (sections 5-8).]

The Resource Management Act introduced an integrated resource management regime for land, air and water. This was a marked improvement on previous ad hoc legislation which was marred by overlapping and sometimes contradicting environmental policy.¹⁷⁵ Integration is also required in inter-agency interactions between the different tiers of government administration (i.e., national ministry, regional councils, and district councils/territorial authorities). The Act also stipulates consistency between planning documents in order to promote an integrated approach to resource management policy. To avoid conflict or misunderstanding, the functions of regional and district councils are separated and clearly defined.¹⁷⁶

A further notable feature of this resource management regime is the emphasis on biophysical relationships. This is reflected in the geographical basis on which regional councils derive their jurisdictional authority (i.e., roughly corresponding to water catchments). The Manawatu-Wanganui regional council prepared the *Whanganui Catchment Strategy* (operative December 1997) with the overall aim of enhancing water quality in the Whanganui River.¹⁷⁷ The ecological connection between accelerated soil erosion (largely due to native forest removal) and poor water quality and clarity directed the primary focus

¹⁷⁵ It was no insignificant feat that over fifty Acts were repealed and a further one hundred and fifty others amended in the resource management law reform exercise.

¹⁷⁶ The functions of regional councils include: water quality and quantity; damming and diversion of water; discharges onto land, air, or water; coastal water; soil conservation; geothermal resources; and hazardous substances [s.30]. Territorial authorities (district and city councils) have functions with respect to land use (including the surface of water in rivers and lakes); subdivision; noise emission; and natural hazards management [s.31].

¹⁷⁷ Manawatu-Wanganui Regional Council. *Whanganui Catchment Strategy*. [Government document.] Operative December 1997, 60pp. The strategy focuses on two main issues: water quality in the Whanganui River (defined by water clarity and bacterial contamination); and accelerated erosion in the Whanganui catchment.

on soil conservation. In this strategy, the council has chosen non-regulatory methods¹⁷⁸ to target land users (in particular, farmers on steep hill country) in attempts to attain sustainable land use management within the Whanganui catchment.¹⁷⁹

The Resource Management Act focuses on the *effects* of activities rather than the activities themselves. The obligation is therefore on the developer (the ‘applicant’) to cover the cost of “avoiding, remedying, or mitigating any adverse effect” [s.5(2)(c)]. Development proposals may require the applicant to undertake an assessment of effects on the environment [s.88(4)(b), Fourth Schedule]. The assessment should include a description of the mitigation measures to be undertaken to help prevent or reduce the actual or potential effect. Where an activity is likely to result in any significant adverse effect, the applicant is required to consider alternatives (for example, energy conservation measures or wind-powered electricity generation rather than hydro-electricity development). In addition, the applicant must supply evidence of their consultation with people affected by the proposal. Those to be consulted include not only neighbouring property owners, but the Maori *hapū* or *iwi* that hold *mana whenua* (traditional status with respect to the land). Such a provision encourages developers and Maori to enter into direct dialogue.

Unless an ‘effect’ is permitted (or prohibited) in the relevant local government planning document, the applicant must apply to the council (the ‘consent authority’) for resource consent(s). In order for a development proposal to then be approved, there are certain ‘matters of national importance’ that need to be recognised and provided for [s.6]. These include the preservation of the natural character of the coastal environment; the protection of outstanding natural features and landscapes; protection of significant indigenous vegetation and habitats of indigenous fauna; public access to the coast, lakes, and rivers. Section 6(e) is specific to Maori: “The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga” [s.6(e)]. ‘Other matters’ that those exercising functions under the Act shall have particular regard to include: Kaitiakitanga; efficiency in the use of resources; amenity values; the intrinsic values

¹⁷⁸ For example: environmental education, provision of information and advice, farm environmental plans, and monetary assistance in the form of regional grants and contribution toward costs of fencing and planting riparian margins.

¹⁷⁹ The more recent *Proposed Land and Water Regional Plan* (currently subject to appeals) ‘out-ranks’ the catchment strategy in its planning status and regulatory enforcement approach. *The Regional Plan for Beds of Rivers and Lakes and Associated Activities* (operative March 2001), which addresses issues including damming and diverting water, provides a further layer of confusion in terms of the ‘integrated management’ of water.

of ecosystems; the quality of the environment; any finite characteristics of resources; and the protection of the habitat of trout and salmon [s.7(a-h)]. Furthermore, the “principles of the Treaty of Waitangi” shall be taken into account [s.8]. (Appendix C)

Sections 6(e), 7(a) and 8 specifically address Maori interests (as noted above). There are a few other provisions in the Resource Management Act 1991 that pertain to Maori. For example, when regional councils and territorial authorities prepare or change the regional/district plan, they shall have regard to “...any relevant planning document recognised by an iwi authority affected by [their] plan” [ss.66(c)(ii); 74(b)(ii)]. A number of *iwi* have prepared their own tribal policy statements and environmental plans. These plans affirm *iwi* strategic directions while providing valuable information for councils and others (such as consent applicants) that assist them in understanding cultural perspectives and Maori environmental philosophies and practices. Many councils now employ Iwi Liaison personnel who act as intermediaries between council and *iwi* authorities.

A further possibility under the Resource Management Act is that a council may transfer some of its functions to an *iwi* authority [s.33]. However, certain limitations on that transfer have reduced the likelihood of the transfer ever being used to great effect. Even after it has transferred the power to another authority, the council remains responsible for the exercise of the function.¹⁸⁰ In terms of *iwi* aspirations for *tino rangatiratanga* (absolute authority) over their resources and *taonga* (treasured “possessions”), as guaranteed in Article Two of the Treaty of Waitangi, the provisions in the Resource Management Act 1991 appear minimal. One of the greatest restrictions, from a Maori point of view, is that the Act empowers councils to determine resource management priorities over all lands in New Zealand, regardless of their ownership status.¹⁸¹ Therefore, even if Crown-owned lands (or waterways) are returned to Maori in Treaty settlements, their ability to ‘manage’ those assets/*taonga* is still constrained by parameters established by local government authorities. The Waitangi Tribunal’s *Whanganui River Report* directly addresses this issue.

¹⁸⁰ Furthermore, both the consent authority and the transferee must agree that the transferee represents the “appropriate community of interest”, and can carry out the function with “efficiency” and “technical or special capability or expertise” [s.33(c)(i-iii)].

¹⁸¹ With the exception of the ‘conservation estate’ (national parks and reserves, etc.), which is managed by the Department of Conservation under the Conservation Act 1987.

WAITANGI TRIBUNAL WHANGANUI RIVER REPORT, 1999

On Saturday 26 June 1999, the long-awaited Waitangi Tribunal report on the Whanganui River claim (Wai 167) was released at a *hui* (meeting) on Putiki Marae. About five hundred people gathered to hear the report delivered by the Tribunal's director, Morris Te Whiti Love. The audience comprised Atihaunui *kaumatua* (elders) through to *rangatahi* (children). Also present were *rangatira* (leaders) of other *iwi*, national and local politicians, members of the judiciary, regional and district council managers, media, and others. For Atihaunui, a lot was at stake. The Waitangi Tribunal report represented the culmination of more than one hundred years of court battles, petitions, protests, and other actions taken by Atihaunui to assert their *rangtiratanga* and *kaitiakitanga* with respect to their *Tupuna Awa* (Ancestral River). Ninety two-year old *kuia*, Te Manawanui Pauro, reflected on the day's events and spoke of the symbolic importance of the rain that marked the opening of the ceremony: "The rain ... [was] the tears of the ancestors mingling with those of the people, in joy and also in sadness that it had taken so long for the claim to be recognised."¹⁸²

Te Atihaunui-A-Paparangi assert that they never ceded sovereignty: their possession and control of the Whanganui River and its tributaries was never freely and knowingly surrendered by them. Rather, as Atihaunui state in their Treaty claim, they have they been "...prejudicially affected by Acts, policies and omissions of the Crown...", which have "...alienated [them] from their lands and waters and from their spiritual heritage and a source of being."¹⁸³ Amongst a long list of offending legislation, the Coal-mines Amendment Act 1903 was particularly damaging to Atihaunui.¹⁸⁴ Section 114 of that Act claimed that the beds of all navigable rivers were deemed to be and always had been vested in the Crown, unless the Crown granted the riverbed to someone else.¹⁸⁵ This was contested by Atihaunui in what was to amount to twenty-four years of litigation.¹⁸⁶

¹⁸² Bryan, M.; Rowatt, C. and Waters, S. "Kuia's dream comes true at Putiki," *Wanganui Chronicle*. 28 June 1999, p.4.

¹⁸³ Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.351. For the 'Statement of Claim', see Appendix 1, pp.349-354 of the Tribunal report.

¹⁸⁴ The long list include the Wanganui River Trusts Act, Wanganui Foreshore Grants Acts, Fisheries Acts, Coal Mines Acts, Public Works Acts, Native Land Acts, Order in Council 1958, Water and Soil Conservation Amendment Act 1973, National Parks Act. A historical timeline of Atihaunui struggles to have their customary rights to the Whanganui River restored has recently been published in the local newspaper: "Whanganui River ownership: the history," *Wanganui Chronicle*. 25 June 1999, p.6.

¹⁸⁵ Non-navigable rivers remained (and continue to be) privately owned by the riparian landowners.

¹⁸⁶ Atihaunui first brought this case before the courts in 1938. It was heard by the Native Appellate Court (1944); the Supreme Court (1949); a royal commission (1950); the Court of Appeal (1953-4); the Maori

Throughout the course of riverbed litigation, seven judges in four courts arrived at the conclusion that, as a matter of law, Whanganui tribes owned the bed of the Whanganui River at 1840. However, the decision reached by the Court of Appeal in 1962 ruled that Atihaunui title to the riverbed had been extinguished prior to 1903. According to the English *ad medium filum aquae* rule, when Maori sold land aligning the river, by definition that 'land' extended to the centre line of the river.¹⁸⁷ As the Waitangi Tribunal observed in *The Whanganui River Report* of 1999, it is doubtful that the individual Maori who sold those lands to the Crown knew that the riverbed was included in the sale.¹⁸⁸ The Waitangi Tribunal also acknowledged the unfairness pervading the entire course of Whanganui River litigation, for Atihaunui had been forced to frame their case (and worldview) to fit the parameters of the English legal process and law. The 1962 decision effectively blocked Atihaunui from taking further legal action. However, Atihaunui persevered in discussions with the Crown, a petition to the Queen in 1977, and further petitions and protests to Parliament.

A brief contrast between Maori custom and English law with respect to 'ownership' of rivers reveals very different perspectives. According to English law, water in free-flowing form cannot be owned or possessed (unlike land). The riverbed, in contrast, is deemed to be 'land' (with water flowing over it).¹⁸⁹ However, as the Waitangi Tribunal report notes: "...it is also a principle of English law that native title is to be rendered conceptually in its own terms, and not in terms of systems that have grown up in England."¹⁹⁰ What Atihaunui possessed was a river that is seen as an ancestral, living being.¹⁹¹ Strictly speaking, Maori do not claim to 'own' an ancestor, as *tobunga* express: "...we don't own the river, the

Appellate Court (1958); and the Court of Appeal again (1960), with a final decision reached in 1962. Waitangi Tribunal. *The Whanganui River Report. op. cit.* pp.195-232.

¹⁸⁷ The Waitangi Tribunal investigated this ruling closely. See sections 9.2.10 "Whether *ad medium filum* was also Maori custom"; 9.2.12 "*Ad medium filum* did not in fact apply when customary titles investigated." *ibid.* pp.294-297, 299-300.

¹⁸⁸ In addition to legitimate sales, land on the banks of the Whanganui River was taken by compulsion from the 1880s and set aside by the Crown for scenic reserve and other public purposes.

¹⁸⁹ "Up until now the debate of river ownership has been discussed using only English law concepts which separate the riverbed and river flow, but Maori have always viewed the riverbeds and river flow holistically, as one entity." Bryan, M. "MP hails brave tribunal decision," *Whanganui Chronicle*. 28 June 1999, p.2.

¹⁹⁰ Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.336.

¹⁹¹ The Tribunal reiterates this point: "The Treaty guaranteed what Maori possessed, and that must be measured in terms of what they possessed in fact, according to their own constructs." "What Atihaunui possessed in fact was a river, not a dry bed." *ibid.* pp.337, 338. [emphasis added.]

river owns us.”¹⁹² However, in terms of the claim (and for the purposes of New Zealand law), the issue is not so much about the ‘ownership’ of water as such, but the “...right to access the water while it is in the river.”¹⁹³ A further contrast can be made between English law and Maori custom. English law takes a compartmentalised approach whereby the river is split into its so-called body, bed, banks, surface (evident in the Resource Management Act 1991). In Maori terms, the river is approached holistically:

“In Maori terms, the Whanganui River is a water resource, a single and indivisible entity comprised of water, banks, and bed. There is nothing unexpected in that. It is obvious that a river exists as a water regime and not as a dry bed. The conceptual understanding of the river as a *tupuna* or ancestor emphasises the Maori thought that the river exists as a single and undivided entity or essence. Rendering the native title in its own terms, then, what Atihaunui owned was a river, not a bed, and a river entire, not dissected into parts.”¹⁹⁴

The Whanganui River Maori Trust Board Act 1988 established the Trust Board, who are empowered to negotiate the settlement of outstanding claims of the *iwi* of Whanganui to the river. In 1993, the Royal Forest and Bird Protection Society lodged an application for a water conservation order for the Whanganui River and its tributaries.¹⁹⁵ Whilst the conservation order may have been applied for with the best of environmental intentions, for Atihaunui it signified yet another imposition by an ‘outside’ organisation ignorant of the special relationship between Atihaunui and their *Tupuna Awa*. The application prompted the Whanganui River Maori Trust Board to bring a claim before the Waitangi Tribunal on behalf of Te Iwi o Whanganui, seeking (among other matters) restoration of their *tino rangatiratanga* over the river and adjoining lands. In light of the water conservation order, the Trust Board urged the Tribunal to give priority to their claim. Ministerial consideration of the conservation order was then suspended. Hearings on the Whanganui River claim were completed by mid-1994.

It was another five years before *The Whanganui River Report* was released. The reason for delay, as the director of the Waitangi Tribunal explained, was that: “The decision was

¹⁹² Bryan, M.; Rowatt, C.; Waters, C. “Tribunal’s findings contain everything iwi was expecting,” *Wanganui Chronicle*. 28 June 1999, p.4. A similar sentiment was expressed by Reverend Maori Marsden (see above). The Waitangi Tribunal explained: “...it does not matter that Maori did not think in terms of ownership in the same way as Europeans. What they possessed is equated with ownership for the purposes of English or New Zealand law.” Waitangi Tribunal. *The Whanganui River Report*. *op. cit.* p.337.

¹⁹³ *ibid.*

¹⁹⁴ *ibid.*

unarguably the most important river report the tribunal had done or would do...¹⁹⁶ The Waitangi Tribunal report is to be commended for the depth of historical research, its balanced consideration from both cultural perspectives (Maori custom and English law), and its 'boldness' in recommendations that go some way toward restoring a strong Atihaunui presence in river decisions within the contemporary resource management structures.¹⁹⁷ The Waitangi Tribunal investigated existing solutions within the scheme of the Resource Management Act 1991 and concluded that they were too limited to do justice to the uniqueness of the Whanganui River claim.¹⁹⁸ The report noted: "There is no process within the Act that does not leave ultimate power and control in the hands of a regional or territorial authority."¹⁹⁹

Subject to other considerations,²⁰⁰ the Waitangi Tribunal report proposed two options for consideration in Iwi-Crown negotiations. The first option proposes that: "...the river in its entirety be vested in an ancestor or ancestors representative of Atihaunui, with the Whanganui River Maori Trust Board as trustee."²⁰¹ In practical terms this means that any resource consent application in respect of the Whanganui River would require *owner approval* (i.e., approval of the Trust Board). The second option proposes that the Whanganui River Maori Trust Board be added as a *consent authority* where resource management issues involve the Whanganui River. It was noted that under existing planning processes, the Trust Board only has the same rights to make submissions on development proposals as do interest

¹⁹⁵ Refer to fn.137 above.

¹⁹⁶ Langdon, C. "River ruling 'might not please anyone'," *The Dominion*. 25 June 1999, p.7. Other river claims investigated by the Waitangi Tribunal include the Te Ika Whenua Rivers Report, the Kaituna River claim, Mohaka River claim, and the ongoing claim of Ngati Kahu for ownership of the Wairoa River.

¹⁹⁷ Although Waitangi Tribunal recommendations are not binding, in many other cases the Tribunal's conclusions have been implemented or have strongly influenced the course of negotiations between Iwi and Crown. The next step in the process toward reaching settlement of the Whanganui River claim is for the Whanganui River Maori Trust Board (on behalf of Whanganui iwi) and the Office of Treaty Settlements (on behalf of the Crown) to enter into negotiation.

¹⁹⁸ The uniqueness of the Whanganui River claim means that other arrangements already made with respect to Maori input in river resource management may not go far enough. Conversely, the Whanganui River claim should not be seen as setting a precedent for all Treaty river claims.

¹⁹⁹ Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.343. The options that the Waitangi Tribunal report recommends (unique to Whanganui) would require amendment to the Resource Management Act 1991, any affected regional plan and other relevant policy documents.

²⁰⁰ The Waitangi Tribunal report further proposed that "...any settlement should protect existing use rights for their current terms and provide for continuing public access." Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.343.

²⁰¹ There was one dissenting opinion to the Waitangi Tribunal recommendations. Tribunal member, former Federated Farmers president John Kneebone, stated: "I am unable to support any proposal that Atihaunui should own natural water or be designated as a consent authority under the Resource Management Act 1991..." *ibid.* p.345.

groups and ordinary members of the public. The option proposed by the Waitangi Tribunal would authorise the Trust Board to: "...act severally or jointly with the current consenting authority ... and that both must consent to an application for the consent to be exercised."²⁰²

The Waitangi Tribunal made a strong case for "joint management on a regular basis".²⁰³ In terms of meeting the requirements of the Resource Management Act, the Tribunal recommended the drafting of a plan specific to the Whanganui River. While both consent authorities (the Trust Board and Regional Council) might choose to draft plans separately, the Tribunal emphasised a preference for a joint approach.²⁰⁴ A similar emphasis on collaboration formed the basis of another study that explored initiatives for improving relationships between Whanganui Iwi and the Department of Conservation with respect to conservation lands (e.g. the Whanganui National Park).²⁰⁵ The study resulted in a report that outlined the background and positions of the affected parties; reviewed international literature on management concepts²⁰⁶ in light of a Treaty framework; and concluded with recommendations for implementing 'collaborative management' initiatives in Whanganui (and generally for New Zealand). The report culminated in a workshop in 1999 which brought together a number of *iwi* and representatives of Crown agencies to debate and share ideas on how collaborative management might be achieved in New Zealand.²⁰⁷

²⁰² Both quotations: *ibid.* p.343.

²⁰³ *ibid.*

²⁰⁴ The consent authorities would be horizons.mw (Manawatu-Wanganui Regional Council) and the Whanganui River Maori Trust Board. The Waitangi Tribunal duly acknowledged the expertise within existing consent authorities: "...within the authorities are a competence and an experience in management that are needed for today's more complex world and on which we ought to capitalise. We consider that there is a need for collaboration in modern river management." *ibid.* [emphasis added.]

²⁰⁵ Šunde, C.; Taiepa, T. and Horsley, P. *Exploring Collaborative Management Initiatives between Whanganui Iwi and the Department of Conservation*. Palmerston North: School of Resource and Environmental Planning. [Occasional Paper Number 3.] 1999, 133pp. The report was commissioned by the Te Ranga Forum (an arrangement between Whanganui Iwi and the Department of Conservation).

²⁰⁶ The key concepts in relevant literature include: ecosystem management, collaborative management, integrated management, and adaptive management. 'Collaborative management' is also known as 'joint management' or 'co-management'. Examples of co-management agreements between indigenous peoples and governments were drawn from experiences in Canada and Australia.

²⁰⁷ Invited participants included representatives of the Department of Conservation (Wanganui Conservancy, Head Office, Kaupapa Atawhai Managers/Iwi Liaison), Waitangi Tribunal, Office of Treaty Settlements, Ministry of Justice, Te Puni Kokiri/Ministry of Maori Development, Ministry for the Environment, Parliamentary Commissioner for the Environment, New Zealand Conservation Authority members, Federated Mountain Clubs, World Wildlife Fund, Forest and Bird, Fish and Game New Zealand, as well as Atihaunui and other *iwi* including Ngai Tahu. The workshop was held 14 September 1999 at Te Putahi-a-Toi/ Maori Studies, Massey University, Palmerston North. See: Forgie, V. *et al.* "Addendum: Workshop held on September the 14th," pp.I-XI, in: Šunde, C. *et al.* *Exploring Collaborative Management Initiatives... op. cit.*

Joint/collaborative management could be endorsed as an expression of the Treaty principle of ‘partnership’. However, as the Tribunal acknowledged: “This proposal [i.e., option two] provides a positive role but may be seen to fall short of effective recognition of the authority of Atihaunui.” As a ‘consent authority’, the Trust Board would have to fit within national planning processes that include the right of appeal through the Environment Court and higher courts. Given that Article Two of the Treaty of Waitangi guaranteed to Maori the “full and undisturbed possession of their lands, water, ... and taonga”, the Tribunal suggested a longer-term option for enhancing Atihaunui authority/*rangatiratanga* with respect to their *Awa*. Hence: “To increase recognition of Atihaunui’s authority, we propose that this joint consent structure be reviewed after five years with a view to elevating the trust board to the sole consent authority...”²⁰⁸

Community reaction to the Tribunal’s report has depended, to a large degree, on the extent to which issues underpinning the Whanganui River claim are understood. To this end, *The Whanganui River Report* provides a privileged perspective into the culture, traditions and relationship of Atihaunui with their *Tupuna Awa*. Furthermore, the report promotes opportunities for cross-cultural dialogue. Some of these opportunities have been seized at the local level. In early 2000, a group of Wanganui citizens known as the ‘Getting On, Moving On’ Network, hosted a series of five public seminars to promote community discussion on the Whanganui River claim.²⁰⁹ The seminars provided a public forum for Atihaunui and other speakers to express their perspectives to a disparate and interested audience. In one seminar, the Chairman of the Whanganui River Maori Trust Board spoke to an audience of three hundred and fifty, and urged the public to:

“Understand where iwi are coming from and why we get frustrated and take action that may be termed civil disobedience. ... It (the claim) isn’t a Maori/Pakeha thing, really, our greatest opposition is the government and its systems. We have to live together so let’s make the best of it... It was important for the Wanganui community to discuss the impact of the River Claim and to understand its historical context...”²¹⁰

²⁰⁸ Both quotations: Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.344. [emphasis added.]

²⁰⁹ The series aimed to look at Maori issues and relationships in the Whanganui district and is part of a larger programme of community sharing and education on Maori/Pakeha relationships. Metcalfe, T. and Francis, J. “The longest journey begins with the smallest step,” *Wanganui Chronicle*. 5 February, 2000, p.7.

²¹⁰ “Call for understanding on Whanganui River claim,” *Wanganui Chronicle*. 12 February 2000, p.7.

Some business operators on the river and conservation groups feared that their existing 'rights' and access to resources would be dissolved as a result of the Waitangi Tribunal river claim. Others, however, have been openly supportive of Atihaunui and encouraging of the Waitangi Tribunal recommendations.²¹¹ With respect to the contentious issues of 'public access' and river users' 'rights', the Waitangi Tribunal reminded that: "...the public right is theirs not as of right but by permission."²¹² Despite recent and historic affrays between Whanganui River Maori and some tourist boat users²¹³, Atihaunui expressed a willingness to share the river with others so long as respect for the river and their culture is reciprocated:

"Mr Taiaroa insisted the most important aspect of any negotiations over the Whanganui River was the river itself. 'We want people to continue coming down the river and to enjoy it but at the same time look after it and to ensure it is kept in a proper state for future generations.' Mr Taiaroa said iwi would expect the community to respect their culture."²¹⁴

The many examples of goodwill and headway in understanding and acceptance of other perspectives that arose from such meetings send a clear message: genuine respect for the 'other', humility, and generosity are critical to any relationship, especially those of a cross-cultural nature.

²¹¹ One tourist operator expressed her respect for the river and its people: "We already understand its [the Whanganui River] importance to Maori, so we abide by Maori traditions. The river holds their ancestors, so we don't pollute it, we don't let dead animals fall into it. The river is a lifeblood of the area. It's our reason for being here." Bingham, E. "Tour operators display grasp of 'spirituality'," *New Zealand Herald*. 28 June, 1999, p.A3.

²¹² *ibid.* Representatives of the Federated Mountains Clubs and other groups expressed concern about continued public access to natural resources. Furthermore, environmental groups (with a preservationist ethic) were concerned about possibilities that Atihaunui might exploit the Whanganui River for monetary gain if they were granted 'private property rights'.

²¹³ Whanganui River hapū continue to assert their resistance to large boats penetrating upriver. Tamahaki (a Whanganui River hapū) cite their reasons for protest as: inadequate consultation, environmental impact on the river wilderness, pollution, effects on the river's ecology. A letter from the hapū explains: "[T]his river is our spiritual, cultural and historical ancestor. It has aspects that must always be protected." For further explanation see: Durie, M.H. *Te Mana, Te Kawanatanga. op. cit.* p.41.

²¹⁴ "Call for understanding on Whanganui River claim," *Wanganui Chronicle*. 12 February 2000, p.7. See also: Stuck, M. "Hundreds turn out for treaty seminar," *Wanganui Chronicle*. 9 February 2000, p.1.

GENESIS RESOURCE CONSENTS HEARING, 2000-2001

On 1 October 2001, ten years after the Resource Management Act 1991 was enacted, the resource consents for the ongoing operation of the Tongariro Power Development came up for renewal. The taking, damming, diversion and discharge of water are all legislative responsibilities of regional council authorities, who are required to consider the effects of any proposed activity in terms of the Act's "sustainable management" criteria. The Tongariro Power Development dams and diverts two major water catchments and, therefore, falls within the jurisdictional boundaries of two regional councils: Waikato and Manawatu-Wanganui ('Environment Waikato' and 'horizons.mw', respectively). 'Genesis Power Limited' (a privatised arm of 'ECNZ'; formerly 'Electricorp') submitted applications for fifty eight resource consents. Instead of the usual ten year tenure for each resource consent, Genesis has applied for the longest consent duration provided under the Resource Management Act: thirty five years.

Genesis lodged their resource consents to the respective regional councils on 30 June 2000. The planning process then unfolded as follows: the regional councils notified the public of the consents (by newspapers, etc.); public submissions were called for and received by 10 August 2000; a Committee of five experts was appointed to consider the applications; dates were scheduled for the hearing of the applicant's case and the submissions supporting and opposing the resource consent applications. In total, one hundred and seventy three submissions were received: seventeen in support and one hundred and fifty six opposing various aspects of the hydro-development scheme. Given the grand scale and complexity of the Tongariro Power Development, the regional councils jointly appointed an independent Committee of Commissioners to hear and decide on the resource consent applications.²¹⁵

The key issues raised in the submissions included the effect of the Tongariro Power Development on the cultural and spiritual values of *tangata whenua*. Specifically, this refers to: "...the relationship of Maori and their culture and traditions with their ancestral lands, water,... [s.6(e), Resource Management Act 1991 (Appendix C)]; the *mauri* of lakes, rivers

²¹⁵ The Commissioners' areas of expertise covered engineering, soil conservation, resource management interests, and included a former chief executive officer (of a city council) and a former Speaker of the House. The latter, Sir Peter Tapsell, was appointed Chairperson. He speaks fluent Maori.

and streams; and the ability of Maori to exercise their traditional role as *kaitiaki*.²¹⁶ Because of the statutory obligations required of the consent authorities (in this case, the regional councils) and the applicant (Genesis), consultation with a number of *iwi* affected by the Tongariro Power Development and consideration of Maori cultural values and traditions (as indicated above) formed a key part of the planning process. Thus, Genesis were keen to prove their fulfillment of obligations to consult Maori. Yet, submissions received from Maori individuals and *iwi* environmental collectives consistently voiced concern over what they perceived as a lack of consultation by Genesis and the regional councils.²¹⁷

At this juncture, a brief update on relations since 1990 might prove helpful. Following the 1990 Planning Tribunal decision on the Wanganui River Minimums Flows Appeals (see above), the combination of a poor public image and significant legal costs forced Electricorp to take a new approach. For the period leading up to the review of their resource consents, Electricorp (now Genesis) embarked on an extensive consultative process with representatives of various interest groups.²¹⁸ Over the nine years, Genesis negotiated deals with some of these groups. For example, the destruction to the natural habitat of the *whio* (endangered blue duck) as a result of the diversion of headwaters led to the formation of the 'Blue Duck Recovery Plan'. This conservation project is overseen by the Department of Conservation but is wholly dependent on Genesis' contribution of one and a half million dollars. Other "side agreements" have been reached between Genesis and other groups, including four *iwi*.²¹⁹ Furthermore, Genesis representatives had reputedly

²¹⁶ Voorthuysen, R. van and Chrisp, M. *Tongariro Power Development Combined Officers' Report*. [Consultants' Report Prepared for Environment Waikato, horizons.mw.] September 2000, p.21.

²¹⁷ As noted in the Officers' Report, *ibid.*, p.65. An understanding of what constitutes 'consultation' differs with respect to the 'consultor' and the 'consulted'. In terms of a continuum or 'levels' of public participation in planning processes, consultation and informing the community are least requirements; partnership and community empowerment/control are highest. Refer to: Arnstein, S. "Ladder of Citizen Participation," *American Institute of Planners Journal*. Vol.35. 1969, pp.216-224. In cross-cultural meetings such as these, consultation is not sufficient. What is necessary is dialogue that seeks to understand the other's world-view, and this requires dialogical openness (see discussion in the following chapter).

²¹⁸ A series of public meetings were held and, resulting from the recommendations, a Consultative Management Group was elected to represent the various interest groups. *Tangata whenua* were also invited to take part in the process, although many declined and preferred to be consulted directly. Over the nine years leading up to the Genesis hearing, the Consultative Group met thirty four times.

²¹⁹ In addition, Genesis pointed out that they had funded the Environmental Services Division of the Ngati Tuwharetoa Maori Trust Board. The Planner's Report on the Committee Decision notes: "Genesis has reached a number of significant side agreements with submitters that resulted in those submitters either supporting the resource consent applications or withdrawing their opposition to them either in part or in whole." Environment Waikato. *Tongariro Power Development Hearing Committee Decision*. Hamilton: Environment Waikato Regional Council. 30 August 2001, p.84. Side agreements were reached with: Ngati Tuwharetoa, Ngati Whitikaupeka, Ngati Tamakopiri, Ngati Hauiti, Lake Rotoaira Trust,

attended forty *hui* (meetings). A consultant, Buddy Mikaere, was contracted by Genesis to undertake an audit of the applicant's consultation with *iwi* and *hapū* groups. The following summarised sections from the cultural audit are of particular interest:

Mixing of waters:

“With regard to the cultural concerns regarding the mixing of waters, Mr Mikaere suggested that this was a modern, rather than a traditional issue. He noted that traditional Maori literature offers no information about the mixing of waters from different river systems, that the human interference in the flow of water was sanctioned in tradition and that water was not intrinsically tapu. He concluded, based on traditional evidence, that the mixing of water, regardless of source, is not of itself a harmful act. He stated that the concern regarding the mixing of waters was an evolved religious issue.”

Kaitiakitanga:

“With regard to kaitiakitanga Mr Mikaere stated that in the context of the TPD Hearing it was a recent phenomenon, dating from the 1960s. He noted that in recent times best practice had seen the incorporation of kaitiakitanga recognition in appropriate consent conditions. These conditions provided iwi with ongoing consultation, input into the formulation and implementation of kaitiaki protocols and input into the formulation of appropriate cultural management plans. Mr Mikaere presented an example kaitiakitanga consent condition and outlined what a cultural management plan would cover.”

Treaty of Waitangi:

“Finally, Mr Mikaere discussed the principles of the Treaty of Waitangi. He noted that the first principle is that of partnership between Maori and the Crown, but that Genesis was not the Crown. He concluded that Genesis had however reflected the partnership principle in terms of its efforts to consult with Maori...”²²⁰

The Manager of Iwi Relationships at horizons.mw (regional council), Gerrard Albert, presented two reports on cultural issues with respect to the activities of the Tongariro Power Development. He concluded that the damming, diversion and mixing of water has “serious adverse effects” on Maori cultural values and that Maori relationships with waterways affected by those activities are, as a result, “significantly diminished”. Further: “Mr Albert noted that while Genesis had undertaken to ameliorate some tangata whenua concerns, nothing short of the return of full natural flows could provide for the protection

Department of Conservation, Royal Forest and Bird Protection Society, Auckland/Waikato Fish and Game Council, Wellington and Taranaki Fish and Game Council, WPI Forestry.

²²⁰ All quotations: *ibid.* p.18. [emphasis added.] The Treaty of Waitangi is between Maori and the Crown. State-owned enterprises are not the Crown and neither is local government. However, both have had

of the mauri, tapu and mana of those waterways.²²¹ Gerrard Albert pointed out that the conclusions drawn by the consultant, Buddy Mikaere, in his cultural audit on behalf of the applicant, Genesis, appear contrary to the views presented at the hearings by affected *tangata whenua*.²²² The following summarise key points in the cultural issues reports raised in response to Genesis' cultural audit:

“...any conclusion to the effect that the mixing of waters (and therefore mauri) was not harmful of Maori values was misplaced. To accept this position would be to imply that tangata whenua were insincere in their submissions to the Hearing. Mr Albert went on to refute Mr Mikaere's view that Maori values in relation to the mixing of waters is a recent, 'evolved' religious issue.”²²³

And:

“...Mr Albert greeted the Applicant's ideal for the exercise of kaitiakitanga with scepticism. He reminded the Committee that as Mr Mikaere himself pointed out, only tangata whenua could authoritatively comment on the cultural and spiritual effects of a proposal and how they might be mitigated. Mr Albert directly opposed the imposition of kaitiakitanga conditions without tangata whenua agreement and input.”²²⁴

Crown responsibilities devolved to them. The Local Government Amendment Act 2002 (which revises the Local Government Act 1974) addresses the role of local government in Treaty provisions.

²²¹ *ibid.* p.70. [emphasis added.]

²²² In addition to the statements of Whanganui River iwi, other iwi expressed their utmost concern over the mixing of waters. For example, Ngati Hauiti explained: “Each of the Mangawhero and Whangaehu Rivers has a spiritual and physical uniqueness that was cherished and protected by the kaitiaki of old, and which gave these waterways their mauri and their mana. ... Of particular concern to Ngati Hauiti, the mixing of these waters with the Moawhango River has the effect of polluting the spiritual and physical characteristics of the Moawhango River.” Te Runanga o Ngati Hauiti submission (7 August 2000), in: Environment Waikato and horizons.mw. *Genesis Power Limited (Tongariro Power Scheme): Submission Appendix*. [Copies of every submission received by both Regional Councils. 731pp.] 21 August 2000, pp.550-551.

²²³ Mikaere's claim that because activities, such as the mixing of waters, were not written about in traditional Maori literature (notwithstanding that Maori are an oral culture) is not sufficient grounds to dismiss the importance of this concept nor to relegate it to modern times only. Perhaps the paucity of historical literature is because it was never 'tested' and therefore not an issue made real; i.e., to mix waterways would have transgressed *tapu* (sacred laws), which no human was willing to tamper with. Ngati Hauiti's submission lends support to this conjecture: “Such activities [mixing waters and damming the natural flow] were forbidden in the times of our ancestors, when Iwi and hapū were the sole managers of the environment. The fact that our established values and practices were ignored when the TPD was established is the first and most obvious impact of the TPD.” *ibid.* p.551. [emphasis added.]

²²⁴ Both quotations: Environment Waikato. *Tongariro Power Development Hearing Committee Decision*. *op. cit.* pp.71, 72. [emphases added.] Given that the expression of *kaitiaki* duties is bound closely with the ability to act on those responsibilities (i.e., *tinu rangatiratanga*; self-determination), the suggestion that *kaitiakitanga* be treated as a 'condition' to Genesis' development activities, appears, to say the least, placatory. However, that option is supported in case law, as discussed in the Officers' Report: “With regard to kaitiakitanga, the Environment Court has suggested that this duty can be met by setting resource consent conditions that require tangata whenua to be provided with information, and allowing for them to offer advice about Maori cultural and spiritual matters relevant to the exercise of the resource consents.” Voorthuysen, R. van and Chrisp, M. *Tongariro Power Development Combined Officers' Report*. *op. cit.* p.43. [emphasis added.] By that definition, *kaitiakitanga* is reduced to an advisory role. Furthermore, there is no guarantee that such advice will be acted on nor fully appreciated by the consent holder.

In the event that the resource consents were approved, Albert strongly recommended a significant reduction to the thirty five year resource consent duration sought by Genesis. Despite the existence and operation of the Tongariro Power Development for over forty years, Albert argued that the full effect of its activities on Maori cultural values is still not fully understood. Nor is there certainty that the mitigation of adverse cultural effects (as proposed by Genesis) is adequate. This recommendation (to limit the consents to ten or fifteen years) was endorsed by most *ini* and *hapū* affected by the Tongariro Power Development, including those who had reached confidential side agreements with Genesis. It is of no small concern that the consent duration sought by Genesis for the continued operation of the Tongariro Power Development would deny an entire generation of the ability to seek environmental and cultural redress. Given the uncertainties abounding in the world today (ecological, political, economic, etc.), the foreclosure on opportunities for the “needs of future generations” to be asserted is of major democratic concern to all conscientious citizens.²²⁵

With respect to *ini* concerns, the effects of the Tongariro Power Development on their spiritual and cultural values are not so easily ‘mitigated’ by resource consent conditions. Since spiritual concerns lie outside the scope of Genesis’ expertise, the applicant emphasised the importance of technical evidence over what they inferred as ‘intangible’ effects.²²⁶ This is reflected in the Assessment of Environmental Effects (AEE) submitted by Genesis: “The matters addressed in this AEE have focussed, almost exclusively, on addressing the physical and biological effects of the operation of the TPD. Genesis power is not yet able to assess the scale and extent of cultural and spiritual effects, and whether such effects require to be specifically mitigated in some way.”²²⁷ Furthermore, with respect to the mixing of water between catchments (and therefore the mixing of *mauri* and pollution to the life force of each waterway), Genesis noted: “...while those concerns were genuinely held, such perceptions, which were not supported by tangible effects, should not

²²⁵ As specifically recognised in the purpose of the Resource Management Act: s.5(2)(a). (Appendix C)

²²⁶ Genesis employed consultants who prepared more than forty technical reports on environmental issues associated with the operation of the Tongariro Power Development, including: hydrology; sediment regimes and erosion; water quality; flooding; aquatic ecosystems; fisheries; blue duck; recreational usage of waterways; and natural character and landscapes. However, Genesis’ assessment of environmental effects (which drew on the technical reports) is notably deficient in its assessment of cultural effects. See comments in the Officers Report. *ibid.* pp.42, 58, 66.

²²⁷ Quote from Genesis’ Assessment of Environmental Effects (p.507) in: Voorthuysen, R. van and Chrisp, M. *Tongariro Power Development Combined Officers’ Report. op. cit.* p.66. [emphasis added.] The Officers Report pointed out that the Committee is unable to adopt a similar approach to Genesis, for they must address all effects including those on Maori.

prevail over the TPD scheme.”²²⁸ The Committee agreed with Genesis’ Counsel that Maori concerns with respect to their spiritual and cultural well being were not to be taken as overriding all other matters raised during the hearing process.²²⁹

Te Atihaunui-A-Paparangi remained resolute throughout the planning proceedings: They demanded the restoration of natural flows in all the waterways comprising the Western Diversion.²³⁰ With respect to the hearing procedures, the Whanganui River Maori Trust Board requested an adjournment of the November 2000 hearing until such time as their Treaty of Waitangi claim was settled. Since the Waitangi Tribunal report on the Whanganui River had been released in June 1999, there had been little advancement in Crown-Iwi negotiations for reaching settlement. Atihaunui felt that a decision on the Tongariro Power Development resource consents application could unfairly jeopardise Treaty settlement options. Following protest action and then a joint request by the Whanganui River Maori Trust Board and Genesis, the hearing on the Western Diversion was adjourned.²³¹ As a ‘solution’, the legal spokesperson for Genesis offered that all resource consent conditions be reviewed following the Crown settlement of the Whanganui River iwi Treaty claim.²³² The Committee reiterated that judicially the Resource Management Act and Treaty of Waitangi processes are separate. In contrast, Maori see ‘ownership’ and ‘management’ as interdependent with respect to their relationship with land, water and other *taonga*.²³³

²²⁸ Environment Waikato. *Tongariro Power Development Hearing Committee Decision. op. cit.* p.13. [emphasis added.]

²²⁹ *ibid.* 126. Presenting Genesis’ legal evidence, Mr Majurey cited case law to support this position: *Watercare Services Ltd. v Minhinnick* [1998] 1 NZLR 294 [Court of Appeal].

²³⁰ The Whanganui River Maori Trust Board, Tamahaki Incorporated Society, and Ngati Rangi all sought the discontinuation of the Western Diversion. The Officers’ Report recorded sixty seven submissions requesting that Whanganui diversions cease.

²³¹ The initial protest by Whanganui River iwi to seek adjournment was for reasons that “...a Hearing was inappropriate until the Crown had honoured the findings of the Waitangi Tribunal. Mr Mair [protester] also felt that the Committee lacked the skill to grasp the very important spiritual and cultural issues of Whanganui Maori.” The request for adjournment was later approved by the Committee when Genesis agreed to it on the justification that it would allow the Whanganui River Maori Trust Board and Genesis to enter into further discussions. Environment Waikato. *Tongariro Power Development Hearing Committee Decision. op. cit.* pp.4, 5.

²³² Pursuant to section 128 (‘Circumstances when consent conditions can be reviewed’) of the Resource Management Act 1991. “He [Mr Majurey] stated that Genesis did not want to impose s128 review provisions on iwi other than Whanganui River iwi... He advised that Genesis would live with any change in resource ownership resulting from the settlement of Treaty claims.” *ibid.* p.78. [underline added, original in italics.] The Committee later informed: “...the consent duration is not a matter that can be altered under such a review process.” p.126.

²³³ The Waitangi Tribunal provided further light on this issue: “‘Management’ is the word used for the powers exercised in relation to the [Resource Management] Act, but on our analysis of the statute, the powers given to regional authorities in respect of rivers are more akin to ownership. However viewed, and no matter how often it is said that the Resource Management Act concerns management and not

The hearing reconvened on 26 July 2001 with a *powhiri* (formal welcome) at the Morero Marae in Taumarunui.²³⁴ Te Atihaunui-A-Paparangi welcomed members of the Committee, Genesis managers and lawyers, Wanganui District Council staff, the media, and members of the public, onto the Marae. A *wero* (challenge) was laid down, and Sir Peter Tapsell rose to reply on behalf of the *manuhiri* (visitors). The planning procedures then continued in the adjacent War Memorial Hall. Nine speakers provided verbal statements on Te Atihaunui-A-Paparangi opposition to the continued extraction of water from the Whanganui River and its tributaries. In many respects the reasons they gave at that forum did not differ significantly to their submissions presented at the 1989-1990 Minimum Flow Appeals (as discussed above). This demonstrates clearly that Atihaunui as a people have not changed; nor has their depth of feeling for, and ancestral relationship with, the Whanganui River.²³⁵ As the speakers noted, however, what has been exacerbated over that period are the negative ecological, spiritual and cultural effects resulting from the continued diversion of the headwaters. The message was simple and direct: “return the water to where it belongs.”²³⁶

On 30 August 2001, the Committee of Commissioners arrived at the following decision with respect to the fifty eight resource consent applied for by Genesis for the continued taking, damming, diversion and discharge of water (as well as land-based activities) with respect to the Tongariro Power Development scheme:

“Acting under the authority delegated to it by the Manawatu Wanganui Regional Council [and Waikato Regional Council], the Hearing Committee for the Genesis resource consent applications for the Tongariro Power Development Scheme hereby grants the resource consents sought by Genesis for a duration of 35 years

ownership, in reality the authority or rangatiratanga that was guaranteed to Atihaunui has been taken away.” Waitangi Tribunal. *The Whanganui River Report. op. cit.* p.339. [emphasis added.]

²³⁴ The hearing reconvened in Taupo on 16 and 17 July 2001. The final day of hearing was 3 August. In total, the Tongariro Power Development resource consents hearing included twenty three days. The hearing at Taumarunui on 26 July was requested by the Whanganui River Maori Trust Board, with the principal focus on their submissions. Wanganui District Council also elected to deliver their submission on this day, partly to show their support of the submissions of Whanganui River iwi.

²³⁵ Atihaunui have consistently expressed that they are not interested in money, nor in employing consultants and technicians. Their concerns relate to spiritual aspects and ancestral *taonga*. Such a centred position contrasts sharply with other submitters. For example, the Ruapehu District Council and Wanganui District Council have since reached financial settlements with Genesis in return for “lost economic opportunities”. See: Stowell, L. “Financial settlement on taking river water,” *Wanganui Chronicle*. 1 June 2002.

²³⁶ Submission of *kaumatua* Petara (Pestal) Pauro. Evidence on behalf of the Whanganui River Maori Trust Board. Taumarunui. 26 July 2001. For a summary of the submissions delivered on behalf of the Whanganui River Maori Trust Board, see: Environment Waikato. *Tongariro Power Development Hearing Committee Decision. op. cit.* pp.62-66.

subject to the conditions specified [in] the consent documents included in Appendix 1 of this Decision.”

The Committee explained its decision based on their considered view that “...the ongoing operation of the TPD represents a sustainable use of natural and physical resources.” Furthermore, they were satisfied that the adverse effects of the power development can be “adequately mitigated” as outlined in the conditions placed on the consents and the ‘mitigation package’ offered by Genesis. With mitigation measures in place, the Committee concluded that “...the overall adverse effects of the TPD on the wider environment within which it resides will be no more than minor.” With respect to the duration of consents, the Committee maintained that “...case law has determined that an applicant is entitled to as much security of term as is consistent with sustainable management.”²³⁷ While the minimum flow requirements for the Whanganui River remain the same as the 1990 decision (29 cumecs between 1 December and 30 May), each resource consent includes a condition that the consent be reviewed following the settlement of a Treaty of Waitangi claim.²³⁸ All resource consents are to be monitored by the regional councils to ensure compliance.

In reaching its decision, the Committee took a “broad judgment” and weighed up the positive and negative effects of the Tongariro Power Development. They concluded that the primary positive effect of the power scheme is the production of electricity and its contribution to the overall national economic well being. Furthermore, it was not necessary to require “...complete avoidance or total remediation of the adverse effects of an existing physical resource of national economic importance as the TPD.”²³⁹ The Committee were satisfied that the adverse effects of the power scheme could be mitigated with modification to the scheme as per the resource consent conditions. Iwi, however, are not convinced that effects on their spiritual and cultural values have been ‘avoided’, ‘remedied’ or even

²³⁷ All quotations: *ibid.* pp.131, 127, 121, 127 (respectively). [emphases added.]

²³⁸ The condition for ‘Treaty of Waitangi Claim Settlements’ reads: “The Manawatu Wanganui Regional Council shall, within 12 months of the Crown settling any Treaty of Waitangi claim by iwi in respect of rivers or lakes dammed or diverted by the TPD, serve notice on the Consent Holder under section 128 of the Resource Management Act 1991 of its intention to review any or all the conditions of this consent for the purpose of making the consent consistent with all Resource Management Act 1991 matters contained in the said settlement.” There is another condition that the consent holder (Genesis) may apply to the regional council for a change or cancellation of the conditions of the consent following Crown settlement of an *iwi*’s Treaty of Waitangi claim.

²³⁹ Environment Waikato. *Tongariro Power Development Hearing Committee Decision. op. cit.* p.117.

'mitigated'. Consequently, appeals to the Committee's decision have been lodged with the Environment Court.

CONCLUDING REFLECTIONS: Whanganui, 2001

18 July 2001 was a crisp winter's day. I awoke at Papakai Marae, under the shadow of the snow-cloaked mountains. By mid-morning a full bus, followed by an ensemble of several other vehicles, pulled off the state highway and onto a minor road marked by the small signpost: "Whanganui River Intake". The bus occupants assembled on the concrete platform that is the intake structure of the Whanganui River headwaters. The group comprised several generations of a people united by bloodline and by river, and me – the only one not of Atihaunui relation. The atmosphere was thick with reverence and the air heavy with grief. In the silence that enveloped us, I stood looking out toward the mountains. The river wound into the distance across rolling plains of mountain tussock and native grasses. Its waters were clear and clean, its flow strong; the feeling was one of a river with visible vitality and, indeed, *mana*.

Yet, beneath my feet, the waters were suddenly hurried – sucked over the cusp of a metal grate and into a large pipe. The grate – a fortified grid for filtering debris – seemed almost offensive, like the personified toothless grin of 'development' itself. From there, the waters churned noisily as their natural flow was disrupted abruptly and detoured at a right-angle from their original path to the sea. I turned to face the direction in which the river would have once flowed, prior to the Tongariro Power Development scheme. The scene now depicted a completely different future. Aside from the ochre-coloured pool of still mud (discoloured by iron oxides leaching from the surrounding soils), the Whanganui River was reduced to a series of disconnected puddles with only a tiny trickle linking them. The so-called 'minimum flows', measured at Te Maire (far down-river), was a fallacy.

I now understood that the "brown liquid" (as I had recognised it all those years ago) that flows past my parents' house in Wanganui is not that of the Whanganui River *proper*, but, rather, a 'mixture' fed and now sustained only by its tributaries (originating from the Taranaki region and elsewhere). The only time that the headwaters are granted 'permission' to enliven the flow of the River is during times of heavy rain when the intake structure reaches its full capacity (or when Lake Taupo is bursting at its seams). Then, and only then,

do its headwaters spill over the boundaries of 'development' in anything like their original volume.

From within the group rose a slow and mournful wailing. It was joined on the uplift by others' voices singing to their *tupuna* – their *Awa Tupua*. In the reflections, tears merged with the mountain waters. I wished for a future better than the one that had beheaded the past.



CHAPTER SEVEN – THE WATER OR THE WAVE? A NONDUAL APPROACH TO THE WHANGANUI RIVER

ON THE WATER AGAIN: Whanganui River, 2003

The river called me back. In February 2003 I was again paddling on the Whanganui River, this time with a group of thirty American ‘global ecology’ students. As part of their university degrees the students were travelling the world to see first hand the devastating impact of Western-driven ‘development’ on local environments and tribal peoples’ way of life. Their journey had commenced in Washington, D.C. at the headquarters of the World Bank. A few months later, they were hosted by villagers in India who, as the result of a hydroelectric development project funded by the World Bank, had been relocated from their tribal lands: hence from their identity, livelihood, and ancestral future. In Whanganui I joined the students and, over the few days we shared, became a focus for their keen questioning. Yet I found myself increasingly unable to provide immediate answers about the Whanganui River beyond reciting scientific ‘facts’ and historical dates. Furthermore, I felt increasingly reticent about doing that, especially in response to deeper questions. Rather, my feelings confirmed to me that it was through reflecting on *lived* experiences, returning to the source, that my answers flowed more naturally.

At the end of our second day on the Whanganui River, we pulled our canoes ashore at Tieke. We were formally welcomed onto the *marae* by the local people of the land; the *tangata whenua*. They had returned to Tieke in 1993 to live in the place of their ancestors. When Maori first reoccupied the hut and surrounding site in what was reported by the mainstream media to be an act of civil disobedience, relationships between Whanganui National Park managers (Department of Conservation) and the local people (Tamahaki; a *hapu* of the Whanganui River) were strained. Ten years later, those relationships have improved although disparities over conservation and other issues remain. That evening we all settled in the main *whare* (house) and, in turn, stood to introduce ourselves. The students had come from rural towns, cities, and megalopolises scattered throughout the states of America. Nearly every one commented how “beautiful” the river is. At last the introductions returned full circle to the hosts and a woman came forward to speak.

She agreed: "The river *is* beautiful." However, she qualified, that beauty is threatened. The river is polluted. The bush is poisoned. The birds and fish are greatly reduced in number and variety. Introduced animals and plants have taken over native species. The river's headwaters are diverted for electricity generation. Our customary fishing has been seriously undermined. Faced with these problems and more, our people are rendered powerless. And yet, despite all this, Whanganui River Maori continue to come back to the source, to the healing waters, to re-centre and revitalise. Yes, the river is beautiful. But it is the beauty that extends beyond that which the eye beholds which draws the people back. In what seemed, to me, to encapsulate the difference between the long-term river resident and the recreational visitor, her relative left us with this health warning: "Do not drink the water."

The Dialectical Framework

In Whanganui (as for all New Zealand), every development proposal with a potential impact on the river and surrounding lands is dealt with through a dialectical framework. For example, the planning process forces a division between those supporting and those opposing a development to argue their respective cases dialectically through legal adjudication techniques. Under the Resource Management Act 1991, developers are required to apply for resource consent(s) which may (or may not) be granted by the relevant local government authority, subject to certain conditions. In the case of Genesis power company, all fifty-seven resource consents for the ongoing operation of the Tongariro Power Development scheme have recently been renewed for an extended tenure of thirty-five years. Appeals against that decision have been lodged by a number of Maori *imi* authorities. The dialectical battle will continue between lawyers on behalf of Genesis and legal representatives of the Maori appellants in the legal battlefield of the Environment Court. The appeals hearings are currently scheduled for mid-2003.

At one level, based on the English legal and planning systems, the dialectical framing described above is 'democratic' and 'just'. For example, councillors who determine resource management decisions are elected by the citizenry. Furthermore, in Western capitalist countries, every individual (and corporation) is granted the 'right' to pursue development of personal financial gain, just as much as any individual or group has the 'right' to voice their opposition to that development. A developer's rights are restricted by environmental protection legislation and rules in regional and district council plans.

Citizens have the opportunity to contribute directly to the formulation of those regulatory mechanisms (i.e., plans) and also during the public hearing of a development proposal through statutory consultation and submission processes. The dialectical framework emphasises efficiency, transparency and accountability when making decisions. Ultimately those decisions on development proposals must be legally defensible. Dissatisfaction with the outcome may then be pursued further through higher legal channels.

From a different perspective the planning hearings for the Tongariro Power Development scheme could be described as a highly ritualistic form of 'game'-playing. In this 'game', two or more opponents enter the legal arena. An implicit assumption is that all contestants are equal before the law and therefore symmetry between them exists at the outset. The reality, however, is that Genesis power corporation draws on financial resources far in excess of those available to their opponents (e.g., *inwi* organisations, local councils, recreation groups, community citizens).¹ As with modern professionalised sport, the legal 'game' becomes more and more serious and competitive as the economic stakes are raised higher. Therefore, the possibility that Genesis might 'lose' (i.e., headwaters currently diverted to the power scheme be returned in full to the natural watercourses) is the first priority that the corporation's lawyers must eliminate.

In order to assert their authority in this legal game, Genesis has used a number of tactics. Their aim is ultimately to win the 'legal race'. When others stand in the way of the developer, they are seen as 'obstacles to progress' and therefore must either be out-competed or coerced out of the dialectical arena altogether.² A key strategy in this legalistic 'game' is that each competitor accumulates large amounts of evidence to convince the adjudicators. Thus, Electricorp/Genesis employed consultants to prepare numerous technical reports detailing the technological and economic merits of the Tongariro Power Development scheme. In addition, consultants with scientific expertise were contracted by Electricorp/Genesis and arrived at conclusions that countered the evidence presented by

¹ The imbalance was contested by those opposing Electricorp in the Whanganui River Minimum Flows Appeals: "...environmentalists [claimed] that Electricorp contracted 32 leading experts in support of its appeal, paying out large sums to publicly-funded organisations under the new 'user pays' system of science research funding. The environmentalists claimed they were unable to match Electricorp's budget for their own expert witnesses and cross-examinations, lessening their ability to participate effectively in the case." Saunders, J. "Scientists won't say how much Electricorp paid them," *Evening Standard*. 11 September 1990, p.5. Also: Saunders, J. "Electricorp 'corners' top witnesses" *ibid.* p.1.

² See discussion in Chapter Five of Goethe's *Faust*. Faust 'The Developer' arranges to dispose of the old couple who, in refusing to move, stand 'in the way' of his grand scheme: they are obstacles to progress.

the Department of Conservation scientists and others. Those ‘contestants’ then enter into dialectical argument whereby each ‘expert’ attempts to undermine the legitimacy of all others, especially that of the ‘non-professional’.

What results is a dead-end argumentation between ‘experts’ (in science, law, etc.) in which no competing party truly *listens* to the claims of the other and the real intent of each contestant is masked by legal terminology and endless dialectical bantering. Because the technical reports were produced by people with professional qualifications (called ‘experts’) they are elevated to an almost exclusive ‘truth’. The reductionistic technical detail, masses of quantitative data, computer-generated graphs, and bureaucratic jargon that characterises those reports renders them impenetrable to the layperson. People who have fished and swum in, boated on and been ritually blessed by the waters of the Whanganui River are not equally valued in this dialectical arena despite their enormous expertise derived from direct and lived experiences. Nor, for that matter, are technical experts, scientists, economists and lawyers appropriately equipped to pass judgment on spiritual relationships of great importance to Maori and others.

If abstract postulates and jargon are the tools of the bureaucrat and corporate executive, then experience and ingenuousness are gifts of the ‘witness’.³ It is precisely the presence and conviction of the latter that exposes the susceptibility to economic ideology of those who approach the legal game as a dialectical contest. In the case of planning hearings for the Tongariro Power Development scheme, submitters come forward as witness to present their testimonies before an ‘audience’. In this case, that audience is a planning committee whose role it is to judge according to the rules of the legal system. The very logic of that system is legitimised within the dominant European worldview. In its modern expression that worldview regards rationality as the only basis of reason and, therefore, as all that is ‘real’. The dialectical framework excludes any other rationale. And yet, Maori (and others) claim that rationality is *not* the only basis of Reality.

The dialectical framework is fundamentally flawed because it operates like a ‘game’: it aims to produce a ‘winner’ and therefore, by implication, disqualifies all others as ‘losers’. The framework incites confrontation among people by imposing a dialectical situation where they are set apart into opposing positions (e.g., submissions must either support or oppose

³ See: Panikkar, R. “Witness and Dialogue,” pp.232-256, *Myth, Faith and Hermeneutics. op. cit.*

a developer's application for planning consent). Even the more open processes of consultation may be seen in this light, given situations where the dominant player has a monetary monopoly and uses that power to strike deals with opponents to gain their support or, at the least, to silence opposition. Evidence is presented in such a way as to convince or coerce those who are empowered in the position to pass judgement. Hence, the dialectical arena is reduced to a battlefield for lawyers. What the dialectical framework blocks is the possibility for dialogue; it blocks the possibility of overcoming conflict through conversation and understanding.

The way in which dialectical argument exacerbates conflict is exemplified in claims that today 'we' enjoy an infrastructure that supports a lifestyle of comfort and ease with technological gadgetry that eliminates many of the mundane tasks of a bygone era. Indigenous people living within a modern, secular society often enjoy those same benefits: the speed of jet boat travel; the communication advantages of cellular phones; the instant gratification of electricity at the flick of a switch. Therefore, some might argue, how is it that Maori can justify a stance that jeopardises the continued supply of electricity? The question, however, is specious because it assumes that an either/or situation exists: it assumes that respecting their *Tupuna Awa* is incompatible with enjoying the benefits of a modern technological society. Even from a 'technical' point of view the question is specious because there are other viable ways of supplying electricity that do not interfere with (i.e., dam and divert) the headwaters of the Whanganui River.

Maori and others (environmentalists, for example) then become locked into a dialectical situation whereby opposing the diversion of the Whanganui River headwaters for hydroelectricity generation is viewed by some as 'anti-development', 'romantic', or even hypocritical. The reality, however, is that others not only benefit from using the Whanganui River but some (such as Electricorp/Genesis) have gained substantial profits through taking water from the river in a way that denies others their relationship with the river. The question (above) could be redirected: How can Genesis justify *their* stance when it continues to jeopardise others' spiritual, cultural, ecological, and recreational values of the Whanganui River? Of course, this question responds in dialectical fashion and, therefore, remains ultimately unsatisfactory.

Monism, Dualism and the Reductionist Response

The factors that have contributed to environmental degradation and dis-empowerment of indigenous peoples and their traditional ways of life are not unique to the case of the Whanganui River nor even to New Zealand. In fact, there is similarity among events throughout the world wherever a colonising culture has imposed its worldview and enforced its authority over an indigenous landscape and autochthonous peoples. A pattern has emerged which suggests that the situation characteristic of Whanganui today is not the result of random cross-cultural interactions. Rather, it can be attributed to a systematically-executed process of British colonisation based on socially enforced beliefs in European cultural supremacy. This thesis, however, does not attempt a detailed historical examination of the events and effects of colonisation per se on the Whanganui River.⁴ Instead the intent is to expose the *monistic attitude* that underpins not only the historical relations among different cultures as a result of colonisation practices, but remains a powerful cultural force behind moderns' drive for social and economic 'development'.

To briefly recapitulate: Monism is displayed in the attitude that there exists One authority, a common law, and a way of living and knowing that is upheld as the best and most truthful claim on Reality. The belief in the supremacy of that One way is considered absolute and universal. That is not to deny the existence of a 'plurality' who object to the imposition of a monopolistic authority. However, as long as those who dissent from the majority do not become too great a threat, the monistic One will tolerate them until they can either be assimilated or extinguished. In New Zealand, a monistic attitude is evident in the politicised assertion that 'we are all New Zealanders'. The assumption is that there is general agreement on what constitutes the 'common good'; dissent is the mark of the 'radical'. Laws are drafted by the State and enforced through its agents (police and judiciary) to protect the rights of a collective majority (and the privileges of an elite minority). It is little wonder that Maori-led initiatives to determine their own ways of governing and educating their people are often met with suspicion, if not open hostility, by those who hold to monistic beliefs.

⁴ See Chapter Six for a cursory discussion. For a more detailed account, see the Waitangi Tribunal's *The Whanganui River Report. op. cit.*

The Tongariro Power Development scheme is justified in monistic terms as development that benefits the national economy and, therefore, the so-called 'national interest'. The reduction of the Whanganui River to economic rationale is evident in claims that, prior to the abstraction of the river's headwaters for power development, the river was an 'unproductive' resource. According to that logic, the Whanganui River is now a 'valuable' economic resource that contributes to the Western Diversion of the power scheme with an estimated profit of fourteen and a half million dollars per year.⁵ Therefore, the Whanganui River forms part of the development infrastructure that fuels the national economy. Economists argue that it is through such efficient engineering initiatives that 'natural capital' is put to good use to enable the New Zealand economy to grow and prosper as a competitive export trading nation in the global economic market. As the political rhetoric goes: What is good for the economy is good for us all.

The Tongariro Power Development scheme is a 'product' of the *dualistic* mind. That way of perceiving reality divorces the 'subjective mind' from the so-called 'objective world' and, in doing so, reduces all 'others' to the status of objects. The Whanganui River is treated as an object when 'it' is viewed simplistically as a body of water (potential kinetic energy) to be tapped for hydro-electricity generation and so transformed to produce economic goods and services. Furthermore, not only is the river perceived as simply a 'body' of water but is dissected bit-by-bit into mechanistic units intended primarily for utilitarian purposes. This approach is known as reductionism: breaking a whole into its component parts, assuming that by doing so those parts will be more easily understandable (through analytical studies), predictable and, therefore, also manipulable. This reductionist approach underpins the entire Western legal framework, property regime, and prevailing scientific management rationale that act as external controlling constraints upon the river and Maori communities. It can also be recognised in the individualism of modern technocratic society.

Yet, there is something essential that the reductionist approach misses entirely...

⁵ "The evidence has established that the nett present value of the Western Diversion is approximately \$183 million... That results in an annual average cost of \$14.5 million (the \$18 million at which the Planning Tribunal valued the full return of the waters less the \$3.5 million mentioned by Dr Cowie as the annual average cost of the water now returned). This is a measure of the benefit to the country of the loss suffered by Whanganui iwi in the desecration of their taonga." Waitangi Tribunal. *The Whanganui River Report. op. cit.* Appendix III: "Findings and Remedies Sought," p.378.

The gulf in understanding between a ‘reductionist economist’ and a ‘holistic’ Maori leader is relayed in the following personal account of an exchange that took place between them.⁶ The economist, who was working on property rights issues for the Treaty of Waitangi claim on the Whanganui River, sought from the Maori leader a precise definition of the physical extent and content of the Whanganui River. From a legal perspective, the focus of the case (the river) must first be isolated and described by an unambiguous set of necessary and sufficient conditions so that the case for (ownership of) the river may then be rigorously defended in a court of law. The economist recalled their conversation as follows:

“During this work, at an early point, the Chairman [of the Whanganui River Maori Trust Board] ..., said to me something along the lines of ‘we just want to own and manage the river as we did before the Pakeha came along.’ I responded ‘OK ..., but what do you mean by ‘the river’?’. I went on to ask:

- Do you mean the bed of the river or something more?
- Do you meant the banks of the river?
- If so how far from the water line does the bank stretch?
- Do you mean the water flowing in the bed?
- Do you mean the flora and fauna living in and around the river?
- Do you mean the air space above the river and how far above?

I could have added more. In typically helpful fashion [the Chairman] replied ‘Yeah, all of that.’ – and he could have added ‘together’ and ‘at the same time.’”⁷

The economist’s commentary continues with the conclusion that: “...western jurisdictions and management regimes ... are arguably more simple in what they seek than those of Maori...” However, from another perspective the case appears quite the contrary. In attempting to ‘simplify’ the complex and interconnected whole, the reductionist approach unnecessarily complicates the explanation. What results is an endless list of questions (such as those above) that in fact avoid forming any relationship and therefore any real understanding of the river beyond superficial definitions of what appears to be only a physical entity. The very meaning of the whole is lost in such pedantic legal enquiry. Not only is the river rendered a mere object, but the questioner himself is diminished in the

⁶ Strictly speaking, the former is not an ‘economist’ because his PhD is in geography rather than economics. However, he now describes himself as a ‘corporate finance consultant’, providing services to entrepreneurs in a market-oriented environment underpinned by neo-classical economic theory; i.e., ‘reductionist economics’.

⁷ Wheeler, B. “Water – Use and Abuse,” *WATER: Values, Uses, Rights, Laws*. [Conference organised by FIRST (Foundation for Indigenous Research in Society and Technology).] Wellington, New Zealand. 7 December 1999, p.2.

process: his search for objective definitions actually reduces him to an object (for he avoids relating to the river as would a subject).

A somewhat different illustration might better press the point home. Let the questioning be reversed so that the economist is now addressed and asked to define what he means by 'his mother'. Is she simply the female who gave birth to him? Is she a structure of bones and collection of organs linked in an assembly of arteries and veins circulating blood within a bounded layer of skin? Is she that individual member of the human species whose physical identity records her as age seventy with curly grey hair and green eyes? Is she his mother only until he turned five years old and began school? Or is she the woman who has provided him with healthy meals, a safe environment, a clean house, and nurtured him when he was ill and bereaved? Is she a person who is not only a mother, but also a wife, daughter, sister, cousin, grandmother, neighbour, friend, employee and citizen? Does the economist include in his definition of her the air she breathes or the food she eats and, if so, how much? What about the songs she sings, the cakes she bakes, the laughter, tears, hugs, ways of disciplining and of loving? To these questions, many of which appear absurdly self-evident to the extent that the economist may consider them personally offensive, he could justifiably reply: "Yeah, all of those"; "together"; and "at the same time". Perhaps, most importantly, he might also add that she is: "so much more than all of those things (parts) described."

This reverse questioning is not intended as a personal attack on that economist per se. Nor are the questions raised in an attempt to imply that Whanganui River Maori relate to their *Tupuna Awa* solely as a respectful child does to his or her mother. However, the analogy suggests that there is some similarity in emotional depth, physical relationship and spiritual connection to that which exists between a person and his or her maternal parent and the many who still relate to and care deeply for *Papatuanuku* ('Mother Earth'). Most importantly, it highlights the futility of such questions – for how can you attempt to disclose in a legally defined or physically 'tangible' sense the fullness of the relationship to your parent? For Whanganui River Maori, the inextricable tie between the people and river transcends words. The Tongariro Power Development might be reconsidered in a very different light if one were to borrow an economist's reasoning that your mother is

‘worthless’ as she is, and is only ‘valuable’ when employed full-time in a factory.⁸ For most people, such a thought is outrageously insulting. And yet modern civilisation has ‘progressed’ under just such a system of exploitation: not the very least in the transformation of Nature into ‘natural resources’ and ‘natural capital’.⁹

Resource management and utilitarian views of water in New Zealand (and other countries) have been dominated by the reductionist approach. However, from an ecological perspective, reductionist explanations are inadequate because the Whanganui River is not simply a collection of ‘parts’ (a bed, a body, surface, banks, fauna and flora) but is a complex system and, indeed, a living ‘whole’. The reductionist perspective is particularly unsatisfactory in that it fails to acknowledge the interdependency of humans with Nature. In fact, that perspective actually encourages humans to view the river as an object to be exploited or a resource to be ‘managed’ to meet human demands and expectations for economic growth. Given this anthropocentric failing, it is little wonder that Genesis and Whanganui Iwi find themselves in opposition; in a dialectical struggle stemming from essentially incompatible worldviews: one primarily reductionist and the other holistic.

A Holistic Approach to the Whanganui River

Conversely, the emerging ‘complex systems thinking’ in science (see Chapter Four) makes explicit the interdependent relationships of humans with Nature. It represents a more holistic conception of ecological interconnections between parts in a dynamic whole (ecosystem), and in that respect it is much more closely in tune with Maori understanding. From a complex systems perspective, the Whanganui River is a self-organising ecosystem sustained by a throughput flow of high quality energy and matter (e.g., as part of the

⁸ Not all economists agree with this narrow neo-classical economics reasoning. Marilyn Waring, a political economist, is outspoken in her criticism of the failings of national accounting systems and the market to account for the contribution of women’s household work and the value of Nature’s functions (i.e., ‘ecosystem services’) to the economy. She asserts: “Water is not amenable, as a ‘commodity,’ to either qualitative or quantitative measurement for the purposes of cost-benefit analysis or income accounting, and so, like the unpaid work of women, it disappears from the public policy arena.” Waring, M. *Counting for Nothing: What Men Value and What Women Are Worth*. Wellington: Allen & Unwin. 1988, p.208.

⁹ Economist Herman Daly and theologian John Cobb, Jr., critique conventional economics and the effects of the industrial revolution and contemporary ‘economic development’ on the environment and human communities. Daly, H.E. and Cobb, J.B. Jr. *For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future*. [Second Edition, Updated and Expanded. With contributions by C.W. Cobb.] Boston: Beacon Press. 1994 [1989].

hydrological cycle).¹⁰ The river ecosystem may be further understood as an open and dynamic system, subject to unpredictable behaviour and responding adaptively. However, when the water flow entering this system was drastically altered by the diversion of the headwaters for hydroelectricity generation, the ability of the Whanganui River to maintain its ecological integrity became seriously threatened.

The resilience of the Whanganui River had already been undermined by the accumulated stress of incremental developments throughout the river catchment. The further interference with one of the key/critical 'parts' of the river (i.e., its headwaters) has resulted in serious ecological (and other) ramifications throughout the entire ecosystem, many of which are still not understood, nor, for that matter, recognised. Although technical 'experts' continue to persuade decision-makers that ecological impacts may be 'mitigated', their self-assuredness is false given that uncertainty and unpredictability are inherent to complex systems. Furthermore, ecosystem behaviour is characterised by 'surprise events' and emergent properties which limit attempts to predict ecological processes. The imposition of a managed water flow regime may be placing the Whanganui River at even greater risk, given that the natural freshets critical to generating biological heterogeneity are now subject to a managed regulation and monitoring procedure.¹¹

Complex systems thinking presents significant challenges for resource management, not least in that it questions the very assumption that humans can 'manage' and attempt to predict ecosystem behaviour. Chaos Theory limits such attempts, for in nonlinear systems (such as the Whanganui River ecosystem) even tiny perturbations can have unexpectedly large consequences. Does this imply, then, that Nature is chaotic and that humans should either resign to 'do nothing' *or* should attempt to impose an order onto that 'chaos'? Neither response is appropriate. The beauty of chaos and complexity theories is that they expose an order in Nature, displayed in fractal patterns that may only be approached, and appreciated, through looking at the whole. Rather than break the whole into pieces (to

¹⁰ This perspective derives from thermodynamics (physics) and is being explored with respect to ecosystems as open systems that self-organise when far-from-equilibrium. See Chapter Four discussion of Prigogine's 'dissipative structures' and Kauffman's 'self-organisation'.

¹¹ C.S. Holling and others studied ecosystems where an attempt was made to manage ecological variables (such as water flow). They reached the diagnosis that: "In short, the success in controlling an ecological variable that normally fluctuated led to more spatially homogenized ecosystems over landscape scales. It led to systems more likely to flip into a persistent degraded state, triggered by disturbances that previously could be absorbed. This is the definition for loss of resilience (Holling 1973)." Gunderson,

analyse its structural components), the challenge is to approach the complex system as a dynamic whole (to understand its behaviour). What may then emerge are the dynamic interconnections and rich patterns of ‘organised complexity’ that give expression to the Whanganui River as a complex system that is spontaneous, adaptive, alive.¹²

The emphasis on relationships (energy and material flow, networks, etc.) in ecosystem studies, as opposed to the reductionist focus on isolated ‘objects’, is similarly critical to indigenous peoples’ epistemologies. While some scientists and indigenous peoples share a similar attitude towards Nature as ‘holistic’, indigenous ecological knowledge is neither identical with nor reducible to complex systems thinking. In Western philosophy, holism is understood as the process of whole-making; the emphasis is on the dynamics of the whole and the interconnections between ‘things’ as constitutive participants of a whole which is ‘more than the sum of its parts’. An enlarged ecological perspective includes human beings as one species (albeit with dominant predatory habits) among many in the holistic web of life. However, with exceptions, systems thinking is mainly restricted to intellectual arenas and ecological awareness struggles to penetrate mainstream consciousness. There is a vast ‘lag’ between the insights of holistic, systems-based theories and their expression in the fuller sense of ‘community’.

For indigenous peoples, the importance of relationships is not limited to ways of *knowing*, but is essential to ways of *living* – culturally, socially, spiritually. Maori regard *whakapapa* as the inextricable interrelatedness of all life forms: the bloodlines uniting a person to their family, tribal groups, ancestors, mountain, river, lakes and land.¹³ Those relationships are not only physical, but also psychical and personal. Therefore, ‘holism’ refers not only to the interconnections between Humans and Nature, but also with *tupuna* (ancestors) and *atua* (deities). These three ‘cosmotheandric’ strands (Human-Nature-Divine) are inseparable in Maori ‘kosmology’,¹⁴ in which the spiritual world is interwoven throughout the physical world. Therefore, an awareness of and respect for the fullness of those tripartite

L.H.; Holling, C.S. and Light, S.S. (eds.) *Barriers and Bridges to the Renewal of Ecosystems and Institutions*. *op. cit.* p.8. See Chapter Four discussion of Holling’s ‘resilience’.

¹² See Chapter Four for discussion of Chaos Theory, Self-Organisation, and the ‘Edge of Chaos’ concept.

¹³ Korean geographer Hong-Key Yoon recognises this in the concept of ‘geomentality’: the mentality conditioning humanity-nature relationships. Yoon, H-K. *Maori Mind, Maori Land: Essays on the Cultural Geography of the Maori People from an Outsider’s Perspective*. Berne: Peter Lang. 1986, especially pp.47-62, “My identity is my mountain, river and people: The Maori Geomentality in the motto-maxims.”

¹⁴ Refer to Chapter Three for the distinction between ‘cosmology’ and ‘kosmology’.

relationships is critical to human use of natural phenomena. Humans must be cognisant of these interconnections and negotiate a harmonious balance between the sacred and the profane: *tapu* and *noa* form complements.

Nondual Awareness of the *Awa*

There are other ways of knowing the Whanganui River that do not take the dualistic categories of subject/object to be discrete or fixed entities. A nondual approach relates to the river as a living being – indeed, as Life. This nondual intuition, where the seer and the seen merge and unite, may only be approached through non-rational channels of perception. The rational intellect may guide in an understanding of the river, but a higher faculty than conscious, directed thought is needed for insight into the inseparability of the river and ‘me’. While direct awareness of this relationship may be attained through intuition, it cannot be obtained through the *logos*, for thoughts and words are always secondary to experience: “the awareness *of* an experience is not the experience.”¹⁵ In contrast to the experiment, where methodological procedures are set out in advance, an experience is truly unique and cannot be ‘proven’ through analytical reasoning. Only afterwards may a spiritual experience be recalled to others as the awareness of a feeling or intuition of deep connection: “Ko au te Awa, Ko te Awa ko au – I am the river, and the river is me.”

Seen from this nondual perspective, pollution is a manifestation of deep disharmony between humans and their spiritual relationship with Nature.¹⁶ It is, ultimately, an abuse of the self. When we desecrate sacred places, like the Whanganui River, we damage the essence of our own spiritual being. For Maori, pollution is a cultural affront because it severely affects the mental, physical and spiritual health of the many *hapū* and *īwi* on the Whanganui River. However, those connections between humans, the Earth, and the spiritual world are seldom regarded seriously by those whose understanding of the river is restricted to dualistic rationality. As Member of Parliament Tariana Turia points out: “Too often planners cannot see the connection between water and the life, soul and spirituality

¹⁵ Panikkar, R. “The Supreme Experience: The Ways of East and West,” *Myth, Faith and Hermeneutics*. *op. cit.* p.292. [emphasis in original.]

¹⁶ From a dualistic rationality, pollution of waterways is tolerated (within ‘reason’) as long as it does not adversely affect opportunities for human use and enjoyment or affect the physical health of riverine organisms and species.

of communities...”¹⁷ The river life which is placed at jeopardy is not *listened* to by those who wield the power to destroy that life-force. Instead, the river is talked about as if ‘it’ is inanimate: as if it has nothing to say and humans have nothing to learn. Yet, no one who has been truly immersed in those waters could ever consider that the river is expressionless or without voice. To talk *with* the river is to enter a very different relationship in which the language is one of profound Silence.

In secular society, spiritual experiences and mystical revelations are rejected outright as ‘superstition’ or relegated to children’s books to be retold as ‘mythical monster stories’. For more than a century, Whanganui River Maori have faced an onslaught of ridicule and humiliation by those whose rationality denies an opening to the sacred. Despite this, they have not forced their relationship with their *Tupuna Awa* onto others but have consistently requested that others respect their cultural traditions and practices by not exploiting the river. However, developments throughout the Whanganui catchment do threaten the spiritual (and physical) welfare of the river and its communities. In attempting to defend the river against these threats, Maori have been forced to pursue legal claims to ‘ownership’ and ‘management’ – concepts that are alien to their ancestral relationship with the river and which emanate from the Western, dualistic worldview. Until ways of understanding other than those limited to this dualistic perspective are accepted not merely in secular law but indeed in spirit, the prospects for resolution of disputes concerning the Whanganui River are bleak. With most, perhaps everything, to lose, the challenge for Maori is to find ways to open the ‘other’ to these ways of understanding – ways that must be nondual.

The Dialogical Opening

Whenever we hold to fixed views, positions, a notion of truth as this or as thus, we do so because we stand on one riverbank and stare across an abyss to the other side. From my side, your riverbank appears blurry, incoherent, lacking stability. Conversely, my riverbank makes sense to me. I can convince you of the superiority of life on this side; for here we have transformed a muddy backwater into a thriving river city that is no longer directly dependent on (and therefore vulnerable to) the river for provisions. I am moved to generosity such that I build you a raft so that you might sail across to my shore. Even if you refuse my gift, I am convinced that it is in your best interests to reside on this side of

¹⁷ Turia, T. “Water is sacred – Turia,” *Massey News*. Issue 12. 16 July 2001, p.8.

the river; therefore I throw you a lifeline to haul you across the waters. If you sink on the way, it is not the fault of the noose that I tied, but it is because you did not try hard enough to swim and thus submitted to the undertow. Once you are safely on my side, rebuilding your life with the materials that I have provided you with, you may also begin to see that your riverbank is but an erosion zone with little hope for concrete survival.

When we stand on one side of the river the temptation is to take a fixed stance; the risk is getting stuck in the mud. Often we are so busy making sure that our dwellings are free of dirt that we neglect the signs that warn of a flood until it is too late. Our actions then can only be reactions. The lesson taken is usually shallow: to build ever higher stopbanks to block out the possibility of another flood. However, in doing just that we also block the view across to the other riverbank. We narrow our vistas and limit the possibilities for seeing new horizons. In building physical barriers to ward off the river in flood, we also project to those on the other side of the river that we do not trust, do not listen to, their cries when they try to alert us to impending danger. Thus we deny opportunities to assist each other in overcoming mutually dangerous situations. Similarly, it becomes more difficult to receive invitations to share in celebratory ritual feasts of fish. Only, perhaps, through individual acts of courage or by accidentally falling overboard can the other save us from drowning and bring us safely across to their side of the river. Is it only then that we, blinking, may open our eyes to the possibility of viewing our own side from a perspective which is other?

This scenario might now be grounded to illustrate the conflicting positions taken by Genesis and Whanganui Iwi. From Genesis' perspective, their existence as a financially viable corporation depends on the continued abstraction and diversion of water to the Tongariro Power Development scheme. However, for Whanganui River Maori, their cultural identity and survival as a people is entirely dependent on the ecological and spiritual health of the Whanganui River. The position that Whanganui River Maori assert – the full return of all headwaters to the Whanganui River – is intolerable to Genesis. Conversely, the continued diversion of the spiritual sustenance of the Whanganui River is totally unacceptable to Maori. It would appear that these two positions are incompatible. Thus a stalemate exists and will remain under the dialectical framework until one or the other convinces a third party (the planning committee or the judiciary) of the absolute validity of their own position or of the absolute invalidity of the other's claims.

There are other ways of outlining the situation of the riverbank dwellers. Rather than emphasising their separation on either side of the river, the banks might also be seen as connected by the water that flows between them. While the river may meander to and fro and shift shingle from side-to-side, it owes its form and character (as 'river') to *both* banks that constrain its otherwise entropic dispersal. However, this is not to say that the river owes its *existence* to its banks, for that is another kettle of fish altogether. Because the river is and because water laps at both shores, there is the potential for people who live on different sides of the river to erect a bridge. Of course, there is also the potential that one side might design a war vessel to launch an attack and conquer the other side. But this is not a study of war or peace. Rather, it is a call to recognise that the dual tensions which appear to divide may also be seen as creative tensions with potential to unite.

The 'dialogical opening' is more than a conversational exchange of information, data, ideas or opinions on a given topic of common interest. There must be an acknowledgement at the outset that the 'partners' entering dialogue are from different cultural worldviews. In the case of the Whanganui River, the dialogue that is urgently needed is that which opens up a bridge of understanding between Maori and European worldviews. This extends beyond the dialectics of mediation among a 'plurality' of groups with differing perspectives, and calls instead for an awareness and positive acceptance of *cultural pluralism*. When planning processes treat Maori testimonies as another set of 'issues' to be considered alongside issues raised by interest groups, they reduce the Maori worldview to one 'group' among a plurality within the Western rational framework. What the Treaty of Waitangi envisaged, however, was the basis for pluralism – a relationship between two peoples.

Dialogue requires openness in that it is a 'talking through' or 'thinking through' (as the etymology of *dia-logos* suggests). Openness in dialogue is essential because it encourages listening with an ear to understanding, and learning with the potential for growth. In authentic dialogue there must be a willingness to bear witness to one's own testimony¹⁸ with a sincerity that flows naturally when one speaks (or writes) with the "optimism of the heart."¹⁹ Thus, dialogue does not stem from the rationalised order of the mind, indeed: "If you can prove with reason or furnish evidence, you are not, strictly speaking, testifying, you

¹⁸ Panikkar distinguishes the *witness* as the one who gives the testimony, the *testimony* as the contents or meaning (what the witness testifies), and the *audience* as the one for whom the witness discloses him or herself. See: Panikkar, R. "Witness and Dialogue," *Myth, Faith and Hermeneutics. op. cit.* p.239.

¹⁹ "Dialectics is the optimism of reason. Dialogue is the optimism of the heart." *ibid.* p.243.

are not witnessing but demonstrating.”²⁰ In witnessing, the *kaumatua* (Maori elder) speaks with the wisdom and clarity of the heart of his or her concern for the Whanganui River. In contrast, the ‘expert’ employed for Genesis does not testify as such, but uses the force of dialectics: he or she delivers information, points out ‘facts’, and ‘proves’ through critical argument. The former bears witness to an intrinsic relationship with the river; the latter sets out to convince the audience of the corporation’s right to take from the river.

Through dialogue people listen to and learn from each other. What may emerge from such a process is a broader dimensional understanding of the Whanganui River from a variety of perspectives and experiences that each speaker communicates. Through listening with an openness to receive, each partner in dialogue might also come to better know the other and their connection with the river. Yet cross-cultural dialogue has an even more essential role – it offers a way of ‘knowing myself’. As Panikkar explains: “Dialogue is, fundamentally, opening myself to another so that he might speak and reveal my myth that I cannot know by myself because it is transparent to me, self-evident.”²¹ In communicating his or her experiences, the other (perhaps quite unwittingly) raises questions in me that challenge the very presuppositions that I take for granted. This dissertation has responded to that challenge as an exercise of self-critique aimed at self-understanding: examining those complex layers that form the worldview of modernity. Ultimately the challenge is one of rejecting claims to universalism – universalism being, inevitably, self-destructive.

While dialogue with the other draws me out of myself, the river brings us back together. The other gives us the ability to see ourselves as fully human. The river makes us whole. Yet, the present condition of the Whanganui River is not ‘whole’; not healthy.²² Both Western-trained scientists and Whanganui River Maori testify to this. From a Western rationale, science and technology may offer practical solutions to restore the river’s physical (environmental) health. At one level, ecological remedy is urgently needed and is a goal

²⁰ *ibid.* p.240.

²¹ Panikkar continues: “Dialogue is a way of knowing myself and of disentangling my own point of view from other viewpoints and from me, because it is grounded so deeply in my own roots as to be utterly hidden from me. It is the other who through our encounter awakens this human depth latent in me in an endeavor that surpasses both of us. In authentic dialogue this process is reciprocal.” *ibid.* pp.242-243. [emphasis added.]

²² Recall the note in Chapter Three: ‘health’ is formed from the root *hāl*, such that ‘to heal’ means ‘to make whole’. Of particular interest, the etymological connection may be extended to the word ‘holy’, suggestive that: “The primary meaning of the word [holy] may have been ‘that must be preserved whole or intact, that cannot be transgressed or violated,’ which would support its relationship to Old English *hāl* whole.” *Chambers Dictionary of Etymology. op. cit.* p.487.

currently pursued by resource management agencies, environmental groups, and Whanganui River *kaitiaki*. However, ecosystem restoration is only one part of healing the whole. A nondual approach to the Whanganui River alerts us to our most vital calling – that of healing ecological *and* spiritual connections – and, in so doing, making ourselves whole.

RIDING THE WAVE: Whanganui River, 2003

Following the formal Maori farewell (*poroporoaki*) from Tieke Marae, we (the group of ‘global ecology’ students, teachers, and myself) returned to our canoes to resume paddling what was the final leg of our journey on the Whanganui River to destination Pipiriki. My new canoe partner elected me to the position at the back of our boat; in charge of navigation. Initially, my unfamiliarity with this role sent us snaking first this way and then that way, making me frustrated with my own ‘inefficient’ paddling stroke. Even a slight distraction off centre could result in a turn in the opposite direction: alas, enantiadromia! Misreading the flow of water could spin us into a back-eddy. Yet, with helpful advice from others and through practice, I relaxed and began to keep a more even keel. Then I could look up again and take in the “beauty” of the bush-clad embankments and the reflections in the water all around me. The large stretches of slower moving water between rapids invited such moments for quiet reflection of a more personal and profound nature.

Our friends from Tieke passed us in a jet boat that left our canoes rocking unsteadily in their wake. They waited for us in the slipstream of the Ngaporo rapid for the entertainment that we would provide.²³ The turbulent whitewater was to test each one of us. Some made it through via the safe side current and thus avoided the rapid’s rough ride. Others only just hung on throughout the roller-coaster ride; not by any special talent but by throwing caution to the wind (or the wave). Others, it seemed, were fated for a swim. But only an elect few really rode the wave. They were rewarded with a ‘standing ovation’ from the jet boat onlookers whose exhilaration had become contagious. As the boat then roared into motion and began to pull away from us, the passengers waved in a reciprocated departing gesture. Over the noise of the engine, almost drowning it, a woman’s voice called out

²³ A Whanganui River guide book describes Ngaporo rapid as: “This is a strong and difficult rapid, the current being deflected by a boulder bank from LB sharply against the papa cliff RB, when it turns abruptly L with breaking waves.” Mead, A.D. *The Naming of the Whanganui River Rapids*. Wellington: I.E. Coulter. 1955, p.43.

strongly in a *karanga*, a cry that penetrated beyond the water to acknowledge the spirit of the *tupuna* whose wave had carried us.

When I reflect back to the health warning we received at Tieke; “Do not drink the water”, I see in those words a message that contains within it the seeds for its own healing. After a couple of days paddling along with the river’s rhythm, the students’ almost unanimous expression that the river is “beautiful” must be appreciated for more than mere frustration with the inadequacy of words (and the *logos*). The river mirrored back to each of us the physical beauty of a landscape in which water is the essence. Yet the beauty of the river experience cannot be ‘captured’ in any physical description or rational analysis. This touches on the ultimate struggle of the poet: how to give expression to that which is truly inexpressible. The beauty is not only in the water, but in the wave – the realm of mystery, of Beauty, that washes through every being. If I can no longer drink the water, should I quench my thirst by drinking the wave?

“*Utram bibis? Aquam an undam?*”

Which are you drinking? The water or the wave?”²⁴

²⁴ The question is posed by Maurice Conchis as a challenge to Nicholas Urfe, the young man whose quest is a search within for the path between both extremes. Mr Conchis adds: “We all drink both. But he meant the question should always be asked. It is not a precept. But a mirror.” Fowles, J. *The Magus: A Revised Version*. London: Jonathan Cape. 1977 [1966], p.188. [italics in original.]



who who who

no one ever

learns the

perfect way

to read

water

Charlotta Sunde
2001-2002

GLOSSARY: Maori – English

<i>atua</i>	deities; often acknowledged and invoked through ceremony
<i>awa</i>	river
<i>iwi; hapū; whanau</i>	<i>iwi</i> (group of people); <i>hapū</i> (group related to a remote common ancestor); <i>whanau</i> (family group related to a recent common ancestor). All three are important social, cultural, economic and political groupings. They form a continuum: “Whanau have extended relationships to hapū. Hapū represent a collective and localised foundation for social, cultural, political and economic activities. Hapū are major contributors to iwi affairs and are likely to be concerned with both distinct local matters as well as broader iwi issues. Iwi have had an increasingly prominent role in recent times.” ⁶
<i>kaitiaki</i>	spiritual or physical guardian
<i>kaitiakitanga</i>	practice of guardianship, conservation, care, wise management of <i>taonga</i> ; “the responsibilities ..., passed down from the ancestors, for tangata whenua to take care of the places, natural resources and other taonga in their rohe, and the mauri of those places, resources and taonga.” ⁸
<i>karakia</i>	prayer, incantation, expression of respect
<i>kaumatua</i>	elders, decision-makers for the <i>iwi</i> or <i>hapū</i>
<i>kawana</i>	simple transliteration of ‘governor’
<i>kawanatanga</i>	governorship; the New Zealand government or the Crown
<i>kuia</i>	respected older women in the <i>hapū</i> or <i>whanau</i>
<i>mana</i>	respect, dignity, status, influence, power, prestige
<i>mana wai</i>	ancestral authority/status with respect to water
<i>mana whenua</i>	traditional status, rights and responsibilities of <i>hapū</i> as residents in their <i>rohe</i> . ⁸ “the rights of hapū and iwi in respect of their own tribal affairs.” ⁶
<i>marae</i>	tribal/community meeting place; local community and its meeting-places and buildings
<i>mauri</i>	“essential life force, the spiritual power and distinctiveness that enables each thing to exist as itself” ⁸ For example, each water body has its own <i>mauri</i> which is unique to it.
<i>pa</i>	settlements, fortified villages, “occupation site, often in a strategic location such as a hilltop” ⁸
<i>pa tuna</i>	eel weirs (<i>tuna</i> ; eel)
<i>Pakeha</i>	New Zealand European
<i>Papatuanuku</i>	‘Mother Earth’; primal parent
<i>rahui</i>	temporary prohibition or ‘closed season’
<i>rangatahi</i>	children, younger generation
<i>rangatira</i>	chiefs, leaders
<i>rangatiratanga</i>	chieftainship; authority, leadership <i>tino rangatiratanga</i> : self-determination, absolute authority. “rights of autonomous self-regulation, the authority of the iwi or hapū to make decisions and control resources” ⁸
<i>Ranginui</i>	‘Sky Father’; primal parent

<i>rohe</i>	geographical territory
<i>tangata whenua</i>	'people of the land'; "The tribal boundaries of tangata whenua are usually determined by waka, original and/or continuing occupation, direct genealogical traditional historical ties or conquest and subsequent ties to the tribal lands." [¥]
<i>taonga</i>	treasures (including 'natural resources'); treasured "possessions" (Article II of the Treaty of Waitangi); "valued resources, assets, prized possessions both material and non-material" [§]
<i>tapu</i>	sacred, spiritual power or protective force
<i>tikanga</i>	customary correct practices, traditions
<i>tohunga</i>	spiritual leader/healer; priest
<i>tupuna</i>	ancestors
<i>Tupuna Awa</i>	Ancestral River
<i>waahi tapu</i>	sites of spiritual and cultural significance
<i>wairua</i>	spirit, soul
<i>whakapapa</i>	genealogy, ancestry, identity with place, <i>hapū</i> and <i>iwi</i>
<i>whenua</i>	land, placenta

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- [¥] Minhinnick, N.K. *Establishing Kaitiaki*. Auckland: The Print Centre. 1989, p.2.
- [§] Parliamentary Commissioner for the Environment. *Kaitiakitanga and Local Government: Tangata Whenua Participation in Environmental Management*. Wellington: Parliamentary Commissioner for the Environment. 1998, p.132.
- ^ð Šunde, C.; Taiepa, T. and Horsley, P. *Exploring Collaborative Management Initiatives between Whanganui Iwi and the Department of Conservation*. Palmerston North: School of Resource and Environmental Planning. [Occasional Paper Number 3.] 1999, p.126.

APPENDIX A**THE TREATY OF WAITANGI**

(THE TEXT IN ENGLISH)

Her Majesty Victoria Queen of the United Kingdom of Great Britain and Ireland regarding with Her Royal Favour the Native Chiefs and Tribes of New Zealand and anxious to protect their just Rights and Property and to secure to them the enjoyment of Peace and Good Order has deemed it necessary in consequence of the great number of Her Majesty's Subjects who have already settled in New Zealand and the rapid extension of Emigration both from Europe and Australia which is still in progress to constitute and appoint a functionary properly authorised to treat with the Aborigines of New Zealand for the recognition of Her Majesty's Sovereign authority over the whole or any part of those islands – Her Majesty therefore being desirous to establish a settled form of Civil Government with a view to avert the evil consequences which must result from the absence of the necessary Laws and Institutions alike to the native population and to Her subjects has been graciously pleased to empower and to authorise me William Hobson a Captain in Her Majesty's Royal Navy Consul and Lieutenant Governor of such parts of New Zealand as may be or hereafter shall be ceded to her Majesty to invite the confederated and independent Chiefs of New Zealand to concur in the following Articles and Conditions.

Article The First

The Chiefs of the Confederation of the United Tribes of New Zealand and the separate and independent Chiefs who have not become members of the Confederation cede to Her Majesty the Queen of England absolutely and without reservation all the rights and powers of Sovereignty which the said Confederation or Individual Chiefs respectively exercise or possess, or may be supposed to exercise or to possess over their respective Territories as the sole Sovereigns thereof.

Article The Second

Her Majesty the Queen of England confirms and guarantees to the Chiefs and Tribes of New Zealand and to the respective families and individuals thereof the full exclusive and undisturbed possession of their Lands and Estates Forests Fisheries and other properties which they may collectively or individually possess so long as it is their wish and desire to retain the same in their possession; but the chiefs of the United Tribes and the individual Chiefs yield to Her Majesty the exclusive right of pre-emption over such lands as the proprietors thereof may be disposed to alienate – at such prices as may be agreed between the respective Proprietors and persons appointed by Her Majesty to treat with them in that behalf.

Article The Third

In consideration thereof Her Majesty the Queen of England extends to the Natives of New Zealand Her royal protection and imparts to them all the Rights and Privileges of British Subjects.

*William Hobson,
Consul and Lieutenant-Governor*

Now therefore We the Chiefs of the Confederation of the United Tribes of New Zealand being assembled in Congress at Victoria in Waitangi and We the Separate and Independent Chiefs of New Zealand claiming authority over the Tribes and Territories which are

specified after our respective names, having been made fully to understand the Provisions of the foregoing Treaty, accept and enter into the same in the full spirit and meaning thereof: in witness of which we have attached our signatures or marks at the places and the dates respectively specified.

Done at Waitangi this Sixth day of February in the year of Our Lord one thousand eight hundred and forty.

TE TIRITI O WAITANGI

(THE TEXT IN MAORI)

Ko Wikitoria, te Kuini o Ingarani, i tana mahara atawai ki nga Rangatira me nga Hapu o Nu Tirani, i tana hiahia hoki kia tohungia ki a ratou o ratou rangatiratanga, me to ratou wenua, a kia mau tonu hoki te Rongo ki a ratou me te ata noho hoki, kua wakaaro ia he mea tika kia tukua mai tetahi Rangatira hei kai wakarite ki nga tangata maori o Nu Tirani. Kia wakaetia e nga Rangatira maori te Kawanatanga o te Kuini, ki nga wahi katoa o te wenua nei me nga motu. Na te mea hoki he to komaha ke nga tangata o tona iwi kua noho ki tenei wenua, a e haere mai nei.

Na, ko te Kuini e hiahia ana kia wakaritea te Kawanatanga kia kua ai nga kino e puta mai ki te tangata maori ki te pakeha e noho ture kore ana.

Na, kua pai te Kuini kia tukua ahau, a Wiremu Hopihona he Kapitana i te Roiara Nawi, hei Kawana mo nga wahi katoa o Nu Tirani, e tukua aianeia a mua atu ki te Kuini; e mea atu ana ia ki nga Rangatira o te Wakaminenga, o nga Hapu o Nu Tirani, me era Rangatira atu, enei ture ka korerotia nei.

Ko te Tuatahi

Ko nga Rangatira o te Wakaminenga, me nga Rangatira katoa hoki, kihai i uru ki taua Wakaminenga, ka tuku rawa atu ki te Kuini o Ingarani ake tonu atu te Kawanatanga katoa o o ratou wenua.

Ko te Tuarua

Ko te Kuini o Ingarani ka wakarite ka wakaae ki nga Rangatira, ki nga Hapu, ki nga tangata katoa o Nu Tirani, te tino rangatiratanga o o ratou wenua o ratou kainga me o ratou taonga katoa. Otiia ko nga Rangatira o te Wakaminenga me nga Rangatira katoa atu, ka tuku ki te Kuini te hokonga o era wahi wenua e pai ai te tangata nona te wenua, ki te ritenga o te utu e wakaritea ai e ratou ko te kai hoko e meatia nei i te Kuini hei kai hoko mona.

Ko te Tuatoru

Hei wakaritenga mai hoki tenei mo te wakaetanga ki te Kawanatanga o te Kuini. Ka tiakina e te Kuini o Ingarani nga tangata maori katoa o Nu Tirani. Ka tukua ki a ratou nga tikanga katoa rite tahi ki ana mea ki nga tangata o Ingarani.

(Signed) William Hobson
Consul and Lieutenant-Governor

Na, ko matou, ko nga Rangatira o te Wakaminenga o nga Hapu o Nu Tirani, ka huihui nei ki Waitangi. Ko matou hoki ko nga Rangatira o Nu Tirani, ka kite nei i te ritenga o enei kupu, ka tangohia ka wakaetia katoatia e matou. Koia ka tohungia ai o matou ingoa o matou tohu.

Ka meatia tenei ki Waitangi, i te ono o nga ra o Pepuere, i te tau kotahi mano, e waru rau, e wa tekau, o to tatou Ariki.

(A LITERAL ENGLISH TRANSLATION OF THE MAORI TEXT)

Signed at Waitangi February 1840, and afterwards by about 500 chiefs.

Victoria, the Queen of England, in her kind (gracious) thoughtfulness to the chiefs and hapus of New Zealand, and her desire to preserve to them their chieftainship and their land, and that peace and quietness may be kept with them, because a great number of the people of her tribe have settled in this country, and (more) will come, has thought it right to send a chief (an officer) as one who will make a statement to (negotiate with) the Maori people of New Zealand. Let the Maori chiefs accept the governorship (kawanatanga) of the Queen over all parts of this country and the islands. Now, the Queen desires to arrange the governorship lest evils should come to the Maori people and the Europeans who are living here without law. Now, the Queen has been pleased to send me, William Hobson, a Captain in the Royal Navy to be Governor for all places of New Zealand which are now given up or which shall be given up to the Queen. And she says to the chiefs of the Confederation of the hapus of New Zealand and the other chiefs, these are the laws spoken of.

This is the First

The chiefs of the Confederation, and all these chiefs who have not joined in that Confederation give up to the Queen of England for ever all the governorship (kawanatanga) of their lands.

This is the Second

The Queen of England agrees and consents (to give) to the chiefs, the hapus, and all the people of New Zealand the full chieftainship (rangatiratanga) of their lands, their villages, and all their possessions but the chiefs of the Confederation and all the other chiefs give to the Queen the purchasing of those pieces of land which the owner is willing to sell, subject to the arranging of payment which will be agreed to by them and the purchaser who will be appointed by the Queen for the purpose of buying for her.

This is the Third

This is the arrangement for the consent to the governorship of the Queen. The Queen will protect all the Maori people of New Zealand, and give them all the same rights as those of the people of England.

William Hobson
Consul and Lieutenant-Governor

Now, we the chiefs of the Confederation of the hapus of New Zealand, here assembled at Waitangi, and we, the chiefs of the New Zealand, see the meaning of these words and accept them, and we agree to all of them. Here we put our names and our marks.

APPENDIX B**THE DECLARATION OF INDEPENDENCE
OF NEW ZEALAND**

- 1 We the hereditary chiefs and heads of the tribes of the Northern parts of New Zealand, being assembled at Waitangi, in the Bay of Islands, on the 28th day of October 1835, declare the Independence of our country, which is hereby constituted and declared to be an Independent State, under the designation of the United Tribes of New Zealand.
- 2 All sovereign power and authority within the territories of the United Tribes of New Zealand is hereby declared to reside entirely and exclusively in the hereditary chiefs and heads of tribes in their collective capacity, who also declare that they will not permit any legislative authority separate from themselves in their collective capacity to exist, nor any function of government to be exercised within the said territories, unless by persons appointed by them, and acting under the authority of laws enacted by them in Congress assembled.
- 3 The hereditary chiefs and heads of tribes agree to meet in Congress at Waitangi in the autumn of each year, for the purpose of framing laws for the dispensation of justice, the preservation of peace and good order, and the regulation of trade; and they cordially invite the Southern tribes to lay aside their private animosities and to consult the safety and welfare of our common country, by joining the Confederation of the United Tribes.
- 4 They also agree to send a copy of this Declaration to His Majesty the King of England, to thank him for his acknowledgement of their flag, and in return for the friendship and protection they have shown, and are prepared to show, to such of his subjects as have settled in their country, or resorted to its shores for the purposes of trade, they entreat that he will continue to be the parent of their infant State, and that he will become its Protector from all attempts upon its independence.

Agreed to unanimously on this 28th day of October, 1835, in the presence of His Britannic Majesty's Resident.

(Here follow the signatures or marks of thirty-five hereditary chiefs or Heads of tribes, which form a fair representation of the tribes of New Zealand from the North Cape to the latitude of the River Thames.)

English witnesses

(Signed) Henry Williams, Missionary, CMS
George Clarke, CMS
James C Clendon, Merchant
Gilbert Mair, Merchant

(THE DECLARATION OF INDEPENDENCE)

**HE WAKAPUTANGA O TE RANGATIRATANGA
O NU TIRENE**

- 1 KO MATOU, ko nga tino Rangatira o nga iwi o NU TIRENE i raro mai o Haurake, kua oti nei te huihui i Waitangi, i Tokerau, i te ra 28 o Oketopa, 1835. Ka wakaputa i te Rangatiratanga o to matou wenua; a ka meatia ka wakaputaia e matou he Wenua Rangatira, kia huaina, "Ko te Wakaminenga o nga Hapu o Nu Tirene".
- 2 Ko te Kingitanga, ko te mana i te wenua o te wakaminenga o Nu Tirene, ka meatia nei kei nga tino Rangatira anake i to matou huihuinga; a ka mea hoki, ekore e tukua e matou te wakarite ture ki tetahi hunga ke atu, me tetahi Kawanatanga hoki kia meatia i te wenua o te wakaminenga o Nu Tirene, ko nga tangata anake e meatia nei e matou, e wakarite ana ki te ritenga o o matou ture e meatia nei e matou i to matou huihuinga.
- 3 Ko matou, ko nga tino Rangatira, ke mea nei, kia huihui ki te runanga ki Waitangi a te Ngahuru i tenei tau i tenei tau, ki te wakarite ture, kia tika ai te wakawakanga, kia mau pu te rongo, kia mutu te he, kia tika te hokohoko. A ka mea hoki ki nga tauwi o runga, kia wakarerea te wawai, kia mahara ai ki te wakaoranga o to matou wenua, a kia uru ratou ki te wakaminenga o Nu Tirene.
- 4 Ka mea matou, kia tuhituhia he pukapuka, ki te ritenga o tenei o to matou wakaputanga nei, ki te Kingi o Ingarani, hei kawe atu i to matou aroha; nana hoki i wakaae ki te Kara mo matou. A no te mea ka atawai matou, ka tiaki i nga Pakeha e noho nei uta, e rere mai ana ki te hokohoko, koia ke mea ai matou ki te Kingi kia waiho hei Matua ki a matou i to matou tamarikitanga, kei wakakahoretia to matou Rangatiratanga.

Kua wakaetia katoatia e matou i tenei ra, i te 28 o Oketopa 1835, ki te aroaro o te Rehirenete o te Kingi o Ingarani.

APPENDIX C**RESOURCE MANAGEMENT ACT 1991****PART II****PURPOSE AND PRINCIPLES**

5. Purpose – (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, “sustainable management” means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well being and for their health and safety while –

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.

6. Matters of national importance – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:
- (b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:
- (c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:
- (d) The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:
- (e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

7. Other matters – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to –

- (a) Kaitiakitanga:
- (b) The efficient use and development of natural and physical resources:
- (c) The maintenance and enhancement of amenity values:
- (d) Intrinsic values of ecosystems:
- (e) Recognition and protection of the heritage values of sites, buildings, places, or areas:
- (f) Maintenance and enhancement of the quality of the environment:
- (g) Any finite characteristics of natural and physical resources:
- (h) The protection of the habitat of trout and salmon.

8. Treaty of Waitangi – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

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