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Values: The content and structure of values held by New Zealand student teachers.

A thesis presented in partial fulfilment of the requirements for the degree of

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A new theory concerning the universal content and structure of values was proposed by Shalom Schwartz and his colleague, Wolfgang Bilsky (1987, 1990). A value survey, based on the Rokeach Value Survey (1973), was developed to measure 56 values and Schwartz (1992) reported empirical support from 40 samples for theoretical components. From 3 universal requirements, (1) the needs of people as biological organisms, (2) the requisites of coordinated social interaction, and (3) the survival and welfare of groups, Schwartz (1992) empirically derived 10 motivational types of values: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation and self-direction. The values were also mapped according to the interests they serve (individualistic or collectivistic or both), their conflicts and compatibilities, and the types of goals to which the values refer (terminal or instrumental). The present study examined the theory in a New Zealand setting using a modification of the Schwartz Value Survey and investigated the value priorities of males and females and Maori and Pakeha. Participants were 311 student teachers from North Island Colleges of Education, 269 (86.5%) were female and 42 (13.5%) were male. There were 50 (16.1%) Maori participants, 261 (83.9%) non-Maori, including Pakeha, Pacific Islanders, Asians and "others". Their ages ranged between 51 years and 20 years. Data were analysed using the Multidimensional Scaling procedure of Guttman-Lingoes Smallest Space Analysis (SSA) and were based on Spearman rho correlations of the importance ratings assigned to values as guiding principles. The results of the study are generally consistent with the new theory (Schwartz, 1992). Partitioning the space into regions revealed 6 distinct motivational types: power, security, self-direction, hedonism/stimulation, universalism/benevolence/spiritualism and conformity/tradition. Achievement did not form a distinct region. The hypothesis concerning the interests served was confirmed and the compatibilities and conflicts hypothesis partially supported. The instrumental and terminal dichotomy was not
evidenced. Cluster analysis, Single Linkage Method (Nearest Neighbour) demonstrated the hierarchical arrangement of values from benevolence to conformity to universalism to self-direction to achievement to stimulation to hedonism to power to tradition to spirituality. Security was scattered throughout the structure. Discriminant analyses were performed to separate the value importance of male and female, Maori and Pakeha. The results supported the hypothesis that males and females would show differences in importance ratings. The females rated the benevolence and spirituality values more highly than the males who prioritised a diffuse range of value types. The results of the study suggest important implications regarding value importance between the two main cultures of New Zealand and the omission of spirituality in the universal structure is discussed. Future studies of New Zealand values might include a process of whakapaakare (consultation) with Maori.
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The thesis is dedicated to the memory of my late father, Stewart J. G. Muir.
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FOREWORD

The project for this thesis, suggested by Professor Michael McCarrey from the University of Ottawa, Canada, provided an opportunity for me to investigate the nature of human values. As a teacher I was interested in "values", and aware that although "values" were not explicitly taught in the curriculum, my values were often transmitted to my students. Likewise, students' values were transmitted to others. It was said that values were "caught not taught". In education today, there is a conscious attempt to inculcate specific values in the curriculum framework. Interestingly, Taha Maori (The Maori Way / Maori Values) has become a cross-curricula component in New Zealand schools in line with this trend.

Articulating our human values is often difficult, it is something we are seldom asked to do. When we are asked it may be challenging to come up with forty or fifty values...... maybe impossible. Perhaps, on a good day, one can describe five or six strongly-held values! Values are not something we are asked to explore; rather our behaviour is thought to represent or give manifestation to our values. This is tenuous. For example, a person may remove a newspaper from a box without paying, yet that same person may, when asked, say they value honesty.

Although we may find it difficult articulating our values, we may comment on the perceived values of others. Popularly, one hears comments such as " Of course, their values are different to ours" or "She's got old-fashioned, middle-class values". In a comparative manner, pitting values against each other suggests degrees of importance, even an hierarchical ordering. I may value protecting the environment as the most important principal in my life and in my efforts may prioritise it over civil obedience. Human values may be compared both at the interindividual and intraindividual level.
The importance of values today is reflected in public statements made by Politicians, Ministers of Religion, Civic leaders and Principals of schools. An example is highlighted in the launching of a private senior secondary school in Auckland which plans to return to "traditional values - self-motivation, responsibility, ambition, and self-discipline" (Catherall, 1994). Not only is the school returning to traditional values, the school founders herald that these values are to be the focus of the school. The rationale is that other schools try to "instil those values in students but the breakdown of the family unit and societal changes meant they were struggling to do so" (Catherall, 1994).

And, according to another Principal, the greatest challenge for education is in the area of values. She believes the need for values stands out because of the enormity of problems that face the world such as environmental damage, refugees from war zones, the arms trade, famine and Acquired Immuno Deficiency Syndrome (AIDS). Solutions to international and intra-national conflicts round the world will depend on policy and decision makers understanding many different cultures ("PNGH principal points to challenge", 1994). It is in the understanding of different cultures that the understanding of human values is implicated.

However, before understanding others' cultures and values, we need an awareness and appreciation of our own culture and values. Such an understanding can then provide a basis for comparison and similarity between one's own and others' values.

Human values that transcend cultural differences may have global significance. The present study seeks to contribute to the work seminated by Schwartz and Bilsky (1987) and later expanded by Schwartz (1992) in which fifty-six values are postulated to be present in all cultures.
By examining the values of a sample of New Zealand student teachers the study aimed to examine types of values and how they are related to each other, how they are organised and what use the values serve. It was hoped that the study would contribute to the literature on the universality of human values.
1. Values: the ambiguity

*Value* is an ambiguous term, used in everyday as well as academic discourse. According to Najder (1975) *value* has several meanings: (1) Value is what a thing is worth, (2) value is a valuable thing or property and (3) value is an idea which makes humans think about given objects, qualities or events as valuable. In the literature, the value concept has been used in two distinctly different ways (Feather, 1975) and, according to Rokeach (1973) it is important to decide which of the two ways the concept should be studied: whether the focus is on the *values* that people are said to have or, if the study’s focus is upon the *values* that events or objects are said to have. On one hand, a person is said to hold values: for example, one may value honesty, creativity and social justice. In that sense a value is a concept to which desirability or valuableness is associated and may be seen as an attribution or a belief. And, on the other hand, an object possess value, that is, it has intrinsic or extrinsic worth: an *evaluation* is made. The concept, then, refers to a sense of measurable quantity of what determines an object’s worth, its valence. In that reasoning a value is quantitative. Therefore, both a person and an object hold values but not in the same way. Hence, the value concept, in its ambiguity, needs elucidation. If the focus of the study is on the values that people are said to have, the focus is not on the intrinsic or extrinsic worth of the values.

Feather (1975), nevertheless, argues that Rokeach may draw the conceptual distinction too sharply because values depend on both people and objects; they are not independent but interdependent. Values involve both the person who is valuing and the object that is the focus of the valuing. They are influenced by a person’s background, education, and experience and by the characteristics of the object being evaluated. The object may be tangible, or it may vary in its degree of abstractness (Feather, 1975). For example, one
may value a car one possesses for its robustness, safety features and style and, at the same time, value family security. A car is a tangible, concrete object, easily specified, whereas family security is an intangible, abstract notion, more difficult to define.

Contrary to the acceptance that humans have values, is B. F. Skinner's denial that people possess values (or feelings and states of mind) and offers alternative explanations to account for behaviour said to be determined by values especially the values freedom and dignity. The reinforcing effect is what counts as important in value judgments. Skinner (1971) asserts: "People act to improve the world and to progress toward a better way of life for good reasons, and among the reasons are certain consequences of their behavior and among these consequences are the things people value and call good." (p.103).

However, given that people may hold values, a recent contributor to the theoretical knowledge of values, Schwartz (1992) conceives of values as the criteria people use to select and justify actions and to evaluate themselves, others and events rather than as qualities inherent in objects. The present thesis adopts this view.

The prominence of values in the human experience is illustrated by the following quotation:

".... the value concept, more than any other, should occupy a central position across all the social sciences ..........shows promise of being able to unify the apparently diverse interests of all the sciences concerned with human behaviour"

( Rokeach, 1973, p.3)

Yet, despite their theoretical centrality, values "are perhaps the greatest black box in all of behavioral science" (Hechter, Nadel & Michod, 1993, p.ix). They contend that knowledge about behavioural outcomes has been gained at the expense of neglecting the independent role of values in shaping behaviour. Research into values has declined
steeply despite the fact that the values concept, as promoted by Rokeach more than twenty years ago, has held a central role in social science but within an intradisciplinary framework. Hechter (1993) claims that calls for renewed attention to values has been gaining momentum but no compelling substantive theories of values have emerged.

Since research on values has been conducted by people who differ in their academic orientations, the meaning of the term "value" has been subjected to many definitions in social science: anthropology (e.g., Kluckhohn, 1951), sociology (e.g., Williams, 1968), economics (e.g., Kuhn, 1963), psychology (e.g., Rokeach, 1973), and education (e.g., Fraenkel, 1977; Raths, Harmin & Simon, 1978).

The influential work of anthropologist Clyde Kluckhohn on the nature of human values and value systems contains useful analytic discussions and contributed to the conceptual developments on values as carried forward by Rokeach (1973). Kluckhohn (1951) defines values as a "conception explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means and ends of action" (p.395). In other words, values are worthwhile spoken or unspoken thoughts particular to an individual or group that effect the ways in which people do things.

Sociological thought explains social order by a hypothetical but seeming agreement on values: basic normative principles that are shared by all of society's members (Zavalloni, 1980). The definition of value that Williams (1968) uses for discussion of values is a descriptive definition, and is continually being challenged by the tests of adequacy imposed by actual behaviour (p.284). The description must be empirically verified or it must be changed (Williams, 1968). Therefore, the value facts themselves are the ultimate evaluative criteria (Pepper, 1958).
In economics, the net worth of an object is determined by what it will bring in exchange, either in other goods or in some medium of exchange - usually money (Reber, 1987). The concept of value has various guises, such as value in exchange or preference order. For some kinds of economic analysis, "value" is "the relative position of a good in a preference ordering, and the higher its position the greater is its value" (Kuhn, 1963, p.266).

Educational institutions provide the forum for the transmission of society's values. The question has been asked of educators whether society in general, and more particularly educators, want students to develop values haphazardly without any conscious and explicit involvement on the part of teachers (Fraenkel, 1977). Raths, Harmin, and Simon (1978) conceive of values as "constantly related to the experiences that shape them and test them. ......., they are not so much hard and fast verities as they are the results of hammering out a style of life in a certain set of surroundings. After a sufficient amount of hammering, certain patterns of evaluating and behaving tend to develop. Certain things are treated as right, desirable, or worthy. These become our values" (Raths, Harmin & Simon, 1978, p.26).

An interdisciplinary approach, espousing the goals of psychology, sociology and anthropology has been neglected (Zavalloni, 1980). Yet, despite the varying nuances in the multidisciplinary approach to the study of values, it is apparent that the values notions share some common features. It seems that all values contain some cognitive elements, that they have a selective or directional quality and that they involve some affective component (Williams, 1968). Values represent a convergence between the individual and society and values research is appropriate to explore cross national variations: all humans hold values.

Whether they are conscious or not, whether they are articulated or not, all people hold their own values, make judgements about others' values and refer to values that are
jointly held in the family or society. Values represent something fundamental and central in the lives of people and societies. It is through communication from others, whether by observation, imitation, conditioning or education that values are transmitted (Cavalli-Sforza, 1993). Recent cross-national studies of values seek to demonstrate the universality of human values (Schwartz & Bilsky, 1987, 1990; Schwartz, 1992).

The starting point of the present study is Schwartz and Bilsky's inquiry into the commonalities, the universals in the content and the structure of values (Schwartz & Bilsky, 1987, 1990), a recent theoretical and empirical advancement in the literature on human values (Schwartz & Bilsky, 1990). The theory seeks to answer the question: "Do all peoples share common values and are these values meaningful for them in the same ways?" The present study aims to contribute to the answer by investigating the values of a New Zealand sample. The thesis is concerned with the conceptualisation of human values, the types of values, how values are related to each other, how they are organised, the interests that values serve and how they are prioritised in a sample of New Zealand student teachers.

Although no single occupational group is representative of a culture, the teaching profession provides an occupation that may be the most appropriate in terms of its representation. Student teachers were chosen as the population of study because as teachers, they will play an explicit part in transmitting society's values and according to Schwartz (1992) "they are presumably key carriers of culture and they are probably close to the broad value consensus in societies rather than at the leading edge of change" (p.18). Student teachers are numerous, accessible, receptive to research and literate. Kitwood (1968) recommended that the Rokeach Value Survey be used with participants whose academic attainment is average or above. Because the Values Survey (Schwartz, 1992) is based on the Rokeach Value Survey, it was assumed that the same recommendation would apply. Student data from other samples (Schwartz, 1992) accords student teachers suitable for the present study and other studies of values.
A considerable and important section of the student teacher population in New Zealand is Maori and Maori education is a significant component of the national education system. The values of Maori, therefore, have meaningfulness in the present study.

However, Marsden (1985) states that many Maori react against the "seemingly facile approach of foreign anthropologists to their attitudes, mores and values" because the reality Maori experience subjectively is incapable of rational synthesis (p163). He believes that only a Maori from within the culture can explore and describe the main features in the experience of the Maori.

The present study, researched from a Eurocentric perspective, does not attempt to "explore and describe the main features in the experience of the Maori" but does seek to acknowledge that the Maori do have different values from those of Pakeha and to test the differences. In a sample from New Zealand, it is very easy to overlook the difference of values and generalise the majority population to the minority. And, it is also possible that Maori values are depreciated by Pakeha. Tanenuiarangi kaumatua Tamate Tuhiwai, in discussion on the Regional Coast Plan stated that too many Maori values, such as kaitiakitanga (exercise of guardianship over a resource), were taken for granted (Saunders, 1994). The present study, therefore, seeks to appreciate the differences.

There is an assumption that Pakeha (New Zealanders of European descent) and Maori (the indigenous Polynesian people, the tangata whenua) share the same values (Patterson, 1992). In examining the values of New Zealand student teachers, it is important to recognise that although a homogeneous group in terms of career choice, aspirations, and educational levels, the group reflects the composition of New Zealand society in terms of ethnicity. New Zealand society is multicultural forging its way towards an understanding and partnership between Pakeha and Maori. Maori values are unlike Pakeha values; the content is different.
Additionally, the student teacher population in New Zealand is predominantly female. The Ministry of Education statistics show that at 31 July, 1993 there were 5839 full time students at the Colleges of Education, 4598 were female and 1241 male. Of the 5033 part-time students, 4155 were female and 878 male (Ministry of Education, Wellington, 1994). Because the Schwartz (1992) value theory was examined with samples of higher percentages of females (see section 1.9 of the present study), of interest in the present study is the difference in value priorities of male and female student teachers.

1.2 The meaning of values and value systems

A value may be defined as an important class of principles shared by members of one cultural community, concerning what is highly regarded and around which, both individual and societal goals can be synthesised.

The concept of value system acknowledges that some values are more important to a person than other values. Throughout the human life span and as situations demand, the relative importance of values also changes. As life events or predicaments become complex, values may be pitted against each other, requiring a person to weigh their importance; for example, a student, under pressure of time and the need to succeed, may need to make a decision. Would it be better to seek success dishonestly or to remain honest and fail to complete an assignment? Rokeach (1973) states the it is through experience and maturation that people learn to integrate "the isolated, absolute values we have been taught in this or that context into a hierarchically organised system, wherein each value is ordered in priority or importance relative to other values" (p.6). Furthermore, he draws the analogy of parents' love for children with values. Most parents believe they love each of their children in an absolute and complete way, yet, under particular circumstances, such as illness or school failure of one child, they may be forced to show a preference for that child over the others. Therefore, when one value is stimulated, the resultant behaviour will be reflective of the relative importance of all
the competing values that the situation has aroused. Thus, value systems are assumed to function as general plans (Feather, 1975) that can be used in decision making and conflict resolution. A situation may stimulate a number of different values, some compatible and some conflictual.

Rokeach (1973) defined a value as

"an enduring belief that a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence. A value system is an enduring organisation of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of importance." (p.5).

In discussing his definition, Rokeach (1973) emphasises a number of points. Firstly, values are said to be enduring; they are not completely stable for if they were completely stable, change for individuals and society would be impossible. On the other hand, if values were completely unstable, continuity to personal and social life would not be possible. As well as having an enduring nature, values have a characteristic of flux.

Secondly, Rokeach (1973) defines a value as a belief that some means or end states of existence are judged to be desirable or undesirable. Kluckhohn (1951), also, defined a value as a "conception of the desirable". Thus, values are defined in terms of beliefs about the desirable. According to Rokeach (1973), and following Kluckhohn (1951), human values, like all beliefs, have three essential elements: cognitive (conception), affective (desirable), and a willingness to act (selection). A value, therefore, involves some knowledge about the means or ends considered to be worthwhile; it involves some degree of affect or feeling because values are not neutral but held with personal feeling and generate affect when challenged; and, a value involves a behavioural element because when it is aroused or challenged it may lead to action (Feather, 1975).
Thirdly, another feature of Rokeach's (1973) definition is that the beliefs defining values may refer either to modes of conduct or to end states of existence; to means or to ends. The values referring to modes of conduct are called instrumental values and the values referring to end states of existence are called terminal values.

Rokeach suggests that there are two kinds of terminal values: those having a personal focus, that are self-centered, intrapersonal and, those having a social focus, society-centered and interpersonal. His contention is that a person's attitudes and behaviour will differ depending on whether their personal or social values have dominance: an increment in one social value will lead to increment in other social values and decrement in personal values; and conversely, an increment in personal value will lead to increments in other personal values and decrement in social values.

A distinction is made also between the two kinds of instrumental values: those that have a moral focus and those concerned with competence and self-actualisation (Rokeach, 1973). Moral values refer mainly to modes of behaviour. They are assumed to have an interpersonal focus and when a person does not behave according to the valued mode of conduct, pangs of conscience and feelings of guilt for violation are aroused. Competence values have a personal rather than an interpersonal focus. Violation of competence values results in feelings of shame or inadequacy, not pangs of conscience. A person may experience conflict between two moral values (e.g., behaving honestly and politely); and there may be conflict between two competence values (e.g., behaving creatively or logically). Additionally, moral values and competence values may conflict: a person may experience conflict between being honest and creative.

There are implications of value conflict in the area of psychopathology. Mickleburgh (1992) asserts that when individuals act contrary to personal values, they experience dissonance with consequences of guilt, anxiety despair or alienation. If these feelings are unresolved or if they are of ample strength, they may manifest in psychopathology.
Fourthly, Rokeach (1973) emphasises that "a value is a preference as well as a conception of the desirable" (p.9), a preference for one mode of behaviour over an opposite mode, or a preference for one end-state over an opposite end-state. Feather (1975) elucidates the point by stating that one can define a belief about what is desirable in terms of the preferences or choices that people make when confronted by a set of alternatives, where the alternatives involve a particular mode of conduct or end-states of existence and its opposite, or where the alternatives consist of other values within a value system.

Following Rokeach's account of values Schwartz and Bilsky (1987) incorporate five features which describe the formal characteristics of values. Values are (a) concepts or beliefs (b) which pertain to desirable end states or behaviours, (c) they transcend specific situations, (d) guide selection or evaluation of behaviour and events and (e) are ordered by relative importance (p.551).

1.3 The distinction between Instrumental and Terminal Goals.

An important aspect and the second feature in Schwartz and Bilsky's definition of values is that values are beliefs that pertain to desirable end states or modes of behaviour: goals. End states are equivalent to terminal goals; modes of behaviour are equivalent to instrumental goals. Thus, terminal goals are a type of value representing end states (Rokeach, 1973), the ultimate goals of human existence. Examples of terminal goals include equality, inner harmony, freedom and world peace. Instrumental values are those modes of behaviour (Schwartz & Bilsky, 1990) which humans conceive of as means to ends (Kluckhohn, 1951) and include such notions as independence, health, curiosity, and responsibility.

The distinction between the two kinds of values - instrumental and terminal - is an important one in terms of theory and in terms of measuring values. There is a relationship: one of interconnection and one of separation.
Conceptually, the distinction between terminal goals and instrumental goals is a slippery one. The distinction between ends and means is not at all clear cut; an end can become a means and vice versa (Dewey, 1957 cited in Schwartz & Bilsky, 1990). Some terminal values may serve as instrumental for promoting other terminal values (Schwartz & Bilsky, 1990). For example, world peace may serve as instrumental for promoting freedom. Kluckhohn (1951) states that the relationship between instrumental and goal values (or "ultimate"/terminal values) is one of complete interdependence, not of consequence (p.413).

One mode of behaviour may be instrumental to attaining any one terminal value; and, one mode of behaviour may be relevant to the attainment of more than one terminal value (Feather, 1975). To illustrate, independence, a mode of behaviour, may be a means of attaining inner harmony, an end state, a terminal value; and, the instrumental value of ambition may be relevant in the attainment of an exciting life, social power and wealth, three terminal values. There is not necessarily a one-to-one correspondence between any one instrumental value and any one terminal value (Rokeach, 1973).

Thus, it appears that instrumental and terminal values represent two systems, each separate, both connected. Despite the conceptual blur, the classification of terminal and instrumental goals is a common feature of value definition and of scales that operationalise values (Rokeach, 1973; Schwartz & Bilsky, 1990).

1.4 The function of values
An important function of values is that they provide standards that guide in human behaviour (Rokeach, 1973). For example, values may influence attitudes and behaviour in education and politics. The choice of and involvement in a particular educational institution or political party would generally be consistent with an individual's values. As potential determinants of preferences and attitudes, values have been shown to predict attitudes to nuclear weapons (Kristiansen & Matheson, 1990), attitudes towards
the unemployed (Heaven, 1990), beliefs in a just world (Feather, 1991) and attitudes towards homosexuals (Haddock, Zanna & Esses, 1993). Feather (1990) has provided data suggesting that values affect behaviour by influencing individuals' evaluations of the consequences of actions (Olson & Zanna, 1993).

Values have a motivational component as well as cognitive, affective and behavioural components (Rokeach, 1973). Because instrumental values are concerned with the attainment of certain goals, they function as incentives. As incentives, they are motivational in that people are aroused and energised by the attainment. Terminal values are motivational because they are concerned with the individual's drive for the attainment of the ultimate goals of human existence. Thus, values and motivation are inextricably linked.

Rokeach (1973) argues that, in the final analysis, values are "the conceptual tools and weapons that we all employ in order to maintain and enhance self-esteem" (p.14). Values are all self-serving and "are conceived to maintain the master sentiment of self-regard - by helping a person adjust to his society, defend his ego against threat, and test reality" (Rokeach, 1973, p.15). Consequently, values may be seen as a matter of personal judgment which is aimed at minimising displeasure and discomfort and maximising self-enhancement.

Not only do values appear to be a matter of personal judgment, they appear to be situationally determined. An expression of a value does not occur in a vacuum: it is always in a context. Moreover, Lydon and Zanna's study (as cited in Tesser & Shaffer, 1990) reported that the commitment by individuals to values appears to increase in the face of adversity. The commitment of family members to one another in times of shared adversity, such as impending bankruptcy, terminal illness or unemployment, illustrates this notion.
1.5 Interests served.

In defining values as goals (Schwartz & Bilsky, 1987, 1990) the logical question to be asked must be: who benefits from the attainment of the value? In other words, whose interests are served? According to Schwartz and Bilsky (1987, 1990) values may serve individualistic interests, collective interests, or both types of interests.

Basically, the individualism/collectivism dichotomy reflects value priorities. The central notion of individualism is the prioritising of personal goals over the goals of others in the group. Individualistic cultures emphasise values that serve the individual by making the self feel good, be unique, and independent (Schwartz, 1990). On the other hand, the central notion of collectivism is the prioritising of group goals over personal goals and collectivistic cultures emphasise values that serve the group by individuals subordinating personal goals for the sake of preserving group integrity, interdependence of members and harmony (Triandis, McCusker & Hui, 1990). Collectivism, therefore, is affiliated with the need to preserve group harmony (Bond, Leung & Wan, 1982).

Values, therefore, can be self-serving; that is, they may serve individualistic interests. The value *ambition*, for example, may serve an individualistic interest as a person strives for personal achievement in a chosen career. And, counter to values serving individualistic interests are values that are other-serving, those serving collective interests. As such, the value may serve the collective interest: the United Nations Peace Keeping Forces in Bosnia manifests global interest in the value of *national security* for a besieged, war torn nation. There are also values which may serve both individualistic and collectivistic interests: the value *altruism* may serve both types of interest. For example, at the individual level an altruistic action may benefit the giver in terms of public admiration and taxation advantages and at the collective level *altruism* may benefit the recipients in terms of the resources or amenities provided.
For almost a hundred years now, the individualism/collectivism construct has been popular in most of the social sciences (Triandis McCusker & Hui, 1990) and in the area of values, the constructs have been examined and discussed (Kluckhohn & Strodtbeck, 1961; Hofstede, 1984; Triandis McCusker & Hui, 1990; Schwartz & Bilsky, 1987, 1990; Schwartz, 1992). The concepts elaborating values serving self and others' interests are a major dimension of value differentiation at both societal and individual levels (Schwartz & Bilsky, 1990).

Attributes of collectivist and individualist individuals have been defined by Triandis, McCusker and Hui (1990). Accordingly, a person is most likely to be a member of a collectivist culture if she has the following attributes: family integrity, self-definition in group terms, her behaviour regulated by ingroup norms, an emphasis on hierarchy and harmony within the ingroup. The ingroup is seen as homogeneous and there are strong ingroup/outgroup distinctions. A modern example would be the membership in the social structures of communes, viz. Centrepoint, Albany, New Zealand. Conversely, if a person has emotional detachment from the ingroup, her personal goals have primacy over the ingroup goals, her behaviour regulated by attitudes and cost-benefit analysis and confrontation is condoned, a person is most likely to be a member of an individualist culture (Triandis, McCusker & Hui, 1990).

Values such as achievement, pleasure and competition are emphasised by individualists more than by collectivists whereas family integrity, security, obedience and conformity are valued by collectivists (Triandis, McCusker & Hui, 1990).

According to Hofstede (1980) societies vary widely in the emphasis that the members give to individualism as opposed to collectivism. In Hofstede's analysis, individualism is very high in the United States, Britain and British-influenced countries, such as Australia. New Zealand is a "British-influenced" country and thus it may be speculated to be highly individualistic, with the exception of cultural minority groups, such as
Maori and Asian communities. Collectivism has been identified in samples from Africa, Asia and Latin America (Triandis, McCusker & Hui, 1990). Hong Kong is near the collectivism extreme (Hofstede, 1980). The Chinese Culture Connection (1987) constructed a value survey to capture the fundamental Chinese values because they suspected the Hofstede study may have been biased towards western values (Smith & Bond, 1993). The survey was administered to university students in 23 countries and the results showed factor equivalence between the Chinese Culture Connection and Hofstede's dimensions. The dimensions of variations in values, including the individualism-collectivism dimension, were seen as "relatively culture-robust" (Smith & Bond, 1993, p. 44).

The interests facet in the theoretical definition of values (Schwartz & Bilsky, 1987) asserts that values are goals and by reason of their definition, the attainment of values must serve varying interests. The interests served are those of the individual, the collective or both.

Schwartz (1992) theorises and gives support to the proposition that five types of values serve individual interests (POWER, HEDONISM, ACHIEVEMENT, STIMULATION, SELF-DIRECTION) and three value types serve collective interests (BENEVOLENCE, CONFORMITY, TRADITION). UNIVERSALISM and SECURITY were postulated to serve both types of interests.

The present study addresses the proposition that values which serve individual interests will be differentiated and opposed to those that serve the collective interests.

1.6 The measurement of values and value systems

The concept of values has been ignored by many psychologists because "they seem to have confused making value judgements, which is incompatible with scientific objectivity, with studying objectively how other people make them - a phenomenon as
amenable to psychological study, in principle, as other forms of human learning and choice" (Levitin, 1973). Human values are essentially subjective (Thurstone, 1959); their measurement an attempt of objectivity.

In one of the first applications of survey methods in cross-national research to study human values, Buchanan and Cantril (1953, cited in Zavalloni, 1980) assessed stereotypes. The study included open-ended questions that concerned general values. Although the authors did not want to impose a standard value scheme on their participants, they did code their responses using a limited number of categories (Zavalloni, 1980).

To obtain data ascertaining the participants' own frame of reference, Cantril (1965) used an instrument with a self-anchoring scale in a study of values concerning personal concerns and strivings. However, Zavalloni (1980) criticises the method because the interpretation of results is problematic. For example, there is the difficulty of interpreting the meaning of aggregate anchoring scores and there are no reasons to assume that the frames of personal references for the participants are the same.

There are, nevertheless, several possibilities that exist in the measurement of values: one would be to ask people to self-report their values without providing any structure to guide, another way to glean information would be for a researcher to observe people and infer their values from the observed behaviour and yet another measurement technique would be to provide a list of values which could be rated or ranked into a hierarchy of importance.

The first two possibilities were rejected by Rokeach when he constructed his Value Survey (Rokeach, 1973); the first, on the grounds of a person's willingness and/or ability to report her values and selectivity. Sometimes people may not know what their values really are and if a researcher was to probe for values, the responses may be unreliable.
The researcher's own values influence the questions asked and the interpretation of the resultant data. It is possible, also, that people may select or conceal their values for strategic purposes (Hechter, 1993). The second possibility, observation and inference, was rejected by Rokeach on the grounds of cost, time, researcher bias and the difficulty to interpret and quantify (Feather, 1975).

Furthermore, there is doubt that values can be observed. A researcher cannot presume to recognise another's values because values are cognitions and no researcher is able to read minds!

Survey measures of values, therefore, have an intuitive appeal (Hechter, 1993).

1.7 The Rokeach Value Survey and its influence in the measurement of values.

In recent years, one of the most widely used instruments for measuring personal and social values has been the Rokeach Value Survey. Rokeach (1973) published his seminal work *The nature of values* which offers the theory in which human values constitute the core concept of all studies of culture, society, personality, social attitudes and behaviour (Cohen, 1978). The book begins from the premise that values are the most basic concepts for the understanding of human behaviour. It is values such as *freedom, achievement, security, pleasure, friendship,* and *equality* that determine attitudes to particular issues and people and these attitudes in turn, determine behaviour. In this causal chain it is the values that are fundamental (Lynn, 1974). The book provides much research data on the Rokeach Value Survey and serves as its manual. The Rokeach Value Survey (Rokeach, 1973), assesses the importance placed on 18 terminal and 18 instrumental values as guiding principles in the lives of respondents. The instrumental and terminal values are listed separately and alphabetically, and presented with a brief definition in parentheses:

"\[ \text{EQUALITY} \text{ (brotherhood, equal opportunity for all)}\]"
___ FAMILY SECURITY (taking care of loved ones)
___ FREEDOM (independence, free choice)
___ HAPPINESS (contentedness)

"... " (Rokeach, 1973, p.422).

Each value is measured by a single item. Rokeach (1973) has described values as the main dependent variable in the study of culture and the main independent variable in the study of social attitudes and behaviour.

Many research studies are reported in Rokeach (1973) and among many other variables, value ranks are related to sex, income, education, race, age, religion, 1968 presidential candidates, political and social attitudes and behaviour (Cohen, 1978). How different people hold values is determined by observing how they rank them and Rokeach (1973) presents a collection of data of the rankings of a number of different groups (Lynn, 1974) ranging from American Catholic priests to artists in Calcutta (Cohen, 1978). For example, the values of a sample of 153 male, white mid-western American policemen, were reported. The values were compared with a national sample and police were found to differ markedly and significantly from white and black Americans on many values. There was a large and significant difference between the police and the policed on equality; its composite rank being fourteenth for police, twelfth for white, male Americans, and third for black, male Americans (Rokeach, 1973). Police were more concerned than black and white Americans in the national sample with certain personal values. They cared more about a sense of accomplishment, being capable, intellectual and logical (Rokeach, 1973).

Catholic priests cared more than did committed Catholic laymen for happiness, inner harmony, salvation, social recognition, true friendship, wisdom and for being helpful and obedient; they cared less for a comfortable life, family security, pleasure and for being ambitious and independent (Rokeach, 1973).
Thus, the Value Survey has been used extensively by Rokeach in his research programme and also throughout studies reported by Feather (1975). The Value Survey has been used with persons from age 11 to 90 and from a wide variety of ethnic and social backgrounds (Kitwood, 1978).

Rokeach's paradigm has been the target of criticisms which include information loss, the difficulty of the lengthy ranking task, and questionable relevance of all the values to daily life (Homer & Kahle, 1988). Kitwood (1978) contends that the logical difficulty with the test is the basic assumption that all respondents have a personal value system in which there is a strict rank-ordering of the value elements.

Lynn (1974) criticises the measure because it only measures the individual's ranking of the values and therefore reveals their evaluation relative to each other. That a particular value may be ranked low on the list does not mean that it is unimportant to the individual, only that it is less important than the other values on the list (Feather, 1975). It does not measure differences in the absolute evaluation of the values. There is no way of telling, for example, if one group cares more passionately than another group about values. The ipsative nature of the procedure dictates that the importance of each value is expressed, not in absolute terms, but in relation to the importance of other values on the list.

In evaluating the results of studies in which a particular measurement procedure is used, it is always important to consider to what extent the method of assessment influences the results obtained (Feather, 1975). Hague (1993) examined the complexity of valuing by assessing the process of rank ordering. The participants were asked to record their comments as they took the Rokeach Value Survey. Some complained about the difficulty of juggling 18 variables at once and others questioned whether they were responding for their real or ideal self.
Feather (1975) discusses two methodological points concerning the suitability of the Value Survey in cross-cultural comparisons. The first point examines the "appropriateness" (p. 228) of using the Value Survey with indigenous people in developing countries, third world countries. The Value Survey was developed in the United States of America, a first world country. People from different cultures may interpret the value concepts in different ways, and as Zavalloni (1980) clearly states, some of the values may be outside the range of indigenous people in developing countries. It could also be speculated that the values of indigenous people and other minority groups within the first world countries, e.g. Hopi Indians and Hispanics of the United States of America and the Aboriginals of Australia, may also be outside the range. However, Feather (1975) argues that the Rokeach lists do cover a wide range of values, and that "they should provide useful indicators of cross-cultural differences in future comparative research among people who have had a reasonable standard of education" (p. 228). Therefore, it would appear that education, rather than other cultural factors, may be the basis for comparison of cross-national studies of values.

Studies from the Flinders University, South Australia programme (Feather, 1975) have been specifically concerned with aspects of the Rokeach Value Survey as an assessment device. Most of the results reported by Feather (1975) support Rokeach's (1973) conclusion that the Value Survey emerges as a useful all purpose instrument for research on human values. The test-retest reliability coefficients for single values for a five week interval show the reliabilities ranged from .40 for wisdom to .87 for salvation, with a median of .63.

Braithwaite and Law (1985), in a study of the structure of human values testing the adequacy of the Rokeach Value Survey, expressed concern that it may not sample the whole range of important human values. They contended that although the survey had received widespread usage, little attempt had been made to examine the extent to which the 36 items provided a comprehensive and representative coverage of the value
domain. Rokeach (1973) maintained that the items provide a "reasonably comprehensive" coverage of the most important human values. The overall procedure for selecting the 36 items had been "intuitive" (Rokeach, 1973).

Researcher's intuitions do not necessarily result in the identification of values that are meaningfully used by the population of interest (Braithwaite & Law, 1985). In their study, Braithwaite and Law (1985) chose a sample of 115 Australian adults from the electoral roll of Brisbane. Sixty-three percent participated, 48% were male, 27% were less than 30 years of age, 37% were between 30 and 49 years of age and 39% were 50 or over. Semi-structured interviews were conducted, all sharing the Rokeach Value Survey as a starting point. Participants were asked to comment on the nature of the task, the clarity of the items, and the instrument's comprehensiveness. The survey "eased respondents into a discussion of their own values and their value priorities" (p253).

In general, Braithwaite and Law (1985) found the Rokeach Value Survey successful in covering the many and varied facets of the value domain. The major weakness in the sampling involved the facets of physical development and well-being and individual rights, the latter being one of the most fundamental tenets of society (Braithwaite & Law, 1985). Other deficient areas involved are thriftiness and carefreeness.

Braithwaite and Law (1985) comment that many participants broached the topic of values with some hesitation. "Initial reticence seemed most often due to subjects not being experienced in verbalising their thoughts on such matters. Values were very much taken-for-granted phenomena" (p. 253).

An alternative instrument to the Rokeach Value Survey was proposed and included values of physical well-being, individual rights and basic necessities (Braithwaite & Law, 1985).
A recent and further criticism of the Rokeach Value Survey resulted from the investigation of the meanings of the terms, the interpretations of values. The Gibbins and Walker (1993) study focuses on the issue of multiple meanings of values. The participants ranked the "importance to YOU, as guiding principles in YOUR life" for the 18 terminal values and then chose from lists of possible interpretations those meanings they had in mind when they made their judgments. The listed interpretations had been gleaned from the researchers, Gibbins and Walker, and from 12 other psychologists. The factor analysis of the correlations among all the interpretations showed that all but one value had more than one meaning. Furthermore, for a number of values the first factor has sets of interpretations with negative loadings as well as sets of interpretations with positive loadings (Gibbins & Walker, 1993). The finding suggests not only different meanings for the values but conflictual meanings.

A more recent development and a more comprehensive instrument devised for the measurement of values has been that of Schwartz (1992).

Schwartz and his colleagues generated a theory-based survey to measure people's value priorities (Schwartz, 1992). Twenty-one values from the Rokeach Value Survey were included, the Braithwaite and Law (1985) instrument and others developed in other cultures (c.f., Hofstede, 1980; Chinese Culture Connection, 1987) were considered (Schwartz, 1992). In consultation with Muslim and Druze scholars and by examining texts on comparative religions, Schwartz (1992) added further values. The Values Survey (Schwartz, 1992) included 56 items.

For all languages relevant to the participating cultures, the values were ordered on the Values Survey according to two principles: firstly, values assumed to represent the same value type were separated from each other by, at least, two other values. Secondly, as a result of pretest measures of importance, values were separated by at least three other values from those in the same quintile (Schwartz, 1992).
Following Rokeach (1973), Schwartz (1992) listed and specified the meaning of each value by the provision of an explanation in parentheses. Both instrumental and terminal values were listed separately. Before rating the values on each list, the participants were instructed to read the entire list, then choose and rate the value they most opposed or the value least important to them. Thus, the response scale was self-anchored.

1.8 Values and gender

Sex, as a variable in analysis, has produced a spate of studies investigating sex differences in almost every imaginable personality trait and disposition (Deaux, 1985). In the area of values, sex and gender differences have been investigated. However, it must be noted that the terms "sex" and "gender" in sex differences and gender differences renders confusion which requires clarification. Deaux (1985) provides that explanation by definition of the two terms. "Sex" refers to the biologically based categories of female and male. The use of the word "gender" refers to the psychological features often analogous with the biological categories by an individual or by an observer (Deaux, 1985). Accordingly, studies that select two groups of participants based on their biological characteristics are considered appropriate for the use of the word sex.

In investigating the effects of gender and values, there is the distraction of differentiation because in some studies the term "gender differences" has been used and, in others, the term "sex differences" has been used. It is not known if participants in the reported studies self-identified male or female on the grounds of their biological characteristics or their psychological orientation or, indeed, knew the semantic distinction.
It is assumed in the present study, however, that both terms refer to the psychological based category as participants self-report their categorisation of male or female based on their intellectual self-identification.

Rokeach (1973) found that the men in his study were more concerned with achievement and intellectual pursuits whereas the females assigned more importance to values concerned with love, affiliation and the family.

Feather (1975) compared different samples in regard to significant sex differences in the value priorities of males and females from late secondary or early tertiary levels of education (16-20 years age range). Overall, analyses showed that the male students gave greater importance to hedonistic values and to values concerned with achievement and competence than did female students. The female students were more concerned with values relating to security, honesty, affiliation, peace and harmony, than were the male students.

Gender differences in value priorities, measured by the Schwartz Value Survey, emerged from a comparative study of Australians, Australian Baha'i's and expatriate Iranian Baha'i's (Feather, Volkmer, & McKee, 1992). The gender differences that emerged were consistent with a conclusion that women tend to accentuate communal and prosocial values and devaluate agentic values when compared to men (e.g., Block, 1973; Gilligan, 1982). Men assigned more relative importance to values from the hedonism, achievement, power, and stimulation domains when compared with women. Women saw values from the benevolence and spirituality domains as more important (Feather et al, 1992).

Another study of values was that of Menzes, Costa and Paiva-Campos (1989) in which they studied the Schwartz and Bilsky typology of ten motivational domains of Portuguese graduating college students. The most important values for all the
participants were maturity and the least important were the preservation of traditional values. Gender differences showed that females gave a higher rating to maturity, social and relational values. Hedonism rated higher with self-defined, nonreligious and leftist males whereas the preservation of traditional values rated higher with religious and rightist males.

In an more recent examination of gender effects, in which the participating graduate and undergraduate students completed a case study and two questionnaires with regard to moral development, decisionmaking and values of equity and equality, Crow, Fok, Hartmam and Payne (1991) found no relationship between gender and equity/equality values.

A study of values, personality and career choice among graduate social work students, 82% of whom were female and graduate business studies students, 68% male (Segal. 1992) showed that while the two groups held similar values, the differences correlated with the gender of the participants. Accordingly, the results suggested that regardless of the choice of profession, females tend to respond like other females and males like other males.

Overall, these studies show that males and females report difference importance priorities.

The work of Schwartz and Bilsky (1987, 1990) was carried out among predominantly female samples (e.g., the German sample was 66% female, the Israeli sample 84%) and in the cases of the Australian sample, the authors "estimated" 40% women and two other samples (Hong Kong and Spain) "about half were female" (p.882). Schwartz (1992) reports 40 studies of which 28 (70%) had 50% or more female in the samples. No gender differences were reported.
The present study seeks to test the differences between the values prioritised by the males and females in the New Zealand sample.

1.9 The Maori and their values

In examining the values of New Zealand student teachers, it is important to recognise that although a homogeneous group in terms of career choice, aspirations, and educational levels, the group reflects the composition of New Zealand society in terms of ethnicity. New Zealand society is multicultural. However, it appears that until issues between Maori and Pakeha are settled, multicultural issues are side-streamed. New Zealand, now politically, socially, economically and spiritually resolved to addressing the issues attendant to biculturalism between Maori and Pakeha, is forging its way towards an understanding and partnership; the partnership enshrined in the articles embodied in the Treaty of Waitangi (a covenant between the British Crown and the Maori). The primary relationship in New Zealand therefore is bicultural; other cultures are immigrant and assimilist.

Marsden (1985) states that many Maori react against the "seemingly facile approach of foreign anthropologists to their attitudes, mores and values" because the reality Maori experience subjectively is incapable of rational synthesis (p163). He believes that only a Maori from within the culture can explore and describe the main features in the experience of the Maori.

The present study, researched from a Eurocentric perspective, does not attempt to "explore and describe the main features in the experience of the Maori" but does seek to acknowledge that the Maori do have different values from those of Pakeha and to test the differences. In a sample from New Zealand, it is very easy to overlook the difference of values and generalise the majority population to the minority populations. And, it is also possible that Maori values are depreciated by Pakeha. Tanenuiarangi kaumatua Tamate Tuhiwai, in discussion on the Regional Coast Plan stated that too
many Maori values, such as *kaitiakitanga* (exercise of guardianship over a resource), were taken for granted (Saunders, 1994). The present study, therefore, seeks to appreciate the differences.

There is an assumption that Pakeha (New Zealanders of European descent) and Maori (the indigenous Polynesian people, the *tangata whenua*) share the same values (Patterson, 1992). Maori values are unlike Pakeha values; the content is different.

Underlying and informing the Maori way of life are the spiritual values of *tapu* (implies the presence of a supernatural force, holy, under religious restriction) and its opposite *noa* (Metge, 1967); *mana* (power, authority and prestige), (Barlow, 1991); *aroha* (love, sympathy and charity), (Barlow, 1991) and the associated concepts of *awhina* (helping) and *manaaki* (caring for); *utu* (reciprocity), (Metge, 1967) and *whanau* (extended family). *Kotahitanga* (tribal unity), a value fundamental to Maori, was to give everyone an equal share in the resources and to ensure no one suffered unduly (Barlow, 1991).

*Tapu*. Maori are a part of, not apart from, the natural/spiritual world around them. With this identification, Maori perceive all persons, places and things as having a "life force" or *Mauri* and also a spirit *Wairua*. *Wairua* is generally acknowledged to be the most essential requirement for health (Durie, 1985). Because of *Mauri* and *Wairua*, Maori are subject to the laws of *Tapu*. *Tapu* plays a central part in Maori values and may be seen as a system of control (Patterson, 1992). It involves rules and prohibitions and as such is more rule governed than virtue driven. The Maori idea of *tapu* is close to the Jewish notion of "sacred" and "holy" and it also has religious and legal connotations (Marsden, 1985). However, as Patterson (1992) explains *tapu* is integrally connected with the concept of *mana*:

"To say that something is *tapu* is usually understood as a prohibition, but essentially *tapu* functions as a protective device. *Something becomes tapu by virtue of becoming
imbued with mana and the prohibition on associating with a tapu object can be seen as a protection against being harmed by contact with the potency of that mana" (p.107).

A significant value for Maori is to know who you are, where you have come from and where you are going to. The knowledge links the individual from creation and forward through the ancestors, tupuna, to those yet to come. Thus, Maori have a strong kinship identity which extends backwards to ancestors and forward to the new generation. Maori identification is linked by tribal affiliations, traditions and values, through whakapapa. Two important questions that Maori use in greetings are: No hea koe? Ko wai koe? (Where do you come from? Who are you?) From the response a Maori can identify kinship ties, determine how much mana the other holds and identify the mana associated with the interpersonal relationship.

Mana means spiritual authority and power. It is a perceived contract between man and the Gods, but not dependent on how good or humble a person is. Mana is conferred on individuals by the Gods either by birth via one's tupuna (ranked from chieftain to slave class) or gained in one's lifetime through personal achievements; for example, in war the warriors in the Maori Battalion were celebrated and gained mana; and individuals attaining All Black status gain mana.

A perceived or actual assault on a person's mana is considered highly offensive and calls for Utu. In the maintenance and pursuit of personal, familial or tribal mana and the restoration of the balance of power or justice, utu is the payment for violation. He aha te utu? What is the cost? Makereti (1986) notes that all greenstones, sources of wealth, may be given in utu, payment for injury.

Aroha, awhina and manaaki are recognition by one Maori to another of their mana. A person who has aroha for another has concern for that person and acts with their
welfare in mind regardless of their fiscal status and wellbeing (Barlow, 1991). *Aroha* is expressed by love for people, land, birds and animals, fish and all living things (Barlow, 1991). *Aroha* is the collective's recognition of looking after itself and does so in the bondage of love.

Central to the Maori world view is the concept of collective responsibility, a concept which, apart from its expression in team sports, is not adopted by Pakeha and is not well understood. Pakeha see the individual as the ultimate bearer of responsibility (Patterson, 1992).

Maori have an ideal of a shared life; for example if wealth and power are to be pursued, it is not for the individual's wealth and power but for the collective good. Maori values are essentially collective values, expressed in terms of collective action and responsibility (Patterson, 1992).

The importance attached to different values of the Maori is of interest in the present study. The Maori and Pakeha of New Zealand have different social histories, culture and mores; different values require addressing. To ignore the contribution of the Maori in a New Zealand study is to vindicate assimilation.
A theory of the universality of the psychological structure of human values was designed by Shalom H. Schwartz and Wolfgang Bilsky and proposed in their seminal work, *Towards a universal psychological structure of human values* (Schwartz & Bilsky, 1987), and advanced in their further study of 1990. The theory was modified by Schwartz (1992). In the theory human values are "cognitive representations of three universal requirements" (Schwartz & Bilsky, 1987, p.551) from which eight motivational domains of values can be derived. The values could be mapped according to the interests they serve (individualistic versus collectivistic) and the type of goal to which they refer (terminal versus instrumental). The following section examines the theory as it is rationalised in the available literature.

### 2.1 Three universal requirements

In line with past research (e.g., Kluckhohn, 1951; Williams, 1968; Rokeach, 1973) Schwartz and Bilsky (1987) made a theoretical assumption about the nature and sources of human values. For the effective and efficient functioning of individuals and societies, Schwartz and Bilsky (1987) contended that all people must be responsive to the three universal human requirements. Firstly, there are the biologically based needs that as biological organisms, individuals have. For example, as humans we have sexual needs (cf., Maslow, 1959) which may be transferred into values expressive of a sense of belonging, intimacy or love. Secondly, there are the requisites of social interaction which are necessary for interpersonal coordination. Thus, the requirements for coordinating family life may be transferred into values of helpfulness and responsibility. And, finally, there are the institutional demands for the survival and welfare needs of groups. Demands for group survival may be transferred into the values of freedom and equality.
These three universal requirements take the form of goals or values (Schwartz & Bilsky, 1990), which become conscious through cognitive development and are transmitted through socialisation (Schwartz & Bilsky, 1987). At the individual level the requirements are internalised; as a member of a social group, the individual externalises them by communicating about them.

In theorising that values could be extracted from the three universal requirements, reflected in human biological needs, social interaction and institutional demands, Schwartz and Bilsky (1987) provided a typology of the content domains of values.

2.2 The content of the motivational domains/types

Originally, Schwartz and Bilsky (1987) derived seven motivational domains from the literature on human needs, social motivations and societal demands. Yet, in presenting the definitions of the motivational domains and their marker values found in the Rokeach (1973) lists, Schwartz and Bilsky (1987) give eight domains. Accordingly, they contended that the motivational domains that people from all cultures are likely to differentiate are: PROSOCIAL, RESTRICTIVE-CONFORMITY, ENJOYMENT, ACHIEVEMENT, MATURITY, SELF-DIRECTION, SOCIAL POWER and SECURITY.

Although defined, SOCIAL POWER was not derived a priori in their theoretical analysis because there were no marker values for the domain in the Rokeach (1973) lists. Schwartz and Bilsky (1987) used the Rokeach Value Survey (Rokeach, 1973) to test their theory because of its wide usage in the literature therefore the availability of data for reanalysis.

Schwartz (1992) extended the number of motivational domains from seven to eleven to include TRADITION, STIMULATION, SPIRITUALITY and POWER, and made modifications to the definitions and contents of four of the earlier domains, namely
PROSOCIAL which was renamed BENEVOLENCE; ENJOYMENT was renamed HEDONISM; MATURITY was renamed UNIVERSALISM; and RESTRICTIVE-CONFORMITY was renamed CONFORMITY. In addition the motivational domains became motivational types.

The following descriptions of the motivational types seek to clarify the origins in the universal requirements and make explicit the meanings of each type. The specific marker values of the motivational domains in the Values Survey (Schwartz, 1992) which measure the type in the present study, are also indicated in the description. The Schwartz (1992) motivational types are indicated and where appropriate the former domains Schwartz and Bilsky (1987, 1990) are noted in parentheses.

BENEVOLENCE (PROSOCIAL)
The active concern for the wellbeing of other people can be witnessed in its historical context with humanity's attempt to codify specific behaviours that are deemed important for group and societal survival. Classic examples are Confucian teachings, the Bible, the Koran and the Eight Fold Path. Such active concern, expressed in acts of altruism, generosity and kindness has been an important tenet espoused in Eastern and Western cultures. The term, PROSOCIAL, refers to concern for the wellbeing of all, active protection or enhancement of the welfare of others (Schwartz & Bilsky, 1990). PROSOCIAL meets the third type of universal human requirements. Regardless of location and regardless of familiarity, the motivational domain PROSOCIAL encompasses a global humanity. An issue of global concern addressed in a global forum, the Mandela concerts and the Live Aid concerts of the 1980's, manifest the PROSOCIAL domain. To promote the continuation and flourishing of one's immediate group, the value has been redefined and renamed. Renamed BENEVOLENCE (Schwartz, 1992) the pared motivational goal, "preservation and enhancement of the welfare of people" (Schwartz, 1992), restricts the concern for the welfare of others to those with whom one is in frequent contact. The social requirement is more narrow in
its focus and enunciates the organismic need of belonging and affiliation (cf., Maslow, 1959). Marker values of BENEVOLENCE in the Values Questionnaire (Schwartz, 1992) are helpful, loyal, forgiving, honest, responsible, true friendship and mature love.

CONFORMITY (RESTRICTIVE-CONFORMITY)
For the effective implementation of commonly held prosocial values and the smooth functioning of social interaction within groups, individuals are urged to restrain and inhibit actions that might aggrieve or endanger others. The demand for self-restriction, repression, has parallels in the psychoanalytic theory of moral development (Freud, 1923) where it is called superego. The superego is composed of the conscience which distinguishes right from wrong and punishes behaviour it considers aberrant or immoral. Renamed CONFORMITY (Schwartz, 1992) the defining goal of the value type is restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (Schwartz, 1992). "Others" refers to those within one's close contact. Thus CONFORMITY is derived from the universal that requires individuals to inhibit disruption for social interaction and group wellbeing. Marker values of CONFORMITY are obedient, politeness, honouring of parents and elders and self-discipline.

HEDONISM (ENJOYMENT)
This motivational domain is derived from the organismic need to satisfy and derive pleasure from basic physiological needs. Maslow (1970) propounded a theory of human motivation that differentiated basic needs and meta-needs. Among the basic needs, deficiency needs, are warmth, food, water and sex. Examples of meta-needs, growth needs, are justice, goodness, beauty, order and unity. Freud (1943) emphasised the pleasure principle which prompts the organism to seek immediate gratification and an immediate reduction of uncomfortable tensions. The basic physiological needs become transformed into socially recognised values such as pleasure, a comfortable life,
happiness and cheerfulness (Schwartz & Bilsky, 1987). Renamed HEDONISM (Schwartz, 1992), because neither happiness nor cheerfulness (cf., Rokeach, 1973) are derived from organismic needs, the motivational goal of this value type is self-pleasure or sensuous gratification for oneself (Schwartz, 1992). Thus, HEDONISM was derived from biological needs and the associated pleasure of satisfying them. The specific marker values of HEDONISM in the Values Questionnaire are pleasure and enjoying life.

ACHIEVEMENT
Generally, achievement is the attaining of a goal. The need for achievement is derived from an innate characteristic of human beings that energises people to develop, master tasks and skills. For example, a toddler works at learning to walk; the achievement of the skill results in developing independence and creates the facility for a greater range of potential enjoyment. The achievement of tasks, skills and resources through the social and physical environment are essential for individual and group survival. Schwartz and Bilsky (1987) contend that although the need for competent performance may or may not be innate to the individual, it is doubtless a vital requirement for successful social interaction and for institutional functioning (p.552). The greater the levels of competence, the more effective the social interaction and institutional functioning is for the individual. Therefore, the motivational type ACHIEVEMENT may be derived from all three of the universal requirements. The goal of ACHIEVEMENT is personal success through demonstrating competence according to social standards (Schwartz, 1992). The implication is that whatever constitutes achievement may have different standards depending on the group or culture. However, regardless of the group standards or cultural differences, the achievement will be the basis for social approval, recognition and admiration within the group or culture. To illustrate the point: the achievement goals, for example, of the Mongrel Mob (a pro-Maori cultural group) have the same strictures and structures as, for example, the Freemasons (an ancient fraternity). In this context the achievement value pertains to
external approval, social approval, not internal approval, meeting one's own standards.
The marker values of ACHIEVEMENT in the Values Questionnaire are capable, intelligent, ambitious, successful and influential.

UNIVERSALISM (MATURITY)
Becoming mature is the result of life experiences, coming to terms with the uplifts and hassles, learning to tolerate, understand and appreciate the environment that the individual confronts. The notion of maturity bears resemblance to Maslow's (1970) suggestion that people have a drive for self-fulfilment, self-actualisation. The value type MATURITY included understanding, appreciation and acceptance of oneself, others and the surrounding world (Schwartz & Bilsky, 1990). The value type UNIVERSALISM (Schwartz, 1992) includes the former MATURITY value type and part of the former PROSOCIAL value type (Schwartz, 1992).
The motivational goal of UNIVERSALISM is understanding, appreciation, tolerance, and protection for the welfare of all people and for nature (Schwartz, 1992). Idiomatically, the Greeks call it Kristos; in Eastern culture, Enlightenment. UNIVERSALISM differs from BENEVOLENCE in its focus: the motivational goal of UNIVERSALISM concerns the welfare of all people and the ecology whereas the motivational goal of BENEVOLENCE is concerned with those people in one's milieu. The specific marker values of UNIVERSALISM in the Values Questionnaire are equality, unity with nature, wisdom, a world of beauty, social justice, broadminded, protecting the environment and a world at peace.

SELF-DIRECTION
Outside the sphere of values concerning the needs and welfare of others is the motivational goal type of SELF-DIRECTION. The notion of self-direction echoes the concept of personal causation (De Charms, 1971) which differentiates between the notion of being a "pawn" and being an "origin". A "pawn" is a person who feels that an external force is controlling her life. An "origin" is an individual who feels she is a
director of her life, that what she does is the result of own free choice because she so desires. SELF-DIRECTION was derived from the organismic needs for control and mastery (cf., Deci, 1975) and the needs of autonomy and independence (Schwartz, 1992). The defining goal type of SELF-DIRECTION is independent thought and action, - choosing, creating, exploring (Schwartz, 1992). SELF-DIRECTION may be illustrated in the realm of sexuality: sexual preferences and practices exemplify the goal type of independent thought and action. Marker values of SELF-DIRECTION in the Values Questionnaire are freedom, creativity, independent, choosing own goals, curious, and self-respect.

SECURITY
Safety is a basic organismic need (Maslow, 1959) and the need of the organism is to survive physically and avoid threats to its integrity (Schwartz & Bilsky, 1990). The needs express physical and psychological safety; both are important for survival of individuals and groups. A salient example in the New Zealand setting, is the current social abhorrence and alarm by society in general of intrafamily abuse, family violence. The origins of family abuse can be attributed to individuals who lack personal security and fail to gain mastery in prosocial behaviour. The effects of their non-compliance to social values impacts upon and severely impairs the physical and psychological safety of the others, individuals in the family and the family as a group. The motivational goal of SECURITY is safety, harmony, and the stability of society, of relationships and of self (Schwartz, 1992). It is derived from individual and group requirements. Included in the marker values are those that address individual security values and group security values. The specific marker values in the Values Questionnaire are national security, reciprocation of favours, family security, sense of belonging, social order, healthy and clean.

The three potentially universal motivational domains, renamed motivational types (Schwartz, 1992), and postulated to be present in all cultures in a further advancement
of the theory: TRADITION, STIMULATION and POWER (Schwartz, 1992) will now be described.

TRADITION

Tradition embodies a tale, belief or practice handed down from generation to generation. Lineal transmission is bound up with an unbroken continuum in the lives of a family or group, sanctioned and valued by the membership. Traditional practices are subject to embellishment whilst maintaining the integrity of the central core. For example, the traditional custom of Easter has its origins in pagan fertility rites, the essential core of new life remains with all the embellishments of rabbits, hot cross buns and chocolate Easter eggs. However, Easter is currently manifest as a Christian festival. Persistent tradition can become a cultural focus and the rallying point for group solidarity, providing an arena of commonality. Groups everywhere develop symbols and practices that represent their shared experience and fate (Schwartz, 1992). The motivational goal of this value type is respect, commitment, and acceptance of the customs and ideas that individuals' culture or religion impose on them (Schwartz, 1992). Marker values of TRADITION in the Values Questionnaire are respect for tradition, devout, accepting my portion in life, humble and moderate.

STIMULATION

An action or influence that produces a response in an organism is said to be stimulating for that organism. Variation of stimuli, the degrees of novelty and complexity and the incongruity of stimulation, affect the level of arousal. Stimulation values are derived from the presumed organismic need for variety and stimulation to maintain an optimal level of activation (Schwartz, 1992). The motivational goal of STIMULATION is excitement, novelty and challenge in life. Biologically based variations in the need for stimulation and arousal, conditioned by social experience, may produce individual differences in the importance of stimulation values (Schwartz, 1992). For example: food, an essential survival need, is also the source of potential stimulation. The shape,
texture, taste and aroma of food, the different styles of cooking, and the presentation of food exemplify the variation of the stimuli (food) and affect the level of arousal. The three specific marker values of STIMULATION in the Values Questionnaire are an exciting life, a varied life and daring.

POWER
Social psychologists and sociologists typically view power as the degree of control that a person or group has over other persons or groups (Reber, 1985). The right to use power is called authority (Parsons, 1969). Social systems require some degree of status differentiation and in the patriarchal paradigms, a hierarchy usually emerges or is conferred. For the justification and the motivation of group members to accept and defer to that hierarchy, power is treated as a social value. The central goal of power, according to Schwartz (1992) is the attainment of social status and prestige, and control and dominance over people and resources. POWER is therefore seen in terms of relationships. The marker values of POWER in the Values Questionnaire are social power, wealth, authority, preserving my public image and social recognition.

SPIRITUALITY
Religious theologians, philosophers and sociologists emphasise that the basic rationale for traditional creeds and customs is to endow life with meaning and coherence in the face of seeming meaninglessness of everyday existence (Schwartz, 1992). Religions provide an answer to the meaning of life with reference to a supernatural being and nonreligions provide an answer with reference to the natural world. Irrespective of geographical location and the prescriptions of behaviour, differences between Eastern and Western religions and philosophies share commonalities. The Christian Bible, the Koran of the Muslims and the Eight Fold Path of Buddhists are indexed to assist, direct and inspire individuals to seek the optimum way of life through commandments and directives of celestial guidance. The large and widely known nonreligious group, Alcoholics Anonymous, has important spiritual aspects which are
evidenced in the Twelve Steps (Davison & Neale, 1990). The marker values of SPIRITUALITY in the Values Questionnaire are inner harmony, a spiritual life, meaning in life and detachment.

2.3 The structure of human values

From the vast array of values, certain groups of values cluster together to form a distinct domain, a distinct type. In the Schwartz (1992) paradigm, the 56 values cluster to form 10 motivational types. SPIRITUALITY did not emerge as a distinct type. Values are organised into these domains or types as a consequence of their similarities and differences. For example, the values mature love and wisdom are elements of MATURITY. The similarities between the two values are maximal and the essential components of the motivational domain MATURITY. The values obedient and polite are a structural part of the motivational domain CONFORMITY. Logically, it is expected that obedience and creativity are diverse in their goals and are conceptually different, each components of the diverse motivational domains of CONFORMITY and SELF-DIRECTION. The structure of human values refers to the conceptual organisation of values on the basis of their similarities and differences (Schwartz & Bilsky, 1987, 1990; Schwartz, 1992).

Not only does the structure of values refer to the organisation of values based on similarities and differences (Schwartz & Bilsky, 1987, 1990; Schwartz, 1992), it also refers to the relations among value types on the basis of their compatibilities and contradictions (Schwartz & Bilsky, 1987, 1990; Schwartz, 1992). Some value types are compatible and are non-conflictual, whereas other are oppositional and conflictual. Thus, if it is practically or logically contradictory to give high priority to values in both types simultaneously, two different types are conceptually distant; for example BENEVOLENCE and POWER. For an individual to prioritise voluntary attention to the needs of others, by being helpful and self-sacrificing, the priority of controlling others and resources, (the component values of the value type POWER), would be
antithetical and incompatible with the value of BENEVOLENCE. The two would be conceptually distant, contradictory and oppositional.

Conversely, two domains are conceptually close if placing high priority on values in both domains is compatible (Schwartz & Bilsky 1987, 1990; Schwartz, 1992), for example, the motivational types STIMULATION and HEDONISM. Prioritising an exciting and varied life (STIMULATION) would seem highly compatible and conceptually close to seeking self-pleasure and sensuous gratification (HEDONISM). The revised theoretical structure of the motivational types of human values (Schwartz, 1992) is shown in Figure 1.
Figure 1. The revised theoretical model of relations among the motivational types of values. (Adapted from Schwartz, 1992, p.45).
2.4 Theoretical measurement

To test the theory Schwartz & Bilsky (1987) performed Smallest Space Analyses (SSA) (Guttman, 1968) on ratings given by subjects from Israel and Germany of the importance of 36 Rokeach values as guiding principles in their lives. SSA enabled the values to be represented as points in a multidimensional space. The distances between the points reflect the empirical relations among the values as measured by the correlations between their importance ratings. Thus, the greater the similarity between the two values, the closer the values empirically and the closer their locations in the multidimensional space.

The 455 Israeli subjects were teachers from urban public schools, who had completed the Hebrew translation of the Rokeach Values Survey, the gummed label version, during staff meetings in an applied study of values and behaviour (see Schwartz, 1985). In that version the respondents rank the values in a list for importance. Eighty-four percent of the sample were female and the median age was 35. The German sample of 331, were students from teacher training institutions. They completed a German version of the Rokeach Value Survey in group sessions during 1984. Sixty-six percent of the sample were female with a median age of 22. The theory was tested, therefore, on a predominantly female sample.

The gummed label version of the Rokeach Value Survey is a ranking system and there are limitations in using a ranking system as all intervals between the variables are treated as being equal. To compensate for the deficit, once the values were ranked the participants compared adjacent pairs of values. They indicated on a 7-point scale how much more important was each value than the value ranked immediately below it. The comparison indicated the relative importance of each pair of value on a 7-point scale. Therefore, the rating system treated the least important value as equally unimportant to all respondents (Schwartz & Bilsky, 1987); all were assigned a score of 1 to the least rated value and to each higher ranked value, a score consisting of all the value
comparison scores for the value below it plus 1 was assigned. Ratings ranged from 1 to 104 (Schwartz & Bilsky, 1987).

Pearson correlation coefficients, based on the ratings of value importance, provided the data matrix analysed with the Guttman-Lingoes Smallest Space Analysis (SSA), a nonmetric multidimensional scaling analysis technique (Guttman, 1968). The segmentation of the regions was achieved by drawing partition lines according to the face of the values: "the facet definitions" (Schwartz & Bilsky, 1987, p.555). The a priori specifications of the expected contents of the regions enabled the drawing of the boundaries.

The results showed that the people in both societies, Israeli and German, discriminated among 36 values according to the a priori specifications of goal types, interests served and motivational domains. The goal types (terminal and instrumental) were segregated into separate regions with the only overlap being the value obedient out of place in the German map. It was concluded that people do discriminate values according to the end state / mode of behaviour dichotomy. However, as the values were discriminated on the Rokeach Values Survey, it is possible that the result was an artifact of the values' location.

Both samples distinguished the interests served with the German sample locating the SECURITY domain in the collectivist set rather than the mixed interests set. The seven motivational domains formed distinct regions as was predicted. In the Israeli map 96% of the marker values fell into the regions corresponding with the predicted motivational domains and in the German map 86%.

The results of the studies that tested the hypotheses (Schwartz & Bilsky, 1987) were promising in terms of the theoretical advancement. The surveys were administered in two different languages, by using repeated-back translation. A Hebrew form of the
Rokeach Values Survey was prepared for the Israeli sample and the German values questionnaire was modified from a translation by Schneider (1983, cited in Schwartz & Bilsky, 1987). The surveys were administered in countries with different histories, culture and mores, the samples varied in their distribution of age and life stage, both were derived from members of the teaching profession but were at different stages of their career development.

2.5 Theoretical development

In 1990, Schwartz and Bilsky examined their theory, the universality of the psychological content and structure of human values, with data from five more countries: Finland, Hong Kong, Spain, Australia and the United States of America. Included in the data analyses were also the samples from Israel and Germany (Schwartz & Bilsky, 1987). The participants were undergraduate students of diverse majors (Australia, Spain and Hong Kong), a representative national sample of adults (United States), and adult residents of a small coastal village (Finland). The samples varied in time, ethnicity, nationality, age, socioeconomic status, educational level, religion and sex.

Interestingly, the data from Australia and the United States of America had been gathered in 1969 and 1968 respectively. Yet, according to Schwartz and Bilsky (1990) all the survey forms were based on the Rokeach (1973) 36-value English version. Data from Finland, Hong Kong, Spain, Israel and Germany was gathered between 1982 and 1984 by different researchers. Translations were prepared locally.

The participants in the American, Spanish, Finnish and Australian samples ranked the 18 terminal values and then the 18 instrumental values from most to least important. In Hong Kong, the participants rated each of their values on a 9-point scale ranging from "(1) no importance for me at all to (9) supreme importance for me." (Schwartz & Bilsky, 1990). For all the samples except for Hong Kong, the criterion of evaluation was
the importance of values "as a guiding principle in my life." In Hong Kong, the criterion of evaluation was the importance of values "to me personally" (Schwartz & Bilsky, 1990).

There were differences in the way in which the participants responded: the German, Israeli and American samples arranged gummed labels in order of importance whilst the Australian, Spanish, Finnish and Hong Kong samples wrote numbers next to the values to indicate their importance. Comparatively, the latter is more subject to error in terms of the participants omitting to endorse values.

In all samples, except Finland and Hong Kong, the terminal and instrumental values appeared on separate lists and were listed alphabetically. The first list contained the terminal values which were expressed as nouns. The second list, the instrumental values, were expressed as adjectives. In Finland, the values were presented in two lists, with both terminal and instrumental values expressed as nouns. The Hong Kong survey had four additional values and all were presented in a single list. Terminal values were not distinguished from instrumental values as the Chinese language does not distinguish nouns from adjectives therefore the values were not differentiated by phraseology (Schwartz & Bilsky, 1990). The results of the analysis indicated that all maps could be partitioned into non-overlapping terminal and instrumental regions. Although there was distinction in all samples, the shape of each cluster was different for each country (Schwartz & Bilsky, 1990).

As with the previous study (Schwartz & Bilsky, 1987) the analyses were based on an intercorrelation matrix of Pearson product-moment correlations between the importance rankings or ratings of the values. The exception was the Australian data: Spearman rho correlations were used. The intercorrelation matrices were analysed with the Guttman-Lingoes Smallest Space Analysis (SSA; Guttman, 1968).
SSA revealed the seven distinct motivational domains (ACHIEVEMENT, ENJOYMENT, MATURITY, PROSOCIAL, RESTRICTIVE CONFORMITY, SECURITY and SELF-DIRECTION) as had appeared in the earlier study. In the Hong Kong sample, a new motivational domain emerged, namely, POWER. The interests that the values serve (individualistic /collectivistic) were also distinguished in all the samples.

The results of the Schwartz and Bilsky (1990) study warranted further examination of the theory. Thus, following the Schwartz and Bilsky (1987, 1990) theoretical proposal of the universal content and structure of human values, Schwartz (1992) revised the theory modifying it and extending its dimensions.

2.6 Theoretical modifications

As previously discussed, four further motivational types of values were added: TRADITION, STIMULATION, SPIRITUALITY and POWER. A new values instrument, the Values Survey (Schwartz, 1992) developed on the basis of theoretical revisions, was introduced. Schwartz (1992) proposed ways to use the theory and an instrument to generate and test hypotheses about the antecedents and consequences of value priorities.

Before the universality of a theory can be claimed, it is essential to examine the theory in all cultures. To test the universality of the hypothesised value types and the dynamic relations among them, data was gathered from 40 samples in 20 countries. A set of samples "maximally diverse in culture, language and geographical region was desirable" (Schwartz, 1992, p.17). Most of the samples were from two occupational groups: teachers and university students. Included in the samples were samples from factory workers and from the general population. In each country, researchers collected the data from approximately 200 teachers.
The administration of the survey questionnaire was not standardised. There were variations in the administration: some were administered in groups of between 5 and 100 respondents, others were administered to individuals and a mail survey was used in two of the samples. The values were presented in two lists: the first list contained 30 terminal values and the second list contained 26 instrumental values. Unlike the previous studies (Schwartz & Bilsky, 1987, 1990) the participants were instructed to read the whole list, choose and rate the value they most opposed or the value least important to them. The procedure, thus, anchored the response scale for them.

Raw data were sent to S. Schwartz at the Hebrew University where all the analyses were performed. The intercorrelation matrix of Pearson correlations between the importance ratings of the values was analysed with the Guttman-Lingoes Smallest Space Analysis (SSA) (Guttman, 1968). Schwartz (1992) interpreted the SSA by "using a configurational verification approach" (p.21).

The value content hypothesis examined the possibility of partitioning the points that occupied the two-dimensional space into distinct regions that mirrored the a priori value types. The values expected to constitute the value types had been specified which enabled the drawing of the boundaries. The value structure hypotheses were tested by comparing the regions obtained with the theoretical structure that represented the hypotheses.

The criteria to determine the appropriateness of a set of value points forming a region were threefold:

"(1) at least 60% of the values postulated a priori to constitute that type and (2) no more than 33% of the values postulated to constitute any other single type. Further, (3) at least 70% of all values in the region had to have been judged a priori as potentially reflecting the goals of the appropriate value type as one of their meanings." (Schwartz, 1992, p.22). If the criteria were not met, a region was formed combining two value
types with the criteria: "The region (1) contained at least 50% of the values postulated to constitute each type, and (2) at least 70% of the values in the region potentially reflected the goals of these two value types" (Schwartz, 1992, p.22). In the event that neither set of criteria were met, the value type was disconfirmed.

Results of the 40 within-sample SSAs show that for most of the samples distinct regions were identified for each value type. SPIRITUALITY was not included because the criteria for forming a distinct region were met in only 8 samples (Schwartz, 1992). However, Schwartz (1992) wanted to investigate the possibility of different SPIRITUALITY types emerging in different cultures and relaxed the criteria. This suggests a "fishing expedition" the consequence of which was the finding of a SPIRITUALITY region in an additional 17 samples.

Nevertheless, the analyses suggest that when people relate to values as guiding principles, they distinguish 10 types of values that express different motivational goals (SECURITY, POWER, ACHIEVEMENT, HEDONISM, STIMULATION, SELF-DIRECTION, UNIVERSALISM, BENEVOLENCE, CONFORMITY, TRADITION).

In terms of the terminal and instrumental dichotomy, the Schwartz (1992) study contradicted the findings of Schwartz and Bilsky (1987, 1990). The earlier studies reported distinct separation of the two regions in each of the seven countries. The terminal values, repeatedly were peripheral to the central region formed by the instrumental values. However, inspections of the projections of the motivational types of the 40 samples examined (Schwartz, 1992) showed that not one case of separation between terminal and instrumental values was evidenced. Schwartz (1992) speculated that the lack of anchoring of ratings by the participants before their use of the response scale could have produced the previously observed distinct regions. The results suggested that people do not relate to terminal and instrumental values differently.
Schwartz (1992) suggested that a single form, either instrumental or terminal, is needed to measure values. The instrumental phrasing is less attractive because, according to Schwartz (1992) people usually think of values in noun form, the expressed form of terminal values, and that instrumental phrasing is sometimes recognised as a value priority but recognised as a personality description.

2.7 Theoretical applications

Because the theory and questionnaire are in their infancy, it appears that there are a number of projects underway in many countries. For example, Michael McCarrey, a supervisor of the present thesis, has researchers in Australia, Russia, England and Canada investigating the theory.

However, a literature search of studies using the value theory (Schwartz, 1992) and the Value Survey (1992) proved almost fruitless. There have been publications as listed on a personal communication from Schwartz (1994) however the languages of these documents prevented the present author from review for this thesis. For example, research has been published in Bulgarian, German, French, Spanish and Hebrew. One such study was that of Menzes, Costa and Paiva-Campos (1989), previously referred to (see 1.9). Letters of request to authors of studies published in English, did not elicit responses.

In reviewing studies of values, Smith and Bond (1993) discuss the Hofstede (1980) study, the Chinese Culture Connection (1987) and the large scale study of values of Schwartz and his colleagues. Smith and Bond (1993) state that the strength of the Schwartz and Bilsky (1987,1990) and Schwartz (1992) work is that it included a thorough sampling of values which are possibly important in various cultures. For that reason it serves as a control on the adequacy of the other studies. The ten value types are more numerous than those identified by Hofstede (1980) and the Chinese Culture
Connection (1987) (Smith & Bond, 1993) so it may be speculated that the Schwartz typology is more comprehensive.
CHAPTER 3. THE PRESENT STUDY

3.1 Aims of the present study

The present study seeks to test the universality of the Schwartz (1992) theory in the New Zealand setting. Specifically, the study asks "Is the structure of the "dynamic relations" (Schwartz, 1992) among the motivational types of values similar or different for New Zealand student teachers compared with other findings reported by Schwartz (1992)? Which value conflicts and compatibilities appear universal? Does the instrumental -terminal dichotomy emerge in the New Zealand sample?"

By considering the definitions of the motivational types, Schwartz (1992) generated specific hypotheses regarding the structural relations among the motivational domains. Accordingly, "Adjacent value types are postulated to be most compatible. Increasing distance around the circular order indicates decreasing compatibility and greater conflict. Values types that emerge in opposing directions from the origin are postulated to be in greatest conflict." (Schwartz, 1992, p.14) Figure 1, represents the theoretical model of relations among the motivational types of values.

The present study seeks to confirm the discrimination between terminal and instrumental goals and give strength to that differentiation by scrambling the lists of values, eliminating the possibility of item location and response set.

The study investigates the similarities and differences in value priorities among male and females. The sample is from a group of people who have similar status in career choice, aspirations and educational backgrounds.

Additionally, the study seeks to investigate the differences in value priorities among two New Zealand cultural groups, Maori and Pakeha. There has been a mistaken belief that New Zealanders are all one people who ascribe to the same values. The present
study acknowledges that there are differences in values and these differences may be explored initially through a cross-cultural questionnaire.

### 3.2 The specific hypotheses

1. It is predicted that the motivational types of the sample of New Zealand student teachers' values have the same content and structure as that found by Schwartz (1992).

2. It is hypothesised that individualistic motivational types of values as postulated by Schwartz (1992), (POWER, HEDONISM, ACHIEVEMENT, STIMULATION, SELF-DIRECTION) and collectivistic motivational types of values as postulated by Schwartz (1992), (BENEVOLENCE, CONFORMITY, TRADITION) will be differentiated.

3. Further, it is hypothesised that motivational types which serve similar individual interests (POWER, HEDONISM, ACHIEVEMENT, STIMULATION, SELF-DIRECTION) will be placed in closer proximity in a two-dimensional projection of the values and, those that serve similar collective interests (BENEVOLENCE, CONFORMITY, TRADITION) will be placed in closer proximity in a two-dimensional projection of the values.

4. Cognisant of the motivational types definitions it is hypothesised that there will be conflicts and compatibilities among the values. Specifically, the simultaneous pursuit of values from the following types will be compatible:
   - power and achievement;
   - achievement and hedonism;
   - hedonism and stimulation;
   - stimulation and self-direction;
   - self-direction and universalism;
   - universalism and benevolence;
tradition and conformity;
conformity and security;
and security and power.

And, the simultaneous pursuit of values from the following types will be conflictual:
self-direction and stimulation versus conformity, tradition and security;
universalism and benevolence versus achievement and power;
hedonism versus conformity and tradition;
and, spirituality versus hedonism, achievement and power.

(5) The present study seeks to confirm the discrimination and give strength to the differentiation of terminal and instrumental goals as found by Schwartz and Bilsky (1987, 1990) by scrambling the lists of values, eliminating the possibility of item location and response set.

(6) It is predicted that the value priorities of male and female student teachers in the present sample will be distinguishable and as such will show significant differences.

(7) It is hypothesised that the value priorities of Maori will reflect their traditional tikanga and as such will differ from the value priorities of Pakeha.
CHAPTER 4. METHIOD

4.1 Participants
Authorisation to conduct the study was granted by the Ethics Committee of Massey University. Approval was then sought from the Colleges of Education and access to student teachers as potential participants requested. Letters were written to the Principals of the North Island Colleges of Education (teacher education institutions) and, in one instance, to a Senior Lecturer at a College of Education, explaining the aim of the project and the procedure. The letters sought access and assistance in the recruitment of student teachers to participate in the study. Upon agreement from the Colleges, arrangements were made for the researcher to visit classes of student teachers inviting participation in the study. To eliminate selection bias, the proposal to advertise in a newspaper for participants at one College was declined.

Participants in this present study were sampled from student teachers in two North Island Colleges of Education, New Zealand. Three hundred and eleven student teachers responded.

4.2 Measures
The Values Survey
The Values Survey (Schwartz, 1992) is based on a theory of the universal structure of values (Schwartz, 1992; Schwartz & Bilsky, 1987, 1990). Modelled on the Rokeach (1973) procedure which specifies values and provides an explanatory phrase in parentheses, the Values Survey (Schwartz, 1992) contains 56 values from 11 motivational types of values. The use of sets of values to define value domains helps to overcome problems of unreliability that may occur when single value items are employed (Braithwaite & Law, 1985). Of the 56 values, 21 are identical to those in the Rokeach lists (Schwartz, 1992).
The motivational types measured are: SELF-DIRECTION, STIMULATION, HEDONISM, ACHIEVEMENT, POWER, SECURITY, CONFORMITY, TRADITION, SPIRITUALITY, BENEVOLENCE, and UNIVERSALISM. Each motivational type is defined in terms of its central goal, that is, of the end-state to which it is directed (Schwartz, 1993). Values are classified into that type whose central goal is promoted when people strive to act in ways that express the value or lead to its attainment.

In the Values Survey (Schwartz, 1992) the 56 values are divided into two lists: Values List 1 and Values List 2 which discriminate terminal (end-state) values and instrumental (mode of behaviour) values respectively. The order of the values followed two principles: to separate values of the same motivational type and, to create maximum variability in the average importance expected of adjacent values (Schwartz, 1993).

To measure the participants' value priorities in the present study the Values Survey (Schwartz, 1992) was adapted. The measure used in the present study differed from the original questionnaire in that the terminal and instrumental values were alternated generating two lists of values both containing instrumental and terminal values. Values List 1 listed 30 values, Values List 2, 26 values. The values on List 1 were alternated with the values on List 2, the values on List 2 alternated with those on List 1. (for example: Value 1 stayed in position, value 2 became 32; 3, unaltered; 4 became 34; 5, unaltered; 6 became 36; 7, unaltered; 8 became 38; 9, unaltered; 10 became 40; 11, unaltered; 12, 42; 13; 14, 44; 15; 16, 46; 17; 18, 48; ............32, 2; 33; 34, 4; 35; 36, 6; 37; 38, 8). Because of the different number of values in each list, values 27, 28, 29 and 30 remained in their original positions. The Values Survey was entitled Values Questionnaire (see Appendix C).

Demographic Questionnaire.
A demographic questionnaire (Appendix C) was included to provide common demographic data for this present study and for future studies, comparing the sample
with those from other countries: sex, year of birth, number of years of formal schooling, 
marital status, number of children, occupational category, religiosity, political 
affiliation, religious group identity, urban/rural residence when growing up, and ethnic 
group identity. Two additional questions were asked, one regarding academic interest 
and the other, preference for working alone or with others. Demographic data used in 
the present study were sex, year of birth, number of years of formal schooling, and 
ethnic group identity.

4.3 Procedure

Before the questionnaire was administered by the researcher, and, on one occasion, by a 
trained assistant, a "recruitment speech" (Appendix A) was given to 6 classes of 
approximately 50 student teachers which briefly explained the purpose and procedure 
of the study and the questionnaire and sought their participation. It was explained that 
the survey was part of an international, large scale project studying human values and 
that people usually find thinking about their values on the questionnaire challenging, 
interesting and sometimes difficult. The estimated time of the survey was given. The 
student teachers were assured of anonymity and confidentiality. They were told that 
they did not have to participate in the study or answer any questions they did not wish 
to, and, that they had the right to withdraw at any stage. They were told that there would 
be no penalty and that their participation, or otherwise, would not, in any way, effect 
their College records. Participants were asked to read and sign two consent forms, one 
copy to be kept by themselves and the other copy returned to the researcher (see 
Appendix B).

Upon their written consent, the participants were handed out the questionnaire, they 
were urged to work quietly and alone and to wait until all the group was done if they 
wished to discuss their answers with each other.
The participants were instructed, with the researcher reading aloud the "Instructions" on page 1 of the Values Questionnaire and by the participants silently reading along, to ask themselves: "What values are important to ME as guiding principles in MY life, and what values are less important to me?" They were told that, in the questionnaire, there were two sets of values which come from different cultures. They were also told that following each value, in parentheses, was an explanation that may help them to understand the meaning of the value and that their task was to rate how important each value was for them as a guiding principle in their life on a nine point rating scale: 0—meaning that the value is not at all important, it is not relevant as a guiding principle; 3—meaning that the value is important; 6—meaning that the value is very important. The rating scale was explained: the higher the number (0, 1, 2, 3, 4, 5, 6), the more important the value is as a guiding principle.

Further explanation involved the usage of -1 and 7: -1 is for rating any values opposed to guiding principles, 7 is for rating a value of supreme importance as a guiding principle and, that ordinarily, there are no more than two such values. Participants were instructed to write in a space before each value, the number (-1, 0, 1, 2, 3, 4, 5, 6, 7) which indicated the importance of that value for them personally. They were asked to distinguish as much as possible between the values by using all the numbers and were advised that they would need to use numbers more than once.

Before beginning, the participants were instructed to read the values in List 1, choose the value that is most important, rate its importance and then to choose the value that is most opposed to their values and rate it -1. If there was no such value, the participants were instructed to choose the value of least importance and rate it 0 or 1 according to its importance before rating the values. The participants then rated how important the rest of the values in List 1. Before rating List 2 the participants read the instructions which followed the format of the List 1 instructions.
After 20 minutes had elapsed, the researcher asked the participants to check their questionnaire to ensure that they had not inadvertently skipped any values or omitted any demographic information. Questionnaires were gathered and the participants were thanked for their cooperation.

Letters of appreciation were sent to the Principals of the Colleges and participants who requested a resume of the study were sent a letter outlining the aims and the findings. Names and addresses had been gathered at the time of consent.

4.4 Statistical Analyses

Computer analysis involved processing the raw data with SPSS,PC+, the Advanced Statistics V2.0 (Norusis, 1988) for descriptive statistics and discriminant analyses. Cluster analysis was performed using SYSTAT and the Guttman-Lingoes Smallest Space Analysis (SSA; Guttman, 1968) option was used for multidimensional scaling in SYSTAT.

1. Descriptive statistics summarising the information obtained were computed. These included means, standard deviations and percentages.

2. Data were analysed using the Multidimensional Scaling (MDS) procedure of Smallest Space Analysis (SSA).

Multidimensional scaling is a term used to describe any procedure which begins with the 'distances' between a set of points and finds a group of co-ordinate values, a configuration of the points, in a number of dimensions (Chatfield & Collins, 1980). All multidimensional scaling methods have two features in common: firstly, they try to discover the criteria used by people when comparing a set of objects or attributes and secondly, they then locate or position each object or attribute in relation to these criteria (Gendall, 1986). The result is a two or three-dimensional "map" with the criteria as its axes and the objects or attributes as points in the spaces between the axes.
Multidimensional scaling analysis has been shown to be an extremely practical technique for the classification or ordering of complex items (Smith & Siegal, 1967). The method has been shown to produce results which agree with those obtained through other techniques (Helm, 1959) and has been applied to areas ranging from studies of attitudes (Messick, 1956) to relatively simple job skills (Schultz & Siegal, 1964).

One of a number of multidimensional scaling methods, Smallest Space Analysis (SSA) has been applied extensively to the study of internal structures of concepts and has been employed in several attempts to formulate theories (Shye, 1985, p.49). In their theoretical formulation and advancement, Schwartz and Bilsky (1990) based the analyses on an intercorrelation matrix of Pearson product-moment correlations between the importance rankings or ratings of the values. The intercorrelation matrixes were analysed with the Guttman-Lingoes Smallest Space Analysis (SSA; Guttman, 1968).

The use of Smallest Space Analysis (SSA), a variation of non-metric multidimensional scaling techniques, enables the representation of values as points in a multidimensional space (Schwartz & Bilsky, 1990). The programme begins by calculating the association coefficients between each pair of the questionnaire items. The programme then represents the items as points in a n-dimensional space such that the rank of the distance between the points is the inverse of the rank of the inter-item association coefficients. The distances between the points reflect the empirical relations among the values as measured by the correlations between their importance ratings. The greater the conceptual similarity (the smaller the dissimilarity) between two values, the more related they should be empirically; the closer their locations in the multidimensional space (Chatfield & Collins, 1980). Therefore, the closer together two points are in the space, the higher the positive correlation.

The Schwartz and Bilsky (1990) application of the SSA is what Davison (1983) called "configural verification." The hypotheses specify the number of dimensions and the
spatial configuration or "map" (Kruskal & Wish, 1978) that should be formed by the stimulus points on the two-dimensional projections.

Two dimensional solutions were specified in advance on theoretical grounds: the hypothesised terminal / instrumental distinction implied a projection on two axes; the hypothesised interests served implied a projection on two axes; and the hypothesised motivational types facets implied a projection on two axes.

The programme also provides a measure of the "goodness of fit" between the rank order of the association coefficients and rank order of their spatial representation. This measure, the coefficient of alienation, is usually considered acceptable when it is .2 or below (Donald & Canter, 1990).

The plot is then partitioned by the researcher by identifying regions that share an element of a facet in common. Thus, the elements of a facet are empirically validated if a region on the plot exists for them. The criteria used to decide whether a set of values formed a distinct region confirming the existence of an a priori value type followed that of Schwartz (1992). The region must include (1) at least 60% of the values postulated a priori to make up that type; (2) no more than 33% of the values postulated to constitute any other single type; and (3) at least 70% of all values in the region had to have been judged a priori as potentially reflecting the goals of the appropriate value type as one of their meanings. When the criteria were not met, a region combining two or more value types was formed using the Schwartz (1992) criteria. The region contained (1) at least 50% of the values postulated to constitute each type; and, at least 70% of the values in the region potentially reflected the goals of the value types. When neither set of criteria were met, the existence of the value type was not validated.

In the present study the original associations used were Spearman rho correlations because the technique takes the order of the ratings into account. Previous research into
Schwartz's theory (Schwartz, 1992) has been based on Pearson product-moment intercorrelations, a technique which assumes the intervals between the rated values are constant. The intercorrelation matrixes were analysed with the Guttman-Lingoes Smallest Space Analysis (SSA; Guttman, 1968).

3. Cluster Analysis was performed to provide a solution to the problem of how to group the values into categories which are as internally homogeneous as possible. The method is equivalent to grouping the values so as to maximise the similarities in the ratings and at the same time maximise the differences between them.

The agglomerative hierarchical clustering algorithm used was the Single Linkage Method (Nearest Neighbour). In this method, the raw data are first converted into a similarity matrix (Brook, 1986). The distance metric is Euclidean. Clusters are then formed by grouping cases into bigger and bigger clusters until all cases are members of a single case (Norusis, 1988). The method proceeds by a series of steps in which objects or groups of objects are successively clustered together into larger and larger clusters (Everitt, 1986). Thus, the smallest inter-pair distance is found and the corresponding values are joined to form the smallest cluster. The smallest distance in the new matrix is identified and the values merged to form a new cluster. The process continues until all the cases have been joined in a single cluster. The series of steps is represented in the form of a dendrogram.

4. Discriminant analyses were performed to predict group membership (sex and ethnicity) using the 56 values variables and to identify the values that are important for distinguishing among the groups. Stepwise analysis based on Wilks' lambda was used. Discriminant analysis is a commonly used statistical technique to identify the variables that are important for distinguishing among the groups (Norusis, 1988). Linear combinations of the independent variables are formed and serve as the basis for classifying cases into one of the groups.
CHAPTER 5. RESULTS

Descriptive characteristics of the present sample

Of the 311 participating student teachers, 269 (86.5%) were females and 42 (13.5%) were males. There were 50 (16.1%) Maori participants and 261 (83.9%) non-Maori participants. The non-Maori participants included those who identified themselves as Pakeha/European (228), Pacific Islanders (21), Asian (5) and Other (6). Their ages ranged between 51 years and 20 years (M = 27 years, S. D. = 7.782). The years of formal education of the participating student teachers ranged between 4 years and 25 years (M = 16 years, S. D. = 2.023). There was 1 missing case.

Multidimensional Scaling

For testing the hypotheses 1 to 5, the two-dimensional solution of SSA proved adequate in the sample according to two criteria. Firstly, the SSA solution has a coefficient of alienation of .25 which is moderately acceptable. Secondly, using the Schwartz (1992) theory, visual inspection showed that the projection was interpretable.

Hypothesis (1) It is predicted that the motivational types of the sample of New Zealand student teachers' values have the same content and structure as that found by Schwartz (1992).

Motivational Types: content and structure

The projection of the SSA map shown in Figure 2 has been partitioned into six distinct regions, the motivational types, with all 56 marker values represented. The map reflects the exact locations of the 56 values on a two-dimensional projection of the value space. In applying the criteria (see p.61), several regions were combined to form joint regions. They are (1) POWER, (2) the combined HEDONISM and STIMULATION, (3) SELF-DIRECTION, (4) the combined UNIVERSALISM,
Figure 2: Motivational types and values structure of New Zealand student teachers.
BENEVOLENCE and SPIRITALITY, (5) the combined CONFORMITY and TRADITION and finally, (6) SECURITY. One motivational type, ACHIEVEMENT, postulated to emerge did not. The criteria for confirming its existence were not met. The marker values (ambitious, influential, capable, successful, intelligent, self-respect) for ACHIEVEMENT were included in the analysis and intermixed in three other types where they were empirically located.

The partition lines between the motivational types were determined firstly by drawing boundary lines that linked the a priori assigned specific values to each motivational type that were at the outer edge of each region. The boundary lines were then drawn to the centre of the map. The types all emanate from a common origin.

The first region contains all the marker values relating to the motivational type POWER, social power, wealth, preserving my public image, authority, social recognition and the "potentially appropriate" (Schwartz, 1992) value, influential. Two values, ambitious and daring appear to be misplaced with regard to this region.

Moving clockwise from the POWER region, is the HEDONISM / STIMULATION region. This area of the map contains 80% of the a priori values pleasure, enjoying life, an exciting life, and a varied life for the regions. The "potentially appropriate" (Schwartz, 1992) healthy is located in the combined region that is basically concerned with individuals' affect. Two values found in the region that were expected to be located elsewhere were intelligent and successful.

Adjacent to the HEDONISM / STIMULATION region is the motivational type SELF-DIRECTION. Four of the five (80%) of the a priori marker values (independent, choosing own goals, curious, freedom) are contained in the region. The value capable appears to be misplaced.
The next major region, clockwise from the SELF-DIRECTION region, is the BENEVOLENCE / UNIVERSALISM / SPIRITUALITY region. All the a priori marker values for BENEVOLENCE, helpful, loyal, forgiving, honest, responsible, true friendship, mature love, are located in the region as are all the a priori marker values for UNIVERSALISM, broadminded, social justice, equality, world at peace, world of beauty, unity with nature, wisdom, protecting the environment. These values are concerned with social interests. Four out of the five (80%) of the a priori marker values for SPIRITUALITY (a spiritual life, meaning in life and inner harmony) are also contained in the region. There are four values which appear misplaced, family security, sense of belonging, self-respect and creativity.

Neighbouring the BENEVOLENCE / UNIVERSALISM / SPIRITUALITY region is the combined CONFORMITY / TRADITION region. All the a priori marker values for the CONFORMITY and TRADITION domains are located in the single region (honoring of parents and elders, politeness, self-discipline, obedient, respect for tradition, humble, accepting my portion in life and devout). Two values appear misplaced (detachment and social order) and expected elsewhere.

The last region, SECURITY, is located between CONFORMITY / TRADITION and POWER. However, only 50% of the a priori maker values (moderate, reciprocation of favours, national security and clean) fall within the region.

Table 1 gives the hypothesised locations of the single marker values in the motivational types. Column 1 lists the 56 marker values, column 2 the hypothesised location of the values, column 3 the potentially appropriate or secondary motivational type to which a value might fit conceptually, and Column 4 presents the empirical locations of the values.
Where the predicted and the observed locations are not matching, the observed type has been underlined. For example, *self respect* was predicted to locate in the primarily ACHIEVEMENT region and potentially in the SELF DIRECTION region. Empirically it was located in the BENEVOLENCE / UNIVERSALISM /SPIRITUALITY region.

Table 1.

Predicted and Observed Locations of Values in Motivational Types

<table>
<thead>
<tr>
<th>Value</th>
<th>Predicted</th>
<th>Potentially appropriate</th>
<th>Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>equality</td>
<td>UN</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>inner harmony</td>
<td>SP</td>
<td>UN,SC</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>social power</td>
<td>PW</td>
<td></td>
<td>PW</td>
</tr>
<tr>
<td>pleasure</td>
<td>HD</td>
<td></td>
<td>HD/ST</td>
</tr>
<tr>
<td>freedom</td>
<td>SD</td>
<td></td>
<td>SD</td>
</tr>
<tr>
<td>a spiritual life</td>
<td>SP</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>sense of belonging</td>
<td>SC</td>
<td></td>
<td>SC</td>
</tr>
<tr>
<td>social order</td>
<td>SC</td>
<td></td>
<td>SC</td>
</tr>
<tr>
<td>an exciting life</td>
<td>ST</td>
<td></td>
<td>HD/ST</td>
</tr>
<tr>
<td>meaning in life</td>
<td>SP</td>
<td>UN</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>politeness</td>
<td>CN</td>
<td></td>
<td>CN/TR</td>
</tr>
<tr>
<td>wealth</td>
<td>PW</td>
<td></td>
<td>PW</td>
</tr>
<tr>
<td>national security</td>
<td>SC</td>
<td></td>
<td>SC</td>
</tr>
<tr>
<td>self respect</td>
<td>ACH</td>
<td>SD</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>reciprocation of favours</td>
<td>SC</td>
<td>CN</td>
<td>SC</td>
</tr>
<tr>
<td>creativitiy</td>
<td>SD</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>world at peace</td>
<td>UN</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>respect for tradition</td>
<td>TR</td>
<td></td>
<td>CN/TR</td>
</tr>
<tr>
<td>mature love</td>
<td>BV</td>
<td>UN</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>self-discipline</td>
<td>CN</td>
<td></td>
<td>CN/TR</td>
</tr>
<tr>
<td>detachment</td>
<td>SP</td>
<td></td>
<td>CN/TR</td>
</tr>
<tr>
<td>family security</td>
<td>SC</td>
<td></td>
<td>CN/TR</td>
</tr>
<tr>
<td>social recognition</td>
<td>PW</td>
<td>ACH</td>
<td>PW</td>
</tr>
<tr>
<td>unity with nature</td>
<td>UN</td>
<td>SP</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>a varied life</td>
<td>ST</td>
<td></td>
<td>HD/ST</td>
</tr>
<tr>
<td>wisdom</td>
<td>UN</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>authority</td>
<td>PW</td>
<td></td>
<td>PW</td>
</tr>
<tr>
<td>true friendship</td>
<td>BV</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>a world of beauty</td>
<td>UN</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>social justice</td>
<td>UN</td>
<td></td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>Characteristic</td>
<td>Instrumental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>independent</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>moderate</td>
<td>TR</td>
<td>SC</td>
<td></td>
</tr>
<tr>
<td>loyal</td>
<td>BV</td>
<td>CN</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>ambitious</td>
<td>ACH</td>
<td>UN</td>
<td>PW</td>
</tr>
<tr>
<td>broadminded</td>
<td>TR</td>
<td>CN</td>
<td>CN/TR</td>
</tr>
<tr>
<td>humble</td>
<td>ST</td>
<td>UN</td>
<td>HD/ST</td>
</tr>
<tr>
<td>daring</td>
<td>UN</td>
<td>ACH</td>
<td>PW</td>
</tr>
<tr>
<td>protecting the environment</td>
<td>CN</td>
<td>TR</td>
<td>CN/TR</td>
</tr>
<tr>
<td>influential</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>honoring of parents and elders</td>
<td>SC</td>
<td>HD</td>
<td>HD/ST</td>
</tr>
<tr>
<td>choosing own goals</td>
<td>ACH</td>
<td>SP</td>
<td>CN/TR</td>
</tr>
<tr>
<td>healthy</td>
<td>BV</td>
<td>SC</td>
<td>PW</td>
</tr>
<tr>
<td>capable</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>accepting my portion in life</td>
<td>CN</td>
<td>HD/ST</td>
<td></td>
</tr>
<tr>
<td>honest</td>
<td>PW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>preserving my public image</td>
<td>CN</td>
<td>UN</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>obedient</td>
<td>BV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>intelligent</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>helpful</td>
<td>TR</td>
<td>SD, UN</td>
<td>HD/ST</td>
</tr>
<tr>
<td>enjoying life</td>
<td>BV</td>
<td>HD/ST</td>
<td></td>
</tr>
<tr>
<td>devout</td>
<td>HD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>responsible</td>
<td>TR</td>
<td>BP</td>
<td></td>
</tr>
<tr>
<td>curious</td>
<td>BV</td>
<td>SD</td>
<td>BV/UN/SP</td>
</tr>
<tr>
<td>forgiving</td>
<td>ACH</td>
<td>BV</td>
<td>HD/ST</td>
</tr>
<tr>
<td>successful</td>
<td>SC</td>
<td>CN</td>
<td></td>
</tr>
<tr>
<td>clean</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Underlined letters indicate placements that do not fit the hypothesised value locations. ACH = Achievement; BV = Benevolence; CN = Conformity; SD = Self-direction; HD = Hedonism; UN = Universalism; ST = Stimulation; SP = Spirituality; TR = Tradition; PW = Power; SC = Security; BV/UN/SP = Benevolence / Universalism / Spirituality; HD/ST = Hedonism / Stimulation; CN/TR = Conformity / Tradition.

There is support for six distinct motivational types. Overall, 46 out of the total 56 (82%) marker values fall within the a priori regions, 10 marker values appear misplaced. Six of those values (60%) were associated a priori with the ACHIEVEMENT type.
The summary table, Table 2, reports the total number of distinct types, the number of correct locations in 56 values.

Table 2

Motivational Types and Structure

<table>
<thead>
<tr>
<th>Sample</th>
<th>Distinct types</th>
<th>Number of correct locations in 56 values</th>
<th>Percentage correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.Z</td>
<td>6</td>
<td>46</td>
<td>82%</td>
</tr>
</tbody>
</table>

(2) It is hypothesised that individualistic motivational types of values (POWER, HEDONISM, ACHIEVEMENT, STIMULATION, SELF-DIRECTION) and collectivistic motivational types of values as postulated by Schwartz (1992), (BENEVOLENCE, CONFORMITY, TRADITION) will be differentiated.

Interests Served

The distribution of values into regions representing the interests they serve conforms with their distribution into motivational types. Figure 3 presents a map of the value projections relevant to the interests served and motivational types facets.
Figure 3. Projections of interests served and motivational types facets of 56 values from smallest space analysis.

Figure 3 shows the differentiation of the motivational types as projected on the map. As previously discussed, seven of the hypothesised motivational types form three combined regions. The combined motivational type HEDONISM / STIMULATION emerges in the individualistic region; BENEVOLENCE / UNIVERSALISM emerges in the collectivistic region; and, CONFORMITY / TRADITION emerges in the collectivistic region.

(3) Further, it is hypothesised that motivational types which serve similar individual interests (POWER, HEDONISM, ACHIEVEMENT, STIMULATION, SELF-DIRECTION) will be placed in closer proximity in a two-dimensional
projection of the values and, those that serve similar collective interests (BENEVOLENCE, CONFORMITY, TRADITION) will be placed in closer proximity in a two-dimensional projection of the values.

The regions representing the individualistic interest, POWER, HEDONISM / STIMULATION, and SELF-DIRECTION form a contiguous region and the collectivistic types, CONFORMITY / TRADITION, and UNIVERSALISM / BENEVOLENCE / SPIRITUALITY form another. The regions representing the collectivistic interest and the individualistic interest emerge in mutual opposition. SECURITY separates the two and serves both individualistic and collectivistic interests. Whilst the ACHIEVEMENT value type did not emerge as a distinct motivational type, five out of six (83%) of its marker value ambitious, influential, capable, successful, and intelligent fell within the area representing the individualistic interest region. The exception was self-respect.

(4) Cognisant of the motivational types definitions it is hypothesised that there will be conflicts and compatibilities among the values. Specifically, the simultaneous pursuit of values from the following types will be compatible:

power and achievement; achievement and hedonism; hedonism and stimulation; stimulation and self-direction; self-direction and universalism; universalism and benevolence; tradition and conformity; conformity and security; and security and power.

And, the simultaneous pursuit of values from the following types will be conflictual:

self-direction and stimulation versus conformity, tradition and security; universalism and benevolence versus achievement and power; hedonism versus conformity and tradition; and, spirituality versus hedonism, achievement and power.
The set of hypotheses concerning the compatibilities and conflicts among the value types was revealed in the configuration of the types presented in Figure 3. The configuration shows a sequential circular ordering from which the compatibilities and conflicts are deduced. Specifically:

POWER and ACHIEVEMENT
The analysis did not support the expressed distinction between POWER and ACHIEVEMENT as motivational types because ACHIEVEMENT failed to emerge as a type. Therefore, the hypothesis regarding the compatibility of these two types was not supported. However, the ACHIEVEMENT marker values which fell in the POWER region (ambitious and influential) were empirically located nearer the origin than the POWER marker values and may be seen to be compatible. They, nevertheless, constitute only 40% of the marker values.

ACHIEVEMENT and HEDONISM
Because ACHIEVEMENT did not form a distinct motivational type, a conclusion about the compatibility of the two types cannot be drawn. Two ACHIEVEMENT marker values, intelligent and successful, are visually close to the HEDONISM marker values.

HEDONISM and STIMULATION
These motivational types, hypothesised to be distinct, formed one type. The intermixed marker values for HEDONISM and STIMULATION reflect the common goal of self enhancement through vitality and variety. Logically, the pursuit of both simultaneously seems to be compatible and the empirical location of the marker values suggests their compatibility.
STIMULATION and SELF-DIRECTION
On the mapping of the motivational types, these two motivational types are consecutively aligned and therefore, compatible.

SELF-DIRECTION and UNIVERSALISM
The pair of value types were found in the adjacent regions in the SSA (Figure 3) and the compatibility criteria met.

UNIVERSALISM and BENEVOLENCE
These value types formed a combined region together with 75% of the marker values for SPIRITUALITY (a spiritual life, meaning in life and inner harmony). The logical inference from the empirical findings is that the simultaneous pursuit of these types is harmonious.

TRADITION and CONFORMITY
The pair of value types, TRADITION and CONFORMITY, formed a combined region and thus, the inference is that they are compatible.

CONFORMITY and SECURITY
The compatibility hypothesis for CONFORMITY and SECURITY is confirmed. The SSA projection shows the two types from adjacent regions.

SECURITY and POWER.
The compatibility hypothesis for SECURITY and POWER is confirmed. The SSA projection shows the two types from adjacent regions.

A conflict is concluded when the regions representing two opposing sets of value types are separated in the circular configuration by two other value types. The hypothesised conflicts were:
a] SELF-DIRECTION and STIMULATION versus CONFORMITY, TRADITION and SECURITY
b] UNIVERSALISM and BENEVOLENCE versus ACHIEVEMENT and POWER;
c] HEDONISM versus CONFORMITY and TRADITION; and,
d] SPIRITUALITY versus HEDONISM, ACHIEVEMENT and POWER.

The hypotheses a, b, and d regarding the conflicts were not confirmed.

a] SELF-DIRECTION and STIMULATION were separated from CONFORMITY, TRADITION and SECURITY regions by the combined BENEVOLENCE / UNIVERSALISM / SPIRITUALITY region only.

b] ACHIEVEMENT did not emerge as a distinct region. UNIVERSALISM and BENEVOLENCE were separated from POWER by two regions.

d] SPIRITUALITY versus HEDONISM, ACHIEVEMENT and POWER. The criteria for conflict was not met except the combined BENEVOLENCE / UNIVERSALISM / SPIRITUALITY REGION was separated from POWER by two regions in both directions.

Hypothesis c. HEDONISM versus CONFORMITY and TRADITION was confirmed.

(5) The present study seeks to confirm the discrimination and give strength to the differentiation of terminal and instrumental goals as found by Schwartz and Bilsky (1987, 1990) by scrambling the lists of values, eliminating the possibility of item location and response set.

Goal Type

Figure 4 presents the map of the projection of the goal type. Each of the 56 values is represented. Values 1-30 are the terminal values and values 31-56 are instrumental.
Figure 4: Map of the projection of the goal type.
As shown, the values are not easily partitioned into two regions. Thus, no partition is evident. Separate regions of terminal and instrumental values failed to appear in the SSA projection in the present study. People do not appear to distinguish values according to the theorised end state-behaviour dichotomy. Thus, the results do not support the hypothesis that the terminal and instrumental values will be discriminated.

Cluster Analysis

The MDS results show which values cluster together but does not reveal which values were the most important. To develop the information found in the multidimensional scaling, it was decided to apply a cluster analysis to the data. The method used to identify the distinct clusters of values, Single Linkage Method (Nearest Neighbour), revealed ten clusters in the hierarchy (see Figure 5). The dendrogram provides a succinct and convenient way to summarise the clustering sequence. The dendrogram shows the clusters being combined and the values of the coefficients at each step (Norusis, 1988).

The dendrogram (tree diagram) (Figure 5) demonstrates the hierarchical arrangement of values and the linkages between values from the lowest level deep within the tree to the highest levels at the top of the tree.

The first major cluster contains 39 (70%) of the values. Two values with the shortest Euclidean distance are placed in the first cluster and joined by a third. They are the values loyal, honest, self-respect, which first join at a distance of 1.33. The next trio to connect are equality, true friendship, responsible. Inner harmony, sense of belonging are next, followed by politeness, honoring of parents and elders. At 1.50 choosing own goals, world at peace, protecting the environment, freedom, family security, meaning in life are linked. Capable, successful join a varied life, enjoying life, healthy, social justice, broadminded, forgiving, helpful, intelligent.
Figure 5. The hierarchical arrangement of values and their linkages.
The next cluster to link independent, ambitious, an exciting life, wisdom, creativity, self-discipline join the single value a world of beauty. The last three groups, in the first major cluster, to merge are unity with nature, curious; the single value mature love; and, clean, social recognition, pleasure at a distance value of 2.12.

The remaining 16 values form another 9 clusterings although 4 of these clusters contain just a single value. Subsequently, the next pair to join are the values daring and influential, then authority, preserving my public image and wealth. Humble, obedient, respect for tradition and social order merge with reciprocation of favours at a distance value of 2.5. Further out is the cluster national security and accepting my portion in life. Moderate is a single item and merges with a spiritual life and devout. Finally and separately, social power and detachment integrate; detachment at a distance value of 3.12. Table 3 traces the pattern of values from inside to outside on the tree and displays the motivational types to which the values are affiliated.

Table 3
The Pattern of Values Traced from Inside to Outside the Dendrogram and their Motivational Type.

<table>
<thead>
<tr>
<th>Pattern of values</th>
<th>Motivational type</th>
</tr>
</thead>
<tbody>
<tr>
<td>loyal, honest, self-respect</td>
<td>BENEVOLENCE</td>
</tr>
<tr>
<td>equality, true friendship, responsible</td>
<td>BENEVOLENCE</td>
</tr>
<tr>
<td>inner harmony, sense of belonging</td>
<td>SPIRITUALITY</td>
</tr>
<tr>
<td>politeness, honoring of parents and elders</td>
<td>CONFORMITY</td>
</tr>
<tr>
<td>choosing own goals, world at peace, protecting the environment, freedom, family security, meaning in life</td>
<td>UNIVERSALISM</td>
</tr>
<tr>
<td>Qualities</td>
<td>Values</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>capable, successful, a varied life,</td>
<td>ACHIEVEMENT</td>
</tr>
<tr>
<td>enjoying life, healthy,</td>
<td>STIMULATION</td>
</tr>
<tr>
<td>social justice, broadminded</td>
<td>HEDONISM</td>
</tr>
<tr>
<td>forgiving, helpful, intelligent</td>
<td>UNIVERSALISM</td>
</tr>
<tr>
<td></td>
<td>SECURITY</td>
</tr>
<tr>
<td></td>
<td>BENEVOLENCE</td>
</tr>
<tr>
<td>independent, ambitious, an exciting life,</td>
<td>SELF-DIRECTION</td>
</tr>
<tr>
<td>wisdom, creativity, self-discipline,</td>
<td>ACHIEVEMENT</td>
</tr>
<tr>
<td>world of beauty</td>
<td>STIMULATION</td>
</tr>
<tr>
<td></td>
<td>UNIVERSALISM</td>
</tr>
<tr>
<td></td>
<td>CONFORMITY</td>
</tr>
<tr>
<td>unity with nature, curious</td>
<td>UNIVERSALISM</td>
</tr>
<tr>
<td></td>
<td>SELF-DIRECTION</td>
</tr>
<tr>
<td>mature love</td>
<td>BENEVOLENCE</td>
</tr>
<tr>
<td>clean, social recognition</td>
<td>SECURITY</td>
</tr>
<tr>
<td>pleasure</td>
<td>POWER</td>
</tr>
<tr>
<td></td>
<td>HEDONISM</td>
</tr>
<tr>
<td>daring, influential</td>
<td>STIMULATION</td>
</tr>
<tr>
<td></td>
<td>ACHIEVEMENT</td>
</tr>
<tr>
<td>authority, preserving my public image,</td>
<td>POWER</td>
</tr>
<tr>
<td>wealth</td>
<td></td>
</tr>
<tr>
<td>humble, obedient, respect for tradition, social</td>
<td>CONFORMITY</td>
</tr>
<tr>
<td>order</td>
<td>TRADITION</td>
</tr>
<tr>
<td></td>
<td>SECURITY</td>
</tr>
<tr>
<td>reciprocation of favours</td>
<td></td>
</tr>
<tr>
<td>national security, accepting my portion in life</td>
<td>TRADITION</td>
</tr>
<tr>
<td></td>
<td>SECURITY</td>
</tr>
<tr>
<td>a spiritual life, devout</td>
<td>SPIRITUALITY</td>
</tr>
<tr>
<td></td>
<td>TRADITION</td>
</tr>
<tr>
<td>social power</td>
<td>POWER</td>
</tr>
<tr>
<td>detachment</td>
<td>SPIRITUALITY</td>
</tr>
</tbody>
</table>
6) It is predicted that the value priorities of male and female student teachers in the present sample will be distinguishable and as such will show significant differences.

**Discriminant analysis on Sex and Ethnicity with 56 values.**

Stepwise discriminant analyses with Wilks' Lambda as criterion statistic were performed to predict group membership using the 56 values variables. In the first analysis, the dependent variables were two groups, males and females. In the second analysis, the dependent variables were two ethnic groups, Maori and Pakeha, each will be reported below. Fifty-six variables, the values, were entered stepwise (see Appendix C for the full list of values). None were dropped in either analyses.

In the first analysis of males and females, the prior probabilities were set to the relative frequencies of the sample group. Of the 311 cases, 42 (13.5%) males belonged to Group 1 and 269 (86.5%) females belonged to Group 2. The prior probability of belonging to Group 1 was 0.13 and the prior probability of belonging to Group 2, 0.86.

The stepwise discriminant analysis resulted in thirty six variables being discarded:

(inner harmony, social power, pleasure, sense of belonging, an exciting life, wealth, national security, reciprocation of favours, creativity, world at peace, respect for tradition, mature love, detachment, family security, a varied life, authority, true friendship, a world of beauty, social justice, moderate, loyal, ambitious, broadminded, humble, protecting the environment, capable, preserving my public image, obedient, intelligent, enjoying life, devout, responsible, curious, forgiving, successful, clean).
Table 4

Discriminant Analyses of Males and Females for Values Variables

<table>
<thead>
<tr>
<th>Discriminant function</th>
<th>Eigenvalue</th>
<th>Canonical correlation</th>
<th>Wilks’ lambda</th>
<th>Chi-square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.3534</td>
<td>.5110</td>
<td>.7389</td>
<td>90.473</td>
<td>20</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardised Discriminant Function Coefficients</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Males</td>
</tr>
<tr>
<td>equality</td>
<td>.23390</td>
<td>5.47619</td>
</tr>
<tr>
<td>freedom</td>
<td>-.13940</td>
<td>5.61905</td>
</tr>
<tr>
<td>a spiritual life</td>
<td>.36326</td>
<td>2.90476</td>
</tr>
<tr>
<td>social order</td>
<td>-.14016</td>
<td>3.83333</td>
</tr>
<tr>
<td>meaning in life</td>
<td>.37538</td>
<td>4.97619</td>
</tr>
<tr>
<td>politeness</td>
<td>.16794</td>
<td>4.88095</td>
</tr>
<tr>
<td>self respect</td>
<td>.36813</td>
<td>5.11905</td>
</tr>
<tr>
<td>self discipline</td>
<td>-.26230</td>
<td>4.26190</td>
</tr>
<tr>
<td>social recognition</td>
<td>.20290</td>
<td>3.59524</td>
</tr>
<tr>
<td>unity with nature</td>
<td>-.22054</td>
<td>4.45238</td>
</tr>
<tr>
<td>wisdom</td>
<td>-.21192</td>
<td>5.11905</td>
</tr>
<tr>
<td>independent</td>
<td>.40293</td>
<td>4.66667</td>
</tr>
<tr>
<td>daring</td>
<td>-.43890</td>
<td>4.38095</td>
</tr>
<tr>
<td>influential</td>
<td>-.20458</td>
<td>3.47619</td>
</tr>
<tr>
<td>honoring of parents</td>
<td>-.31625</td>
<td>5.50000</td>
</tr>
<tr>
<td>choosing own goals</td>
<td>-.32488</td>
<td>5.26190</td>
</tr>
<tr>
<td>healthy</td>
<td>-.24574</td>
<td>5.73810</td>
</tr>
<tr>
<td>accepting my portion in life</td>
<td>.18047</td>
<td>2.28571</td>
</tr>
<tr>
<td>honest</td>
<td>.31681</td>
<td>5.16667</td>
</tr>
<tr>
<td>helpful</td>
<td>.25548</td>
<td>4.26190</td>
</tr>
</tbody>
</table>

Table 4 lists the standardised discriminant function coefficients and the means for the males and females. The present results suggested that twenty variables were the most important variables predicting group membership. Of these, the values: daring, independent, meaning in life, self-respect and a spiritual life showed the highest standardised discriminant function coefficients and accepting my portion in life,
politeness, social order and freedom the lowest. Thus, daring made the highest contribution to function 1 and freedom the least. The coefficients ranged between -.43890 and -.13940.

The means show that females, on average, had placed more importance on equality, freedom, a spiritual life, meaning in life, politeness, self-respect, social recognition, independent, accepting my portion in life, honest and helpful. The males, had on average rated as more important, social order, self-discipline, unity with nature, wisdom, daring, influential, honoring of parents and elders, choosing own goals and healthy.

On average, the females had smaller discriminant function scores than the males. The average value for the males is -1.49953, whereas the average value for the females is 0.23413 (see Table 5).

Table 5

<table>
<thead>
<tr>
<th>Canonical Discriminant Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
</tr>
<tr>
<td>males</td>
</tr>
<tr>
<td>Group 2</td>
</tr>
<tr>
<td>females</td>
</tr>
</tbody>
</table>

The overall classification of cases into criterion groups was accurate in 81.67% of the cases. Both groups 1 and 2 had good classification results, with a correct classification rate of 78.6% and 82.2% males and females respectively (see Table 6).
Table 6

Discriminant Analysis: Classification Results

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>No. of Cases</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>males</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td></td>
<td></td>
<td>78.6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21.4%</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>females</td>
<td>269</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>221</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82.2%</td>
</tr>
</tbody>
</table>

Percentage of grouped cases correctly classified: 81.67%

Although significant, the relatively large Wilks' Lambda (0.7389) indicates that the group means do not appear to be very different. The hypothesis that the value importance of male and female student teachers in the present sample will be similar is not supported in the present study.

(7) It is hypothesised that the value priorities of Maori will reflect their traditional tikanga and as such will differ from the value priorities of Pakeha.

Ethnicity

In the second analysis, the dependent variables were two ethnic groups, Group 1 consisted of 50 Maori and Group 2, 228 Pakeha. Fifty-six variables, the values, were entered stepwise (see Appendix C for the full list of values). None were dropped.

Of the 311 cases, 33 were excluded from the analysis. Thirty-three cases were classified as Pacific Islander, Asian or Other and therefore were out-of-range group codes. Thus, 278 cases were used in the sample group for analysis. The prior probabilities were set to the relative frequencies of the sample group. Fifty (18%) belong to Group 1 and 228 (82%) belong to Group 2. The prior probability of
belonging to Group 1 was 0.18 and the prior probability of belonging to Group 2, 0.82.

The stepwise discriminant analysis resulted in 31 variables being discarded: equality, social power, pleasure, freedom, sense of belonging, social order, an exciting life, meaning in life, creativity, world at peace, detachment, social recognition, unity with nature, wisdom, a world of beauty, independent, loyal, ambitious, broadminded, daring, protecting the environment, influential, choosing own goals, healthy, capable, honest, preserving my public image, intelligent, responsible, forgiving, successful.

The present results suggested that twenty-five variables were the most important variables predicting group membership (see Table 7). Of these, the values: true friendship, respect for tradition, and clean showed the highest standardised discriminant function coefficients and honoring of parents, authority, family security, and social justice the lowest. Thus, true friendship made the highest contribution to function 1 and social justice the least. The coefficients ranged between -.48339 and .12702.

Table 7 lists the standardised discriminant function coefficients and the means for Maori and Pakeha. The means show that Maori, on average, were higher on a spiritual life, politeness, wealth, national security, respect for tradition, family security, authority, social justice, moderate, humble, honoring of parents and elders, accepting my portion in life, obedient, helpful, enjoying life and clean. Pakeha had, on average rated more importance on inner harmony, self-respect, reciprocation of favours, mature love, self-discipline, a varied life, true friendship, devout and curious.
Table 7

Discriminant Analyses of Maori and Pakeha for Values Variables

<table>
<thead>
<tr>
<th>Discriminant function</th>
<th>Eigenvalue</th>
<th>Canonical correlation</th>
<th>Wilks' Lambda</th>
<th>Chi-square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.5112</td>
<td>.5816</td>
<td>.6617</td>
<td>108.795</td>
<td>25</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Standardised Discriminant Function Coefficients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Maori</th>
<th>Pakeha</th>
</tr>
</thead>
<tbody>
<tr>
<td>inner harmony</td>
<td>-.27531</td>
<td>5.28000</td>
<td>5.50877</td>
</tr>
<tr>
<td>a spiritual life</td>
<td>.27075</td>
<td>4.48000</td>
<td>3.90789</td>
</tr>
<tr>
<td>politeness</td>
<td>-.27580</td>
<td>5.20000</td>
<td>4.85088</td>
</tr>
<tr>
<td>wealth</td>
<td>.20291</td>
<td>3.92000</td>
<td>2.92982</td>
</tr>
<tr>
<td>national security</td>
<td>.18488</td>
<td>4.34000</td>
<td>3.31140</td>
</tr>
<tr>
<td>self respect</td>
<td>.23287</td>
<td>5.68000</td>
<td>5.78947</td>
</tr>
<tr>
<td>reciprocation of favours</td>
<td>-.29545</td>
<td>3.52000</td>
<td>3.81579</td>
</tr>
<tr>
<td>respect for tradition</td>
<td>.42133</td>
<td>4.86000</td>
<td>3.35526</td>
</tr>
<tr>
<td>mature love</td>
<td>-.18470</td>
<td>4.96000</td>
<td>5.19298</td>
</tr>
<tr>
<td>self-discipline</td>
<td>-.25767</td>
<td>4.16000</td>
<td>4.18860</td>
</tr>
<tr>
<td>family security</td>
<td>.14875</td>
<td>6.16000</td>
<td>5.74123</td>
</tr>
<tr>
<td>a varied life</td>
<td>-.35061</td>
<td>4.82000</td>
<td>4.99561</td>
</tr>
<tr>
<td>authority</td>
<td>.17560</td>
<td>3.56000</td>
<td>2.84649</td>
</tr>
<tr>
<td>true friendship</td>
<td>-.48339</td>
<td>5.44000</td>
<td>6.07456</td>
</tr>
<tr>
<td>social justice</td>
<td>.12702</td>
<td>5.58000</td>
<td>5.37719</td>
</tr>
<tr>
<td>moderate</td>
<td>.28832</td>
<td>4.16000</td>
<td>3.05263</td>
</tr>
<tr>
<td>humble</td>
<td>.28399</td>
<td>4.52000</td>
<td>3.35965</td>
</tr>
<tr>
<td>honouring of parents</td>
<td>.18221</td>
<td>5.90000</td>
<td>5.02632</td>
</tr>
<tr>
<td>accepting my portion in life</td>
<td>.24474</td>
<td>4.12000</td>
<td>3.48246</td>
</tr>
<tr>
<td>obedient</td>
<td>-.20445</td>
<td>3.76000</td>
<td>3.48684</td>
</tr>
<tr>
<td>helpful</td>
<td>.30472</td>
<td>5.04000</td>
<td>4.43421</td>
</tr>
<tr>
<td>enjoying life</td>
<td>.20593</td>
<td>5.64000</td>
<td>5.48246</td>
</tr>
<tr>
<td>devout</td>
<td>-.20185</td>
<td>3.38000</td>
<td>3.81579</td>
</tr>
<tr>
<td>curious</td>
<td>-.30664</td>
<td>3.96000</td>
<td>4.18860</td>
</tr>
<tr>
<td>clean</td>
<td>.36892</td>
<td>4.80000</td>
<td>3.90351</td>
</tr>
</tbody>
</table>
Table 8

Canonical Discriminant Functions

<table>
<thead>
<tr>
<th>Group</th>
<th>Maori</th>
<th>Pakeha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>1.52124</td>
<td>-0.33360</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On average, Pakeha had smaller discriminant function scores than Maori (see Table 8). The average value for the Maori is -1.52124, whereas the average value for Pakeha is -0.33360 (see Table 8).

Table 9 shows that the overall classification of cases into criterion groups was accurate in 82.73% of the cases. Both groups 1 and 2 had good classification results, with a correct classification rate of 82% and 82.9% for Maori and Pakeha respectively.

Table 9

Discriminant Analysis: Classification Results

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>No. of Cases</th>
<th>Predicted Group 1</th>
<th>Membership 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maori</td>
<td>50</td>
<td>41</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82.0%</td>
<td>18.0%</td>
</tr>
<tr>
<td>Group 2</td>
<td>228</td>
<td>39</td>
<td>189</td>
</tr>
<tr>
<td>Pakeha</td>
<td></td>
<td>17.1%</td>
<td>82.9%</td>
</tr>
</tbody>
</table>

Percentage of grouped cases correctly classified: 82.73%.
The Wilks' Lambda (.6617) indicates that the group means do not appear to be very different although there is significance. The results support the hypothesis that Maori and Pakeha will differ in their value priorities.
CHAPTER 6   DISCUSSION

As Kilby (1993) states there is good information on human values "scattered about in various sources, spanning disciplines and decades, but it is not easily located nor readily assimilated" (p.v). The modern theory of human values by Schwartz and his colleagues (1987, 1990, 1992) contributes to the literature in psychology whilst retaining an affinity with the broader disciplines embodied in the social sciences. Whilst the theory is in its formative stages the published literature of cross-national studies is not easily sourced nor readily interpretable in English.

As with the Rokeach Value Survey, no deception is involved in the administration of the Schwartz Value Survey. The measure is labelled "Values Questionnaire" (Appendix C) and participants are informed from the outset that they will be asked to consider what values are important as a guiding principle in their life (Appendix C). The Schwartz Value Survey appears to be a simple, efficient means for discovering the relative importance of 56 values as guiding principles in people's lives. In rating values with referents the participants' interpretations of the values are restrained and in 20 minutes a researcher can obtain data about individuals' values.

Participants are asked to rate a negative, -1, to "opposed to my values", 0 for "not important", 1 and 2 were available for negative responses, 3 "important" in the middle, 4 and 5 available for positive endorsement, 6 for "very important" and 7 "of supreme importance." Therefore, the rating scale on the Values Survey provides the participants with the choice of accepting values as their guiding principles or, rejecting them.

Although the assumptions were met for the linear discriminant function to be optimal, there were violations of statistical purity in the use of the 9 point scale. In the analyses the ratings were converted to means with an assumption that the 9 point scale is an equal interval scale. That is not necessarily so but in defence of the accusation of
violation of statistical purity, Schwartz (personal communication, September 25, 1994) states that most parametric statistics are robust to violations of the assumption. In the case of values, this is a scale heavily skewed to the upper end. And, in defence of the scale, Schwartz (personal communication, September 25, 1994) states that to determine what was the best set of responses, numerous pretests were used in developing the scale, such as symmetrical scales around zero, 100 point scales, and ratio scales. Because less than 5% of responses fell on the negative side, spreading the scale on the negative side was senseless and only agitated respondents. Thus, Schwartz (personal communication, September 25, 1994) concluded that one negative point treated as part of the scale was the best option.

Furthermore, he states: "The ideal scaling of responses is that which captures the underlying scale used by most respondents" (Schwartz, personal communication, September 25, 1994). In the present study, the underlying scale used by the participants is captured by the dendrogram (Figure 5). The flatness of the dendrogram suggests that participants have utilised a restricted part of the rating scale. The first major cluster contains 39 (70%) of the values falling between the Euclidean distances of 1.33 and 2.12 which suggests a narrow range. And, with the Euclidean distances of all the values ranging between 1.33 and 3.12, a spread of 1.79, the analysis suggests therefore that there is a scaling difficulty.

The results of the present study will be discussed below and concluding remarks will follow.

**Hypothesis 1**

A comparison of Figure 1 and Figure 2 shows the similarities and differences between the findings of Schwartz (1992) and the present study. The revised theoretical model of Schwartz (1992) shows 10 motivational types to be empirically distinguished. In the present study, the evidence clearly supports the existence of six motivational types:
POWER, HEDONISM / STIMULATION, SELF-DIRECTION, CONFORMITY / TRADITION, BENEVOLENCE/UNIVERSALISM/SPRITUALITY, and SECURITY that emerge from a common origin.

As Figure 1 shows in the Schwartz (1992) model, TRADITION did not emerge from the common origin but rather was located in the outer periphery of CONFORMITY. The present study shows a combined type with 60% of the TRADITION marker values falling in the periphery of the region (see Figure 2). This falls within the designated criteria for a distinct region but, because it did not extend from the common origin the type was combined. The intermixed location of the values for TRADITION and CONFORMITY suggests that the types share the same motivational goals. With the motivational goals of respect, commitment, acceptance of customs and ideas and restraint of actions, inclinations and impulses that violate others, expectations or norms, a unified goal might be "self subjugation." Conformity is the outward manifestation of traditionally held values, beliefs and attitudes and for that reason a combined type may be logically and empirically validated. The present study supports this argument.

There were three empirically misplaced values in the CONFORMITY/TRADITION region, family security, detachment, and social order according to Schwartz (1992). However, it may be asserted that detachment and social order do logically relate to the type. Detachment may be seen as an inactive component of CONFORMITY; the withdrawal from worldly concerns is an alternative option in many cultures. For example, the Krishna movement and the Carmelite order of Catholic nuns withdrawn from worldly concerns. Detachment does not give rise to social change nor does it impact on social order. It may be seen as an internalised individual code of conformity. Social order, however, suggests an active and collectivised understanding of conformity for the greater good of society. Social order demands an active participation in the conservation of society.
Perhaps the mixed CONFORMITY/TRADITION region in the present study is not surprising given the New Zealand sample. As Public Servants, student teachers serve not only their own needs and interests but also the needs and interests of society; they are required to conform to the values, policies and beliefs that are directed by the Minister of Education. Teacher effectiveness and achievement levels are dependent on conformity and are formally measured by the Education Review Office (ERO), a department of the Ministry of Education. Furthermore, movement away from tradition and conformity is punishable: movement away from tradition and conformity results in loss of opportunity for appointment and promotion. With the prospect of individualised employment contracts, a consequence of the Employment Contracts Act, 1991, the need for CONFORMITY/TRADITION may become more entrenched and paramount.

The 1992 version of the Schwartz theory narrows the definition of BENEVOLENCE to a focus on the welfare of people with whom one is in close contact and UNIVERSALISM was defined as understanding, appreciating tolerating and protecting the welfare of all people and nature. The results in the present study do not support this distinction.

The broader concern for the welfare of all, expressed in the UNIVERSALISM values world of beauty, unity with nature, protecting the environment, world at peace and social justice emerged closely together. The BENEVOLENCE marker values, responsible, helpful, forgiving and honest which refer to generosity towards people within one's social milieu, are located closely together. However, the values are intermixed, neighbouring and inseparable.

The indistinction of the motivational types may be attributable to the uniqueness of a sample from New Zealand. Because New Zealand is an emergent nation, geographically distanced from the origins of its majority culture but linked in kinship, the relative global isolation, New Zealand's constitutional acknowledgment of its indigenous people
and the diversity of minority groups from the Pacific, Europe and Asia, New Zealanders may be in the process of rapid national self-identification and therefore the parameters of the Schwartz (1992) model are fused. Kinship ties, global location and a nation in a state of flux may correlate with a combined BENEVOLENCE / UNIVERSALISM motivational type. Future studies in other New Zealand samples might further investigate the value changes in line with these findings.

SPIRITUALITY failed to emerge in Schwartz (1992). In the present study 75% of the SPIRITUALITY values fell in the combined region with BENEVOLENCE and UNIVERSALISM. The closeness of the values in the combined region suggests high compatibility of these motivational types. It could be speculated that people find a purpose and peace in their lives through concern for the welfare of others inside and outside their social milieu and through the concern for eco-aesthetics. Maybe, by transcending the needs of self, by extending to the wider community and environment, people find a meaning in their lives which satisfies a neo-spiritual motivation. Although not separate in the present study, the combined region may reflect the current New Zealand trend towards the Western conceptualisation of national and spiritual secularism.

The POWER marker values refer to the results of status (e.g., wealth, authority) and the regard of others (e.g., social recognition, preserving my public image) and all the marker values emerged empirically in a distinct wedge. The POWER motivational type contained six expected values and two other values: ambitious and daring. As with all the misplaced values, the errors may be random or they may be attributable to cultural differences in the meanings of the values. For example, for New Zealanders ambitious and daring may be allied with social status and having control over one's reputation, mana, and standing; power. Translocating cultures in an unexplored land with minimum resources is the heritage of modern New Zealanders. Historically, New Zealanders have been characterised as enterprising, hard working and aspiring to gain
personal POWER and control over resources and markets. Closely associated with that entrepreneurial thinking is the sense of adventure, expressed as daring, as enterprise and endeavour require a degree of risk taking. Schwartz (1992) found that out of 36 samples, ambitious was empirically located in POWER in only one sample. Daring showed 100% accuracy in the 36 samples.

Unlike the distinct regions of HEDONISM and STIMULATION found by Schwartz (1992), the values for HEDONISM and STIMULATION in the present study formed a combined region with two misplaced values: intelligent and successful. Cognisant of the characteristics of the sample (age, student status, choice of career) in the present study it may be speculated that these two values have congruence with the motivational type. Typically, student teachers aspire to upwardly mobility, a mobility confirmed by academic success, academic success translates into rewards that furnish opportunity for hedonistic and stimulating pursuits. In New Zealand society it may be acceptable to pursue hedonistic goals provided there is a compliance with goal orientated behaviour and success. The practical application of intelligence facilitates and enhances the likelihood of achievement.

The formation of SELF-DIRECTION as a wedge emanating form the origin clearly supports the hypothesis of a distinct motivational type for the marker values independent, choosing own goals, freedom and curious. Misplaced in the region is the value capable. Although capable may be an attribute of SELF-DIRECTION, the descriptors namely, "competent, effective, efficient" (Schwartz, 1992) open the meaning of the value to include and extend to external direction. One may value and exhibit capability that has been other-directed such as in the case of Adolf Eichmann whose sole defence at war crimes trials at Nuremberg regarding his participation in the extermination of six million European Jews during World War 2 stated "But I was only following orders." Hence, it appears that the value capable is misplaced both on empirical and logical grounds.
Interestingly, the marker values of SELF-DIRECTION choosing own goals, curious and independent are values inculcated in student teachers. The values are promulgated as being desirable outcomes of learning for the students they teach. There is a certain tension, however, in that there is a nationalised, prescribed curricula, methods of delivery and assessment. Thus, on one hand there is an espoused notion of SELF-DIRECTION and, on the other, and externally directed and measured control.

ACHIEVEMENT did not emerge as a distinct motivational type and therefore the present study and the findings of Schwartz (1992) show dissimilarity. The marker values capable, intelligent, ambitious, successful and influential emerge elsewhere (see Table 1) and are discussed above.

It may be that New Zealanders still retain an egalitarian ethos and place low social value on individual achievement. Historically, New Zealand has seen itself as an egalitarian society: a nation that prides itself on "Fair Play"; a nation that talks of "level playing fields"; a nation whose Government funded television station broadcasts a programme "Fair Go".

Ambition, success, intelligence and influence for individual achievement is not as equally valued as ambition, success, intelligence and influence for the collective good. They may be regarded as almost anti-social. This may be exemplified in achievement in personal business, politics, sporting acumen and academia. Achievers may be subject to frequent negative public scrutiny. Political and social satire of high achievers rates highly as cultural entertainment in New Zealand, e.g., the television programmes "McPhail and Gadsby", "Issues" and "More Issues".

However, ambition, success, intelligence and influence for the collective good are heralded as worthwhile and laudable. For example, achievements by national sporting teams, New Zealand-based multi-national companies (e.g., Brierley Investments,
Fletcher Challenge), Rotary International, Lions, Girl Guides and other community based service groups.

Gold and Webster (1990), in their report on New Zealand values, concluded that New Zealanders want job security, good pay, interesting work and pleasant people to work with more than they want to achieve worthwhile goals, use their skills or initiative. Achievement motives, therefore, were subordinate to economic and social motives.

The SECURITY motivational type is comprised of 50% of the marker values. Interestingly the a priori marker values concerned with the security of the collective (social order, family security) and the values concerned with the security of the self (healthy and sense of belonging) emerged outside the wedge. It may be that the developmental stage of the sample provides a reason for the dislocation. Although the mean was 27 years of age, the standard deviation was 7.7 which suggests the mean was effected by a group of mature students. For aspiring young adults family security is surpassed by the developmental task of self-identification (c.f. Erikson, 1963) and relationships outside of the family. It is, perhaps, not surprising that family security is not located in the motivational type SECURITY for the present sample. A sense of belonging may be attained through cohort identification and with the focus of BENEVOLENCE on the need for belonging and affiliation (Schwartz, 1992), the location of the marker value in that wedge is not logically misplaced.

Hypothesis 2 and 3
The overall SSA two-dimensional projection of values showed that the individualistic motivational types of values and the collectivistic motivational types are differentiated confirming the second hypothesis of the present study. POWER, HEDONISM, STIMULATION, and SELF-DIRECTION form approximately one third of the total map and emerged as a set of adjacent regions. Although ACHIEVEMENT did not emerge as a distinct motivational type, all its a priori marker values fell within the
region delineating the individualistic motivational types. BENEVOLENCE, CONFORMITY, TRADITION form a second region of almost two-thirds of the total map. The marker values of BENEVOLENCE cluster towards the boundary of the BENEVOLENCE / UNIVERSALISM /SPIRITUALITY region and are adjacent to CONFORMITY / TRADITION.

The delineation of the regions in the present study gives support to the dichotomy that values can be self-serving, serving individualistic interests and other-serving, serving collectivistic interests. The value types that serve individual interests and those that serve collective interests formed distinct finite regions.

Although the SSA analysis shows the individualistic and collectivistic motivational types form two coherent groups, it does not necessarily propose that the two are in opposition nor does it prioritise the values. SSA reveals which values group together but does not expose which values were the most important. To further investigate the value priorities a cluster analysis was applied to the data.

The dendrogram, Figure 5, demonstrates the hierarchical arrangement of the values and the linkages between values from the lowest levels deep within the tree to the highest levels at the top of the tree. Table 3 traces the pattern of values listing the marker values and their motivational types. The hierarchy of values, from inside to outside of the tree, demonstrates the characteristics of the more concrete (e.g., loyal, honest, self-respect, true friendship) to the more abstract (e.g., a spiritual life, devout, social power, detachment); immediate (e.g., helpful, forgiving, social justice, curious) to over-arching (e.g., mature love, preserving my public image, reciprocation of favours, accepting my portion in life); lower order (e.g., equality, politeness, protecting the environment) to higher order (e.g., social order, national security); and, subordinate to superordinate (see Table 3).
As the Table 3 shows the linkages and the progression of motivational types from BENEVOLENCE to CONFORMITY to UNIVERSALISM to SELF-DIRECTION to ACHIEVEMENT to STIMULATION to HEDONISM to POWER to TRADITION to SPIRITUALITY. SECURITY, scattered throughout the tree, may give coherence to the structure. Gold and Webster (1990) found that New Zealanders overwhelmingly chose security as the most important quality for their own lives. The following argument describes a possible rationale for the linkages and progression as presented in Table 3.

Arguably, the motivational type of values progression as shown in Table 3 has parallels with Maslow's hierarchy of needs. The social requirement of BENEVOLENCE articulates the organismic need of belonging and affiliation. CONFORMITY with its derivation from the universal that requires people to inhibit disruption for social interaction and the group wellbeing links with the need for security (c.f., Maslow). With the basic needs fulfilled the individual may externalise their wellbeing to others which is represented by UNIVERSALISM, the understanding and appreciation of all people and the ecology.

With understanding, tolerance and appreciation of others and the environment, it may be that the individual can proceed to satisfy the needs of autonomy and independent thought and action stated in the motivational type SELF-DIRECTION. SELF-DIRECTION is an essential pre-cursor to ACHIEVEMENT, personal success and competence according to social standards which generates rewards and motivation for excitement, novelty and challenge in life, STIMULATION.

HEDONISM, self-pleasure and sensuous gratification, is derived from the preceding motivational types and gives rise to POWER. Over time, POWER maintained will lead to the establishment of TRADITION. TRADITION, respect, commitment and acceptance of the customs, dictates that people do not set self-directing goals or behave outside social and moral codes counter to sanctioned creeds and customs. These
sanctioned creeds and customs provide meaning and coherence in an incomprehensible mortal existence. Meaning in life is expressed by SPIRITUALITY, the ultimate motivational type. Therefore, TRADITION and SPIRITUALITY may be the anchors which help to conserve and perpetuate a consenting society. As shown in the dendrogram all the motivational types are subsumed in the latter two types.

The progression may show that human values are prioritised from the externally driven to an internalised, self-direction and finally to ethereal control.

**Hypothesis 4**

The definitions of the motivational types promulgated the hypotheses that there would be conflicts and compatibilities among the motivational types. The set of hypotheses concerning these conflicts and compatibilities were partially supported in the present study. The support for an overall confirmation could not be verified because ACHIEVEMENT did not emerge as a type and seven types were combined to form three regions. Where types combined, it was assumed that they shared a compatibility e. g., TRADITION and CONFORMITY; HEDONISM and STIMULATION; UNIVERSALISM and BENEVOLENCE.

The amalgamation of TRADITION and CONFORMITY suggests that people may pursue these types simultaneously and without conflict. A common emphasis for the types suggests a conservative acceptance of the status quo implicating peoples' compliance and adherence to societal conventions and resistance to change. TRADITION and CONFORMITY constrain people for the good of the collective.

Contrastingly, HEDONISM and STIMULATION suggest a motivation for excitement, novelty and egotistic self-gratification. The pursuit of these values simultaneously and their observed compatibility oppose TRADITION and CONFORMITY. The latter are
concerned with maintenance of the status quo, whereas the former are concerned with challenge; the latter are concerned with individualism, the former with collectivism.

The overarching theme of UNIVERSALISM and BENEVOLENCE is concerned with the welfare of others. The location of the two types in the one region suggests an intended compatibility and the transcendence of self-interests in the support of others.

The pairs of types to emerge in adjacent regions were STIMULATION and SELF-DIRECTION, SELF-DIRECTION and UNIVERSALISM, CONFORMITY and SECURITY, and SECURITY and POWER.

The simultaneous pursuit of STIMULATION and SELF-DIRECTION show compatibility and it may be they are interdependent. One might question whether it is possible to be self-directional in the absence of stimuli and the rewards.

In the matter of desirability, the simultaneous pursuit and seeming compatibility of SELF-DIRECTION and UNIVERSALISM does not necessarily augur well for the benefit of others or the ecology. New Zealand provides a good illustrative point. During 1981, representatives of the national sport, rugby, the All Blacks, took it upon themselves (SELF-DIRECTION) against the advice of the government of the day, against the wishes of the British Commonwealth Games Committee, and against the wishes of a significant number of the population, to engage in sporting contact with South Africa. This unilateral action precipitated a widespread social disturbance by way of public protest and rioting within New Zealand. This concrete example supports the argument that SELF-DIRECTION is not necessarily compatible or desirable with UNIVERSALISM.
Likewise CONFORMITY and SECURITY, although empirically compatible, may invite anti-social outcomes. Historically, CONFORMITY to the political ideology of Adolf Hitler decimated the SECURITY of the German nation.

Empirically, SECURITY and POWER were confirmed as compatible. The above challenge to the assumption of desirability is further compounded by the evidence that SECURITY and POWER are compatible. It has both current and historical contradictions. For example, in 1993 the white supremacist Nationalist government of South Africa was forced to capitulate to world pressure and in doing so, paved the way for the installation of Nelson Mandela as President, a Black activist, they had imprisoned for 27 years. A similar example is found in Ancient Rome in the case of the demise of Julius Caesar.

The hypotheses regarding the motivational type conflicts were not confirmed except for the hypothesis concerning HEDONISM versus CONFORMITY and TRADITION which was discussed above.

**Hypothesis 5**

A characteristic of the Values Survey (Schwartz, 1992) is the formal grammatical feature of the marker values. In Values List I the terminal values are expressed as nouns (e.g., equality, inner harmony, social power, pleasure); the Values List 11, the instrumental values, are expressed as adjectives (e.g., independent, moderate, loyal, ambitions). However, in order to test whether these terminal and instrumental values were distinct and distinguishable, to give stronger support to the findings of Schwartz and Bilsky (1987, 1990) and to avoid the artifact of location, the present study interchanged the listed values. Thus, the instrumental and terminal values were scrambled, though not all the values were re-ordered: Values 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 28, 29, 30, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, and 55 remained unchanged. (equality, social power, freedom, sense of belonging, an exciting
life, politeness, national security, reciprocation of favours, world at peace, mature love, detachment, social recognition, a varied life, authority, true friendship, a world of beauty, social justice, independent, loyal, broadminded, daring, influential, choosing own goals, capable, honest, obedient, helpful, devout, curious, successful)

Moreover, values 32 and 2; 34 and 4; 36 and 6; 38 and 8; 40 and 10; 42 and 12; 44 and 14; 46 and 16; 48 and 18; 50 and 20; 52 and 22; 54 and 24; and 56 and 26 were interchanged. (moderate and inner harmony; ambitious and pleasure; humble and a spiritual life; protecting the environment and social order; honoring of parents and elders and meaning in life; healthy and wealth; accepting my portion in life and self-respect; preserving my public image and creativity; intelligent and respect for tradition; enjoying life and self-discipline; responsible and family security; forgiving and unity with nature; clean and wisdom).

Therefore, the present study, unlike the studies of Schwartz and his colleagues, lacked the cohesion of the formal grammatical structure. There was no apparent disconcert to the respondents; commentary was favourable. Respondents commentary suggested that the questionnaire was "thought provoking", "really good" and "suitable for prospective clients at a dating agency"! The latter sentiment alludes to the comment by Gibbins and Walker (1993) that one of the attractions of examining values is the possibility of predicting behaviour.

In testing the hypothesis that the terminal and instrumental values would be discriminated, multidimensional scaling was used. Figure 4 presents the map of the projection of the goal types. The values were not easily partitioned into two regions. People do not appear to distinguish values according to the theorised end state-behaviour dichotomy. Thus, the results do not support the hypothesis that the terminal and instrumental values will be discriminated.
Further analysis by way of the hierarchical clustering suggests that both terminal and instrumental values are interconnected. The first major cluster contained 39 values, of which 43% were instrumental and 56% were terminal.

The present finding supports that of Schwartz (1992) which reported the failure of separate regions of terminal and instrumental regions in the SSA projections "in the vast majority of samples" (Schwartz, 1992, p.49). The difference between the findings of Schwartz and Bilsky (1987, 1990) and Schwartz (1992) was attributed to the possibility that participants may have shifted their subjective rating scale in the earlier studies. The consequence of the shifts in scale would reduce correlations among separated instrumental and terminal values' lists because of the possibility that they would be rated on different subjective scales (Schwartz, 1992). By using the anchoring technique prior to rating each list, a technique which the present study adopted, Schwartz (1992) conjectured that shifts in scale use would be minimised and accounted for the contrary findings between the earlier studies Schwartz and Bilsky (1987, 1990) and the more recent one Schwartz (1992).

The present study, which scrambled the instrumental and terminal values to avoid an artifact of location and had participants anchor their rating scales, therefore, challenges the significance of the goal type facets in the organisation of human values. Furthermore, it may be that the characteristics of the sample have significance in the findings. Unlike other occupations, a prime role of teachers is to impart socially prescribed values. Student-teachers are bound by moral issues for societal ends and simultaneously pursue personal and social values.

According to Rokeach (1973) there are two kinds of terminal values: those having self-focus, an intrapersonal focus and those having a society focus, an interpersonal focus; there are also two kinds of instrumental values: those having a moral and interpersonal focus and those having a competence and intrapersonal focus.
Given the results of the present study, both SSA (Figure 4) and cluster analysis (Table 3) in which the values failed to differentiate, it may be concluded that people retain a moral focus and concurrently pursue personal development thereby relating to both kinds of instrumental values; and, they may also be concerned with competence and self-actualisation (Rokeach, 1973) for societal ends and in the interests of self.

The duality of pursuing personal and societal goals may necessitate the instrumental and terminal interconnection. Consequently, the present findings may not be surprising.

**Hypotheses 6 and 7.**

To investigate which values were the most important for males and females and Maori and Pakeha, discriminant analyses were performed. The results of each will be discussed separately below.

**Males and Females’ Values**

As with much of the previous research into the theory (e.g., Schwartz & Bilsky, 1987, 1990; Schwartz, 1992), the New Zealand sample was predominantly female (86.5%). Although the analysis counters the sample imbalance in terms of sex distribution, the education statistics, nevertheless, show that the ratio of women student teachers to men is 5 : 1. In July 1993, there were 5839 full time student teachers at Colleges of Education: 1241 (21%) were male, 4598 (79%) were female (Ministry of Education, Wellington). The overall effect is that for many students in the educational system women teachers will be their main role models and teachers in values education.

The present study supported the hypothesis that, females and males would show significant difference in value importance ratings. Table 4 shows that the means for females, on average, placed more importance on the values equality, freedom, a spiritual life, meaning in life, politeness, self-respect, social recognition, independent, accepting my portion in life, honest and helpful. The males, had on
average rated as more important, social order, self-discipline, unity with nature, 
wisdom, daring, influential, honoring of parents and elders, choosing own goals and healthy.

The sex differences in value priorities which emerged from the present study are consistent with the general conclusion that women tend to emphasise prosocial and spiritual values (Gilligan, 1982; Feather, Volkmer & McKee, 1992). The value types BENEVOLENCE and SPIRITUALITY can be seen as the outer motivational types according to the hierarchical arrangement of values illustrated by the tracing of the pattern of values (see Table 3). Interestingly, women did not emphasise CONFORMITY, SELF-DIRECTION, ACHIEVEMENT, STIMULATION, HEDONISM, TRADITION or POWER. By comparison the men prioritised a diffuse range of values with no observable pattern.

The chosen occupation of the present sample has direct influence on society because as previously noted, teachers play a critical part in the transmission of human values. If the female sample are themselves prioritising the peripheral types BENEVOLENCE and SPIRITUALITY which the results suggest, and transmitting those values as priorities to their subsequent generations of New Zealanders, then the implications may impact negatively on the internalised value structure of those students.

Without the internalisation and prioritising of the specific motivational types, teachers may unconsciously ignore or devalue others' values: "criteria people use to select and justify actions" (Schwartz, 1992). The motivational types of SELF-DIRECTION, ACHIEVEMENT, STIMULATION, HEDONISM and POWER are classified as serving individualistic interests (Schwartz, 1992) and without their influence there may be a risk of increasing the vulnerability of individuals to collective-competitive external agencies. Furthermore, society in general may be effected. Broad societal deficits in SELF-DIRECTION, ACHIEVEMENT, STIMULATION, HEDONISM and POWER
may restrict growth in psychological development, social, economic, intellectual, and political climates of the nation. Such consequences could impact at the individual and group levels in society.

Furthermore, a devaluation of motivational types could result in a direct challenge to SPIRITUALITY and BENEVOLENCE which would be, by empirical and theoretical definition, standing in unconnected, polarisation.

In a study of urban secondary teachers' value orientations Ennis (1994) showed that teachers' goals for their students' learning were consistent with an emphasis on social responsibility in learning to work with others and understanding, respect and responsibility to others. The teachers reported a tension between the need to teach academic goals and the need to teach skills associated with social responsibility. In reflecting the findings of Ennis (1994) in light of the Schwartz (1992) model and the findings of the present study, it may be speculated that teachers experience a tension between teaching skills associated with BENEVOLENCE and the need to teach academic goals which link with types such as SELF-DIRECTION and ACHIEVEMENT.

One may conclude that there may be the potential for values' imbalance within New Zealand. The ideal structure of student teachers' values would encompass a more equitable distribution of value types.

Maori and Pakeha Values

The responses to the Values Questionnaire are reports of individuals' personal value priorities. However, because values represent cultural values to the extent that they are acquired through cultural influences, there is the possibility that people of one population but two cultures, Maori and Pakeha, may respond in a manner that is culturally differentiable.
The values of the indigenous people have been under pressure from assimilist policies at Government and local levels since the days of colonisation. Assimilation, by definition, assumes that the minority group embody the values of the dominant. In New Zealand, the Maori were to assimilate the values of the colonists. The results of the present study may be indicative of cultural value maintenance despite external pressure.

Furthermore, the average individual priorities of a sample of Maori and a sample of Pakeha from one population may reflect the different value influences to which they are exposed through a shared socialisation (e.g., state education, media, law) and through a distinct enculturation process (e.g., *marae* based education, demography, *whakapapa*).

The Wilks' lambda (.6617) shows that, although not large, there is a significant difference between Maori and Pakeha values importance (Table 7). In closer examination of the discriminant values of Maori and Pakeha, there appears to be a difference in the types of values, which Maori rated as more important to them, as guiding principles, than Pakeha.

The means show that Maori, on average, were higher on *a spiritual life*, *politeness*, *wealth*, *national security*, *respect for tradition*, *family security*, *authority*, *social justice*, *moderate*, *humble*, *honoring of parents and elders*, *accepting my portion in life*, *obedient*, *helpful*, *enjoying life* and *clean*. These values have close parallels in Maori-tanga.

While the Schwartz Value Survey does not specify the Maori values of *mana*, *tapu* and *noa*, *aroha*, *utu*, and *wairua tanga*, the Maori values may be reflected in the analysis. The Maori concept of *Wairua*, may be reflected in the values *a spiritual life*, *respect for tradition*, *humble*, *accepting my portion in life* and *enjoying life*; *Utu*, *social justice*, *national security*, *family security* and *humble*; *Aroha*, *honoring of parents and elders,*
helpful and enjoying life; Manaaki tanga, politeness and obedient; Mana, authority, humble, accepting my portion; and, Tapu and noa, clean.

It may be that these concepts are collectivised as are the Maori people. For example, a person cannot show hospitality (manaaki tanga) without encompassing aspects of aroha, koha, and mana. The way in which the hospitality is shown is an expression of wairua. Values which serve the collectivistic interest and rated more important by Maori are tradition, humble, accepting my portion in life, moderate, politeness, obedient, clean, a spiritual life and honoring of parents and elders.

Pakeha had, on average rated more importance on inner harmony, self-respect, reciprocation of favours, mature love, self-discipline, a varied life, true friendship, devout and curious. Generally, these values express the notion of self-fulfilment and have the individual at the core.

A further study of the values of New Zealanders could embody Maori values.

As a nation, welding a bicultural society, it seems important to understand, though not necessarily subscribe to bicultural values. Currently, the changing dynamics in socio-political, educational, and economic climates reflect a transference of power from the Crown to the Maori (e.g., Fisheries, West Coast Land Leases). By the year 2020, it is predicted that 20% of the New Zealand population will be identified as Maori. At the 1991 Population Census 59% of the Maori population were under the age of twenty-five years and 37% were less than fifteen years of age. This compares with 23% of the total population being under fifteen years of age (Davies & Nicholl, 1993). The inter-censal (1986 - 1991) population growth rate shows that the Maori population increased 7.4%, the total population increase was 3.9% (Davies & Nicholl, 1993). The implications for institutions, at macro and micro levels of New Zealand society, are extensive.
Concluding remarks

The main focus of the present research was to examine the validity of Schwartz' theory using SSA in a New Zealand sample.

Results supported the structural hypothesis for motivational value types. However, where Schwartz (1992) shows 10 motivational types to be empirically distinguished, the present study validated 6 motivational types that emerge from a common origin. The motivational types POWER, SELF-DIRECTION and SECURITY formed the hypothesised distinct regions, and several regions were combined to form joint regions: HEDONISM and STIMULATION; UNIVERSALISM, BENEVOLENCE and SPIRITUALITY; and CONFORMITY and TRADITION. The Schwartz (1992) model shows TRADITION to be located in the outer periphery of CONFORMITY and are counted as two separate regions. The criteria for distinct regions were met in the present study but because the TRADITION region did not extend from the common origin, the region was combined with CONFORMITY to form a joint region. The two regions share the same motivational goals and can be logically as well as empirically supported.

In the present study 82% of the values measured by a modified version of the Schwartz Value Survey were placed in the hypothesised regions. Therefore, the meaning of values appears to be highly consistent when the values of the predominantly Pakeha (73% of the total sample) and female (86.5%) New Zealand student teachers were compared to the ideal value structure. Sixty per cent of the misplaced values were hypothesised in the ACHIEVEMENT region which failed to emerge in the SSA. The finding may be explained by New Zealanders' egalitarian ethos and a reluctance by individuals to be a victim of the "Tall Poppy Syndrome".

The present findings are consistent with Schwartz's contention that values serve individual, collective and mixed interests. The analysis showed that individualistic and collectivistic motivational types form two coexistent groups. The regions representing
the individualistic interest POWER, HEDONISM / STIMULATION, and SELF-
DIRECTION form a contiguous region and the collectivistic types, CONFORMITY / 
TRADITION, and UNIVERSALISM / BENEVOLENCE / SPIRITUALISM form 
another. SECURITY which serves both interests separates the two.

Schwartz (1992) found that value systems could be organised into a synthesised 
structure with compatibilities and conflicts. The study empirically confirmed the 
 hypothesised value system of compatibilities and conflicts and goes beyond 
confirmation by alerting to implications of the simultaneous pursuit of the motivational 
types.

The compatibility defined implies an harmonious relationship between neighbouring 
types, incompatibility equates with conflict, yet, as is discussed, several of the 
motivational type compatibilities when considered translate into social reality which is 
not always in an harmonious form. While the motivational types empirically show a 
harmonious relationship, the apparent concordance can lead to anti-social behaviours 
and corrupt practices. It is fallacious therefore, to assume that the term "compatibilities" 
implies an harmonious or desirable behavioural outcome.

The present study disconfirmed the terminal and instrumental dichotomy of value goals 
and it was suggested that the sample, given its function in society and its pursuit of both 
personal and societal values, may simultaneously aspire to instrumental and terminal 
values and thus the affiliation of the two is one of interconnectedness. The results throw 
further doubt on the conceptual importance of the terminal and instrumental distinction.

The MDS results project the values in a configurational map but the technique does 
not reveal which values were the most important. Thus, cluster analysis was performed 
on the data. The Single Linkage Method (Nearest Neighbour) exposed ten clusters in 
the hierarchy. The linkages and the progression of motivational types from
BENEVOLENCE to CONFORMITY to UNIVERSALISM to SELF-DIRECTION to ACHIEVEMENT to STIMULATION to HEDONISM to POWER to TRADITION to SPIRITUALITY. The motivational type, SECURITY, was dispersed throughout the tree and it was postulated to give cohesion to the structure. The furthest motivational types to link, TRADITION and SPIRITUALITY, provide meaning and connection in life and may be the basic values which maintain and sustain society.

The present study, investigating the content and values structure of a New Zealand sample, in particular highlighted the value priorities of Maori and Pakeha, male and female student teachers.

The importance attached to different values of the Maori was of interest in the study. Internally, New Zealand faces a period of social change which necessitates cultural sensitivity and adjustment that includes an emphasis on bicultural relationships. Maori and Pakeha of New Zealand have different social histories, culture and mores; different values. To ignore the contributions of the Maori in a New Zealand study is to vindicate assimilation.

For Maori, their cultural value system pivots on the fundamental understanding that their mortal context can be meaningful only when observed in relation to their past. *whakapapa*. Their *whakapapa* is conceptually understood as their genealogical link to the creators of the universe. Their future is regarded, co-jointly in social and spiritual terms, as a mission to ensure the continuation of the sacred lores and understandings handed to them by their *tupuna* in order that future generations should survive and meet psychological and physical well-being. Failure to acknowledge these sacred lores is regarded by Maori leaders as pathological. All Maori values extend from the understanding of spiritual values. In the New Zealand context, therefore, disregarding SPIRITUALITY as a motivational type in a model of the universal types of human values is a regretful omission. Future studies of New Zealand values might include a
process of *whakapaakare* (consultation) with Maori *kaumatua* (elders with knowledge) and *tohunga* (guardians of psychological, spiritual and physical health).

Holoday, Leach and Davidson (1994) discuss the intrapersonal value conflict that counsellors may experience when working with clients whose culture and values are different from their own. They suggest that as counsellors become more proficient in multicultural counselling and more able to promote decision making from another's perspective, feelings of internal value conflict will decrease. At the same time, understanding others' values may increase the efficacy of counselling.

Maybe, if psychology in New Zealand was to recognise the value structures of the indigenous people from a less Eurocentric perspective then there may be greater application and acceptance of psychology as a social science amongst the Maori people. *Whare Paia*, for example, was a Maori response to address the perceived deficits in psychological medicine with its Eurocentric notions of psychological health.

So, while it appears that the structure of values is invariant across culture (Schwartz, 1992) the present study shows that there are differences in how strongly values are endorsed within a "national culture". Whilst the Gold and Webster (1990) study combined "international and local values concerns" (p. xiii) it failed to define "values" and provided a survey of attitudes, opinions, behaviours and aspirations of New Zealanders. There is the need to explore cultural values variation within New Zealand and their impact on social behaviour. The Schwartz Value Survey and theory has provided an exploratory tool and perhaps as New Zealand's biculturalism evolves a New Zealand generated values survey would allow psychologists to observe, monitor and interpret cultural differences and changes in values endorsement.
Although New Zealand is constitutionally bicultural, it is increasingly becoming multi-cultural. An awareness of unique and culture-specific values in data gathering, analysis and interpretation may only serve to enrich any future studies in this field.

Sampling student teachers in a study of values has the advantage of investigating a homogeneous group in terms of career choice, career aspirations, career acculturation and educational background. However, a disadvantage may be that student teachers are not representative of the population; no membership of an occupation is truly representative. Admission to teacher training is based on specific selection criteria and candidate characteristics.

Rokeach (1973) asserted that experience and maturation teach people to integrate values that have been contextually taught into a hierarchically organised system in which each value is ordered in priority or importance relative to other values. As the hierarchical clustering technique revealed there was a hierarchically organised system, values progression (BENEVOLENCE to CONFORMITY to UNIVERSALISM to SELF-DIRECTION to ACHIEVEMENT to STIMULATION to HEDONISM to POWER to TRADITION to SPIRITUALITY). However, when discriminant analysis was applied to the male and female sample, the females showed an emphasis on value priorities in the BENEVOLENCE and SPIRITUALITY types. The questions to be asked are: Can these results be generalised to the female population of New Zealand? And, if not, should the teacher training institutions be reviewing their criteria for teacher trainee selection?

Finally, values are by definition mental constructs and an expression of values provides evidence of the reality of human values. A declaration or, as in the case of research, an endorsement of values is simply that. It does not assume a behaviour. Nevertheless, that many values do yield behaviour can not be questioned, otherwise they would not
warrant the emphasis that is placed on them in education, cultural transmission and psychological research.
REFERENCES


APPENDIXES
Hello! My name is Cathie Collinson. I am a student at Massey University currently doing a Masterate in Psychology. My professional background is in Education and I am now combining my interests in Educational and Psychology in my research. As a teacher, I have for a long time been interested in the notion that as teachers we transmit our own values to the students we teach and by such transmission, our cultural, human values are reproduced.

I am working with Associate Professor Judy Brook at Massey University and Professor Michael McCarrey from the University of Ottawa, Canada, on a cross-national study of human values. This morning I am here to invite you to participate in our study by asking you to complete a questionnaire which will take about 20 minutes.

Basically, our study shall compare the values of New Zealand student-teachers and teachers with similar samples in 20 other countries including Russia, Canada, Israel, China, Brazil and Australia. We are investigating 56 human values and will be looking for a New Zealand trend, and comparing it with other countries.

The questionnaire will ask you how important 2 sets of 26 values are to you. People often find thinking about their values on the questionnaire challenging, interesting and sometimes difficult. However, you are asked to work alone and quietly and to wait until all are done if you wish to discuss your responses with your friends. There is also a set of demographic questions for you to complete.
If you agree to participate in the study, you will have complete anonymity; you are asked not to give your name; we are interested in group trends only.

All of the information you provide is anonymous and confidential, only group analyses will be reported and not even your College of Education will be identified by name or location.

You do not have to participate in the study or to answer any questions you do not wish to and you have the right to withdraw at any stage. There will be no penalty; your participation or otherwise does not, in any way, effect your College records.

I would very much appreciate your participation in this study which will allow us to see the extent to which our teacher values compare and contrast in the multi-national scene.

In the event that you agree to participate I ask you to read and sign the consent forms. Keep one copy and return the other to me.

If you would like a resume of the study, please write your name and address on a separate piece of paper. It is anticipated that the study will take a year to complete so please provide a permanent address (i.e., not the address of the flat you are in for this year).

(After consent forms are signed and non-participants leave the room I will read aloud Page 1 INSTRUCTIONS).

For those of you who do wish to participate, I will read the instructions on Page 1 of the questionnaire and then without further ado, unless you have any questions for me, you can get on with it!
(At completion I will ask participants to check the questionnaire to ensure they have not inadvertently skipped any values or omitted any demographic information).

Thank you for your cooperation.
CONSENT FORM

Researcher: Dr Judy Brook, Catherine Collinson
Institution: Department of Psychology, Massey University, New Zealand
Telephone: Brook (06) 356-9099 Ext 4121, Collinson (06) 358-1444

I, ____________________________, am interested in collaborating in this study, the purpose of which is to make cross-cultural value comparisons among teachers in various countries.

If I agree to participate, I will complete a value importance questionnaire and some demographic characteristics. This will take about 20 minutes. I understand that confidentiality will be assured as I will not be asked to write my name or sign the questionnaire.

I understand that I am free to withdraw from the study at any time without penalty.

I have received assurance from the researcher that the replies I give will remain strictly confidential. Moreover, the interest of the researcher is with group trends only.

PARTICIPANT’S SIGNATURE: ________________________________
DATE: ________________________________
In this questionnaire you are to ask yourself: “What values are important to ME as guiding principles in MY life, and what values are less important to me?” There are two lists of values on the following pages. These values come from different cultures. In the parentheses following each value is an explanation that may help you to understand its meaning.

Your task is to rate how important each value is for you as a guiding principle in your life. Use the rating scale below:

0 -- means the value is not at all important, it is not relevant as a guiding principle for you.

3 -- means the value is important.

6 -- means the value is very important.

The higher the number (0, 1, 2, 3, 4, 5, 6), the more important the value is as a guiding principle in YOUR life.

-1 is for rating any values opposed to the principles that guide you.

7 is for rating a value of supreme importance as a guiding principle in your life; ordinarily there are no more than two such values.

In the space before each value, write the number (-1, 0, 1, 2, 3, 4, 5, 6, 7) that indicate the importance of that value for you, personally. Try to distinguish as much as possible between the values by using all the numbers. You will, of course, need to use numbers more than once.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

<table>
<thead>
<tr>
<th>opposed to my values</th>
<th>not important</th>
<th>important</th>
<th>very important</th>
<th>of supreme importance</th>
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<tr>
<td>-1</td>
<td>0</td>
<td>1</td>
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Before you begin, read the values in List I, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values and rate it -1. If there is no such value, choose the value least important to you and rate it 0 or 1, according to its importance. Then rate the rest of the values in List I.
VALUES LIST I

AS A GUIDING PRINCIPLE IN MY LIFE, this value is:

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<td>-1</td>
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1. _______ EQUALITY (equal opportunity for all)
2. _______ MODERATE (avoiding extremes of feeling & action)
3. _______ SOCIAL POWER (control over others, dominance)
4. _______ AMBITIOUS (hard-working, aspiring)
5. _______ FREEDOM (freedom of action and thought)
6. _______ HUMBLE (modest, self-effacing)
7. _______ SENSE OF BELONGING (feeling that other care about me)
8. _______ PROTECTING THE ENVIRONMENT (preserving nature)
9. _______ AN EXCITING LIFE (stimulating experiences)
10. _______ HONORING OF PARENTS AND ELDERS (showing respect)
11. _______ POLITENESS (courtesy, good manners)
12. _______ HEALTHY (not being sick physically or mentally)
13. _______ NATIONAL SECURITY (protection of my nation from enemies)
14. _______ ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances)
15. _______ RECIPROCATION OF FavOURS (avoidance of indebtedness)
16. _______ PRESERVING MY PUBLIC IMAGE (protecting my “face”)
AS A GUIDING PRINCIPLE IN MY LIFE, this value is: (continued)

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<th>opposed to my values</th>
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17. _______ A WORLD AT PEACE (free of war and conflict)
18. _______ INTELLIGENT (logical, thinking)
19. _______ MATURE LOVE (deep emotional & spiritual intimacy)
20. _______ ENJOYING LIFE (enjoying food, sex, leisure, etc.)
21. _______ DETACHMENT (from worldly concerns)
22. _______ RESPONSIBLE (dependable, reliable)
23. _______ SOCIAL RECOGNITION (respect, approval by others)
24. _______ FORGIVING (willing to pardon others)
25. _______ A VARIED LIFE (filled with challenge, novelty and change)
26. _______ CLEAN (neat, tidy)
27. _______ AUTHORITY (the right to lead or command)
28. _______ TRUE FRIENDSHIP (close, supportive friends)
29. _______ A WORLD OF BEAUTY (beauty of nature and the arts)
30. _______ SOCIAL JUSTICE (correcting injustice, care for the weak)
VALUES LIST II

Now rate how important each of the following values is for you as a guiding principle in YOUR life. These values are phrased as ways of acting that may be more or less important for you. Once again, try to distinguish as much as possible between the values by using all the numbers.

Before you begin, read the values in List II, choose the one that is most important to you and rate its importance. Next, choose the value that is most opposed to your values, or -- if there is no such value -- choose the value least important to you, and rate it -1, 0 or 1, according to its importance. Then rate the rest of the values.

AS A GUIDING PRINCIPLE IN MY LIFE, this value is: (continued)

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<th>opposed to my values</th>
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31. INDEPENDENT (self-reliant, self-sufficient) |
32. INNER HARMONY (at peace with myself) |
33. LOYAL (faithful to my friends, group) |
34. PLEASURE (gratification of desires) |
35. BROADMINDED (tolerant of different ideas and beliefs) |
36. A SPIRITUAL LIFE (emphasis on spiritual not material matters) |
37. DARING (seeking adventure, risk) |
38. SOCIAL ORDER (stability of society) |
39. INFLUENTIAL (having an impact on people and events) |
40. MEANING IN LIFE (a purpose in life) |
41. CHOOSING OWN GOALS (selecting own purposes) |
42. WEALTH (material possessions, money) |
AS A GUIDING PRINCIPLE IN MY LIFE, this value is: (continued)

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<tr>
<th>opposed to my values</th>
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43. _______ CAPABLE (competent, effective, efficient)
44. _______ SELF RESPECT (belief in one's own worth)
45. _______ HONEST (genuine, sincere)
46. _______ CREATIVITY (uniqueness, imagination)
47. _______ OBEDIENT (dutiful, meeting obligations)
48. _______ RESPECT FOR TRADITION (preservation of time-honored customs)
49. _______ HELPFUL (working for the welfare of others)
50. _______ SELF-DISCIPLINE (self-restraint, resistance to temptation)
51. _______ DEVOUT (holding to religious faith & belief)
52. _______ FAMILY SECURITY (safety for loved ones)
53. _______ CURIOS (interested in everything, exploring)
54. _______ UNITY WITH NATURE (fitting into nature)
55. _______ SUCCESSFUL (achieving goals)
56. _______ WISDOM (a mature understanding of life)

* * * * * * * *
Sex (circle): 1. Male 2. Female

Year of birth: 19____

Number of years of formal schooling (primary, secondary & tertiary): ______

Marital status (circle):
1. Single 2. Married or cohabiting
3. Widowed 4. Separated or divorced

Number of children ______

Please describe your current occupation or your occupation when last employed. Be as explicit as you can. (For example, painter in an auto garage, sales management in a clothing store, 6th form science teacher). If you are a student, please give mother’s or father’s occupation.

________________________________________

________________________________________

What is/was your major at tertiary level (college or university)?

________________________________________________________________________

In which area are your academic interest?
1. Science 2. Arts

When working do you prefer to work (circle)
1. In a group with one or more people 2. Alone

With regard to religion, with which religious group do you identify? (circle)
4. Jewish 5. Other: ______ 6. None

How religious are you, if at all? (circle)

Not at all 0 1 2 3 4 5 6 7 Very religious
Which of the following political parties comes closest to representing your views? (circle)

In what kind of place did you grow up? (circle)
1. City 500,000+ (Auckland)
2. Other major city less than 500,000 (Wellington, Christchurch, Dunedin)
3. Provincial cities
4. Town
5. Rural area

To which ethnic group do you belong?

Have you any New Zealand Maori ancestry? (circle)
1. Yes  2. No.

To what main iwi (tribe) do you belong?

Thank you very much.
Ve appreciate the time you have taken to answer this questionnaire.