Capitalism, Class, Care and Craft

A Discursive Journey Around the 1900 Act to Make Better Provision for Manual Technical and Commercial Education in New Zealand

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In grateful memory of my mother

Ellen Jane Halliwell

a weaver, who refused to let me follow in her footsteps

The Author and Students in Cookery Class at Hindley County Secondary School in 1964

Abstract

This historical education policy development case study covers the years 1877 to 1917. Critical Discourse Analysis (CDA) of Parliamentary Debates and Reports are primary sources used to address the 'how' and 'why' questions relating to the policy which was formalized in 1900 as *An Act to Make Better Provision for Manual, Technical, and Commercial Education*. Secondary sources are also used to examine social, political and economic issues, in particular the dominant discourses around Capitalism, Class, Care, and Craft. The thesis argues that the 1900 Act is a model of 'top down policy' development, with a small number of powerful men making moral decisions around educational development that were based on technical rationality and its corollary social Darwinism rather than on egalitarianism and social mobility. It is also argued that the 1900 Act demonstrated a strong link between the state education system and its economic instrumental role in meeting the needs of the capitalist mode of production. The analysis of state rhetoric surrounding policy development continues to be as relevant today as it was in 1900.

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Chapter 1: Introduction

This historical case study is a discursive analysis of the social, political, economic and educational antecedents that underpinned the legislation entitled, *An Act to Make Better Provision for Manual, Technical, and Commercial Education* (hereafter the 1900 Act) (Statutes of New Zealand. 1900. No. 39. p. 215). The short title of this act is:

> "The Manual and Technical Instruction Act, 1900"; and it shall form part of and be read together with "The Education Act, 1877" (hereafter called "the principal Act").

This thesis examines the years between the passing of the 1877 Education Act, *An Act to make further Provision for the Education of the People of New Zealand* (hereafter the 1877 Act) and 1917. The first of these dates coincides with the introduction of free, compulsory and secular elementary education to New Zealand. The second date is significant because during that year domestic education was made compulsory for female students wishing to access free places at secondary school. The focus of this study is to develop a better understanding of the 'why' and 'how' questions of the 1900 Act, a state initiative to extend manual and technical education through state funded institutions during the years of compulsory education.[1] Only passing reference will be made to Native and Maori Secondary Schools because in general these institutions lie outside of the scope of this study.

At the end of the nineteenth century Parliamentary Debates revolved around the basic premise that state provision of schools would allow everyone equal access to standardised education. Manual and technical education had been on the state agenda since the 1877 Act was passed. Prior to this time there were several disparate institutions in New Zealand offering manual and technical education that served a range of purposes. These were usually vocational, in the very narrow sense of being directly linked to specific employment. Sometimes they reflected overt purposes of social control, as in Industrial Schools, and in the case of the Native Schools their additional benefits to the state of fostering assimilation into the dominant European culture.

The 'common-sense' rhetoric on the legitimation of vocational education is evident in this statement by Director General of Education George Hogben. It is one:

> ... in which a certain part of the work is brought into close contact with the facts of life in which the boy or girl finds himself or herself and with the aims and objects of the most probable calling that he or she will follow in the future (cited in Openshaw, Lee, & Lee, 1993, p. 118).

This makes perfectly good sense at one level, since schools are by their nature always linked to preparation for adult life. However the ideology expressed in the above citation exemplifies what Codd refers to as "determinate representations (i.e. statements that claim to convey "intelligible relationships between elements of social reality)" (cited in Harker & Nash, 1990, p. 145). The deterministic notion that the students' backgrounds or 'facts of life' are key indicators of school success and career prospects has been shown empirically often to be the case (Lauder & Hughes, 1990; Nash, 1990, Harker, 1990). However, settlers coming to New Zealand did not want their children's 'facts of life' to be static, they were ambitious for improvement.

Attempts in 1889, 1890 and 1893 to gain parliamentary support to extend manual and technical education failed (Nicol, 1940). However, the 1895 *Manual and Technical Elementary Instruction Act* (hereafter the 1895 Act) signified symbolic acceptance of it by the state. This was an important move towards general acceptance of the idea but it was the 1900 Act that included increased funding, the vital ingredient for effective policy development. The 1900 Act was an attempt to impose a broadening of curricula on the secondary system. When this move was strongly resisted by the Secondary Schools, Technical High Schools were established that set up a system of education directing some children towards vocational education. Such a separatist system should have been an anathema to the egalitarianism on which the 1877 Act and New Zealand society was built. Indeed, there was little public demand for an education system based on manual and technical education. Nor was there any interest from the industrial sector. Noteably, this was not a settlement[2] made by the state in response to pressure from groups we now call stakeholders. On the contrary, as early as 1888 Otago's school inspectors had proposed that while the curriculum in the District High Schools was far too academic, this situation:

> ... seems to be supported by the majority of rural parents who are mainly interested in the provision of inexpensive ways in which their children can qualify for public examinations (McKenzie, Lee, & Lee, 1990)

Nor was there a push for major educational changes from the business and commercial sector (Nicol, 1940).

Major retrenchment by the state, following the long depression (discussed in Chapter 3) suggests that such an initiative was a major disjuncture in contemporary state policy, particularly so given that many of the suggested provisions of the 1877 Act remained incomplete. This Act had established a system of management that could have accommodated changes to educational pedagogy, curriculum and evaluation without recourse to setting up an alternative system. So, why did the state undertake such a major financial commitment to extend manual and technical education at this time? In order to answer this the study examines the following key questions.

Key Questions

1. What were the primary reasons why the New Zealand State undertook a commitment to establish and support manual and technical education through the 1900 Act to make better provision for Manual, Technical and Commercial Education.

2. How did the above Act reflect the dominant social, political, economic, and educational discourses of the era?

3. Who were the key players that were responsible for the Act?

This Chapter identifies the parameters of the study and introduces key terms to provide a backdrop against which the arguments in subsequent Chapters will be set out. Multiple discourses around the concept of 'technical' will be discussed. I argue that the way in which manual and technical education developed in New Zealand was based on discourses that did not just reflect the British context but had become integral to a culture that had its basis in the Renaissance and the Enlightenment and the associated scientific revolution. From this arose a culture of positivism that supports detachment, objectivity and the independence of researchers. This assumes theory-neutral, value-free observations within a rhetoric of impartiality, all of which place faith in science to solve any technical and political problems (Olssen, 1987). This faith and the belief in positivism were central

to the classical liberal ideology that had dominated western civilisation after the Enlightenment. It also underpinned pre-revisionist accounts of the history of education.

In order to make sense of the discourses of any particular era it is necessary to understand past events and the practices from which they emerged. Industrialisation, urbanisation and contested politics were all impacting on social, political and economic aspects of life in New Zealand during the era of this study. These, I argue, were pivotal to the production of the policy on which the 1900 Act was based.

After reading the literature, four discourses emerged as dominant in justifying what was essentially a new approach to educational provision. Three of these capitalism, class, and craft dominated the development phase while the fourth, care, emerged after the passing of the Act and related to the education of girls. A synopsis of these discourses is outlined below.

Capitalism, Class, Craft and Care

Capitalism is an economic system based on the private ownership of the means of production and the distribution of the goods or services. This structure underpins the way we live socially, and the relationship between the economic system and and the way in which society develops, is integral to policy development in education:

> Capitalism, a social form when it exists in time, space, population, and history weaves a web of myriad threads; the conditions of its existence form a complex network each of which pre-supposes many others (Braverman, 1974, p. 21).

According to Marxist theory the capitalist class own 'the means of production' and those who work for capitalists sell their labour for wages and produce goods or services. This results in the division of the population into two basic classes, capitalist and labour. There is however, always a relationship between capitalism, the state, and education (Bowles & Gintis, 1976; Offe, 1984; Olssen, Codd, & O'Neill 2004). Taxes from public and private sectors fund welfare and education. The education system must, in turn, serve the needs of the state and society. I use the term state here in the sense used by Gramsci who proposed that the:

> ... state should be understood not only [as] the apparatus of government but also the private' apparatus of 'hegemony' or civil society (Gramsci, 1971, p. 261).

The state is not a unitary thing but consists of a complex and large number of organizations and structures, such as public service authorities and statutory authorities such as Treasury and Social Welfare. The state "translates values, interests and resources into objectives and policies" (Davis *et al.*, 1993, cited in Taylor *et al.*, 1997, p. 19) and these processes work collectively towards multiple outcomes to manage society. A key role of the state is to protect and sanction a set of institutions and social relationships that support capitalism, but it must also consider the needs of all members of society.

The relationship between production, the economy, state and education is complex. As governments change, discourses around this relationship also change. The symbiotic relationship betweeen technology, capitalism and the state ensures the creation of a partiular type of political state. Technology is the key to wealth generation, wealth that is required to meet political demands and the legitimacy of the state (Braverman, 1974).

Class is a key system of stratification emerging out of the organisation of production in modern capitalist industrial societies. Marxist theory separates society into two classes, labour and capital, a very simple definition of class but one that probably reflects very closely New Zealand society in the 1870s. Between 1890 and 1930, however, a "social and economic pattern began to emerge" (Shuker, 1987, p. 49). One aspect of this was a more complex class system, in particular the establishment of a new middle class (Ibid).

One way to improve class position is through education and the possibility of 'social mobility' that it offers. Settlers in New Zealand may not have used this term but the idea was integral to their practices as they sought better lives for themselves and their children (Shuker, 1987, Simons, 1994). They were working people who came to New Zealand believing that this was "not a flight from starvation but a short road to abundance" (Thompson, 1859, cited in Shuker, 1987, p. 37).

Craft capability is central to manual and technical education. At the end of the 19th century, however, machinery and scientific management were supplanting handcraft skills in industrial production methods. The expansion of craft activity into school curricula, the usefulness of which was now surpassed in the production sector, would seem only to make sense if it served specific educational objectives. This anomaly raises questions about the

purpose of manual and technical education as an integral aspect of compulsory study and I argue that the answer to this lay not so much in a need to foster expertise in 'technical' skills but was linked to the scientific management structures of capitalism and the need for a compliant, unskilled workforce – one willing and able to carry out instructions. Apple, using Braverman's analysis suggests that:

> Our economic structure requires the continual division and breaking down of complex skills into less complex and more standardised skills ... economic control may be helped by the lack of prestige given to such craftsmen (cited in Apple, 1979, p. 38).

The rigid training exemplified in the 'lockstep' pedagogy of manual and technical education involved students carrying out the exact activity demonstrated by the teacher in a rigid step by step controlled routine. Factory floor values of a uniform, standardised curriculum instilling qualities of obedience, malleability and punctuality are emphasised. Personal development through problem solving and expressions of individuality did not feature in this model.

It is important to remember that during the latter part of the 19th century New Zealand was undergoing a transition stage from a pre-industrial society to a capitalist one and, as Olssen (1995, p. 4) proposes, over a very short time New Zealand experienced two industrial revolutions in rapid succession.[3] This is the reason such pedagogies were introduced into education.

Care of home and family through domestic education was a key ideology that supported cultural and societal reproduction. Preparation for the domestic role was integral to the capitalist mode of production, which depended on reproduction of the next generation of workers and the maintenance of the existing labour force. The 'common sense' assumptions that care was the 'natural' role of women were deeply entrenched in liberal thought and in British and New Zealand society. But in this country it became instituted and perpetuated through the formal education system in the early 20th century (O'Neill, 1996).

Schools are never neutral, rather they are a microcosm of the society in which they function. Schools always reflect the ideas, beliefs and values of the most powerful groups in society. One way of understanding how this legitimating process occurs is through the

use of Critical Discourse Analysis (CDA), which is a way of understanding how dominant ideas transfer across generations and through distance. It is a mode of action, a way of analysing how people act on the world and on each other. The dialectical relationship between discourse and social structure reflects the relationship between social practice and social structure (Fairclough, 1992). Discourses both shape and challenge the way in which people develop their values and ways of being, and this occurs through language as well as through signs and symbols. Discourses may be both limiting, for example, 'boys don't cry' or emancipatory, 'girls can do anything'. Most importantly discourses may be challenged and the process of 'interrupting' dominant discourses is a key tenet of critical thinking and a precursor to bringing about change.

The ideology of egalitarianism has been premised as a guiding concept of New Zealand society since early settlers arrived here. In reality, the management of the classless culture that they expected, rested in the hands of a few wealthy landowners and merchants. In education this meant that those with money were able to build schools and pay fees to access the elite, academic forms of education expected of the middle and upper classes. In this way cultural difference and privileges were maintained. The 1877 Act made education the first social welfare system to be made available through the state and this offered the chance of upward mobility to the working classes. As Shuker (1987) argues, while there was a qualified commitment to egalitarianism, the civilising value of education was also a major factor used to support its introduction. Inequalities of educational outcomes remained subsumed and accepted as an element of the natural differences based on class, race and gender. I argue that the 1900 Act reinforced this ideology.

So although settlers had expectations of achieving social mobility in an egalitarian society they brought with them a set of dominant discourses from the highly structured, classed and gendered culture in Europe, mostly Britain. *Dominant* discourses are the most powerful ideas that become so deep-seated and normalised that they take on the status of 'common sense'. They shape individuals into the norms and values of that culture. They become the "prevailing way that a culture talks about or represents something" (Thomas, 2004, p. 213).

'What's Past is Prologue'

(Shakespeare, The Tempest)

> ... men and women who risked the 19,000 kilometre journey to the Antipodes were determined that the injustices, exploitation and poverty they were leaving behind should find no purchase in these new lands. The dead weight of tradition and the expectations of a politically entrenched ruling class had made reform exceedingly difficult in the lands they were leaving (Trotter, 2007, p. 64).

Determination to throw off the 'dead weight of tradition' was not easily achieved and for early settlers their 'taken for granted' way of doing things was not easily discarded. Dominant discourses were as integral to the ways they viewed and shaped their lives as were their basic necessities for physical survival.

The settlers who arrived in New Zealand in the 1870s left Britain at a time when there was an extension of elementary education there. This was considered an "improving social movement", a way to eliminate drunkenness, prostitution, child labour and poverty and to enhance social control. Access to education was believed to be a way to draw the lower classes away from lives of abject degradation, further intensified by the industrial revolution and the terrible living conditions in which "the lower orders lived", especially in London and the bigger cities (Selleck, 1968, p. 5). These living conditions were an accepted part of a highly stratified and rigid class culture. Education in New Zealand was believed by settlers to be the key to the better life they sought. It was an idea presented by politician Sir Robert Stout speaking during the 1880s:

> As soon as the labourer is educated he will have his rights; he will have his rights though all the capitalists in the world declare he should not, because he will organise, and if he is faithful to his fellows the battle will be won (Sutch, 1966, p. 67).

In order to understand the potency of the cultural heritage of British settlers in relationship to the discourses surrounding the 1900 Act, I will briefly outline the historical origins of these ways of thinking. This was a cultural heritage shaped by ideas founded in

Greek and Roman philosophy, later fashioned by worldviews arising from the Renaissance, and then by the Enlightenment and the associated scientific revolution.

The Enlightenment and the Scientific Revolution

By the beginning of the 18th century Sir Isaac Newton's research into mechanics had established the principles of scientific determinism – the belief that all events have preceding causes. This view of knowledge shaped Western thought for more than three hundred years.

Classical liberalism that emerged from this historical era provided the guiding principles and ideological rationales for the reproduction of the political, social and economic systems on which Western societies were based. Discourses embodying the political nature of liberalism include, democracy, constitutional government, rule of law, popular sovereignty, consensual and minimalist government, all of which are directed at the central ethos of upholding the freedom of the individual. These discourses were all underpinned by the assumption that the rule of law would work towards the good of all in society (Olssen *et al.*, 2004). They were affiliated with the liberal view of human nature that "each individual is driven in the pursuit of the gratification of these ideas, desires and appetites by the faculty of reason" (Ibid, p. 75).

Isaac Newton's story of God creating the universe as a self-propelled machine (Canterbery, 1995) was later utilised in Adam Smith's (1776) 'invisible hand theory', which centered on the belief that any interference with free market competition, which encompassed laissez-faire philosophy, no tariffs or subsidies, no government interference, a floating exchange rate and open economic relationships, would destabilise the natural order. Market mechanisms were viewed as natural laws working in the interests of commerce. In this way competition and individual self-interest became accepted as both a force for economic expansion and market regulation (Ibid).

The later Darwinian revolution further reinforced laissez-faire ideals and also underpinned political movements for social efficiency, which were imbued with technocratic rationality and emerging throughout the 'developed' world towards the end of the 19th century. Social Darwinism justified imperial expansion and exploitation and underpinned contemporary racism (Harker, 1993). Eugenics was also an extension of Social Darwinism, based on the work of Francis Galton (1867), *Hereditary Genius* (cited in Shuker, 1987), which argued that all natural abilities are inherited. A corollary to this is

the belief that humans like animals could be bred to ensure mental and physical superiority and ultimately produce an enhanced breed of people.

Positivistic views are based on the assumption that empirical-analytical science is the only rational way of 'knowing', and technical management the only rational form of 'action'. These assumptions have become central to the management of Westernised societies. The views of 'experts', interested predominantly in the efficient harnessing of 'means' rather than the concerns about the 'ends', were adapted to fit this ideology. Discourses of standardisation, rationalisation and scientific and technological determinism are all key precepts of technical rationality. These management theories were also applied to state education.

The discourses of Social Darwinism and Eugenics were particularly powerful in education because of their position within the 'scientific' realm and they were also used by the state to justify extending manual and technical education to groups considered to be naturally suited for a life of low status, menial and mindless work. The power of this hegemony reinforced the idea of leaders and followers, and is well captured by the newspaper the Australian *Register* in 1898:

> Some young folk may be exactly suited to educational equipment as the future, 'captains of industry' but this remark does not apply to the majority.... The chances of heredity cause the big brains and the large capacities for work and leadership to occur sporadically.... Numerous young men have no taste or aptitude for special technical studies. These may have their useful places in economy of industry, but they will never act as leaders (cited in Miller, 1982, p. 10)

The idea that laws of natural selection could be applied to the social realm of human life was both anti-egalitarian and undemocratic, and quite contrary to egalitarian principles, but in the context of a liberal polity the unequal distribution of wealth and power was seen as evidence that natural selection was working (Kliebard, 1995). Social programmes that might upset the balance were shunned because of the deep-seated belief that the 'fittest' would always prevail and social equilibrium would be thus maintained.

The liberal view of education places faith in the neutrality and objectivity of scientific and technical rationality. The discourse of meritocracy reinforces this view and

encompasses the belief that IQ, plus access to education, plus effort, will always guarantee that the brightest will rise to the top and either maintain social status or achieve social mobility. All other aspects of human characteristics and culture are discounted, and sociological experiences based on class, gender and race, which we now realise are integral to school achievement, were marginalised. The discourse of egalitarianism, which for so long sustained the liberal ideology of educational provision, was seen as having been achieved if access to education was available, the rest was believed to depend on individual effort.

In New Zealand, the liberal progressive view of education (Shuker, 1987) remained largely unchallenged as the framework for educational policies throughout the 20th century. It rested on assumptions that education created social change, was capable of redressing social inequities, and that the culture transmitted through schooling was autonomous and independent of society (Dale, 1989).

By the end of the 19th century the laissez-faire doctrine of classical economics was beginning to be partially challenged by utilitarianism and there was a movement towards policies that embraced the concept of 'utility'. Utilitarianism, which at its most simplistic means the greatest good for the greatest number, slowly overshadowed 'natural rights' philosophy (Olssen, 1997, p.395) and underpinned approaches to societal well being. This shift is an example of the way in which liberal views are not incontrovertible but:

> A socially and historically variable set of discourses, the interpretation of which has been altered and reshaped but certainly not disfigured out of recognition, to reflect its modernity (Olssen *et al.*, 2004, p. 74).

The Enlightenment and the scientific revolution had provided a framework for British culture and therefore the dominant cultural discourses of settlers. In addition the transfer of systems of education to New Zealand also reflected the British culture. Manual and technical education in Britain pre-dated even Enlightenment thinking and demonstrates how the rich and powerful controlled the options of the lower classes. The British elites defined early ideas about manual and technical education that had endured through time and distance to re-surface as dominant discourses in late 19th century New Zealand.

Discursive Antecedents: Manual and Technical Education in Britain

Apprenticeships for boys were the earliest form of organised manual and technical education in Britain from the 16th century onward. These were *ad hoc*, initially private, and based on the teaching of craft skills by members of Guilds. From homes where poverty was the norm (pauper children could be apprenticed compulsorily), children lived and learned alongside their employer/teacher. Apprenticeships declined in number when, following the mechanisation of factories, owners could no longer spend time training them. In Britain this decline was used by the state as a reason for increased access to technical education (Donnelly, 1989).

Schools of Industry established by the state in the 17th century also catered for poor children (Peters, 1963) and combined learning in practical skills with basic numeracy and literacy. These schools were linked to technical and economic change, in particular the establishment of the factory system. The rise in capitalism in 18th century Britain increased the need for skilled labourers to mind and operate machines. Craft skills alone had become superseded by systems requiring:

> ... some understanding of scientific principle .... Literacy in the vernacular and the ability to make calculations became general requirements in the population as a whole ... The need for universal education, combining manual and verbal training, began to become apparent (Peters, 1963, p. 144).

The state was thus a key instigator in providing a literate and numerate workforce which indicated this early instrumental role for education.

The Health and Morals of Apprentices Act of 1802, made it compulsory for employers of more than three apprentices to provide part-time daily instruction in the three 'R's during the first four years of a seven year apprenticeship. This was reinforced by the 1833 *Factories Regulation Act* which directed that children under 11 could be employed only if they attended school for two hours a day, six days a week (Ibid). Grammar Schools were available for children of wealthy families to prepare boys as doctors, lawyers or priests and by the end of the medieval era in Britain two forms of education were available – technical and secondary:

> ... one provided the manual and the other the verbal skills which society needed ... and verbal occupations had a higher social status than manual (Ibid, p. 142).

From the early 19th century, Mechanics Institutes were established to cater for adult education. Based on socialist and Chartist philosophy these provided the chance for working class artisans to better themselves (Ibid). Many of these British educational institutions and voluntary organisations and their associated ideological underpinnings were well established in New Zealand by 1877 (discussed in Chapter 3).

Britain's poor showing in international exhibitions of manufacturing excellence between 1850 and 1878 thrust both compulsory school attendance and technical education under the spotlight. The paucity of both was viewed as possible reasons for the decline in Britain's industrial superiority. There was a successful push for compulsory education in 1876 but on-going dissonance around technical education (Ibid).

The 1867, The Schools Inquiry Commission's Report *Relative to Technical Education*, published by the British Government, warned against neglecting the application of Natural Science to the industrial arts and encouraged the linking of technical education to pure and applied science. Peters (1963, p. 149) suggests that by 1902 the Board of Education in Britain had "revived the earlier class-limited and narrow concept of technical education". He noted that by 1906 children going out to earn their living in the ranks of commerce and industry were expected to receive "a kind of education that is likely to make then efficient members of the class to which they belong" (Ibid).

In summary, manual and technical education in Britain had its foundations in working class vocationalism, the sort of education that was assumed to have direct bearing on the preparation for specific life roles either in employment or unpaid work after school. As the workforce in Britain grew, the growing capitalist economy required new skills. The provision of these increasingly became the responsibility of the state and this led to universal education. That is, it was technical development that was the driving force for education in general and technical education in particular. Parallel with these approaches to education was the ideology that while "*some* education for the 'lower orders' was deemed necessary to secure a social peace, *too much* (my emphasis) education for the lower classes was held to be dangerous" (Selleck, 1968, p. 15). This was representitive of the discourses around Eugenics and Social Darwinism discussed earlier. It was assumed by elite groups

that this would disturb the natural order by removing people from their alloted station in life.

Technical skills, especially those involving practical rather than intellectual activity, were related to the specific historical and cultural norms of different societies. By the early 20th century Wood Jones and Elliot Smith were beginning to describe anatomical evidence correlating the evolution of hand, eye and brain (Peters, 1963; Selleck, 1968). This proved to be a particularly powerful argument for promoting manual and technical education, built as it was on medical evidence.

Social Influences on Technical Development

Societal status attached to technical activity changes across time and cultures. The Romans disdained manual labour, leaving it to slaves, while the Jews believed that every boy should be taught a trade (Peters, 1963). In Maori society, te tangata ringa raupo (those gifted with their hands) are people of status, and those achieving expertise in a particular field of craft skills become teachers and pass on their knowledge in Te Whare Para (place for the chosen). Technical know-how was integral to every facet of sustaining life through the skills of catching, growing, storing and preparing food and enhancing life through carving, weaving and tuku tuku (personal correspondence Helena Baker[4]).

Early European settlers to New Zealand also needed technical skills to survive and most earned their living through different forms of technical know-how. A central discourse of New Zealand culture originated in the physical terrain that had to be broken in. This led to a national respect for the number 8 baling wire capability of the quintessential Kiwi male, tinkering in his workshop, armed with a handful of tools and innate 'nowse'. In this environment the connection between masculinity and technical ability became entrenched. Many traditional female activities also require skills in manual dexterity and tool use and were also integral to the establishment of New Zealand as a viable nation. These were rarely, if ever, recognised as technical activities. One reason for this is that technical expertise has historically been seen to be the social property of males and basic to the process of becoming a man (Cockburn, 1983). This idea permeates all spheres of the public and private, and is reflected in the gendered segregation of the job market, the intimate relationships of family life and the separate-spheres ideology of technical education, which reinforces:

> The construction of men as strong, manually able and technologically endowed, and women as physically and technically incompetent (Ibid cited in McKenzie & Wajcman, 1992, p. 23).

Technology both shapes and reflects the sort of society in which we live, and enables us to realise certain wishes. In doing this "we change our conceptions of ourselves and of our world" (Street, 1992, p. 10). Whether we subscribe to the 'technological determinist' theory that technical development 'shapes' society, or the 'social constructivist' theory that incorporates an integral relationship between people, technical objects and systems, these systems both shape and express political values that operate to benefit some groups and disadvantage others. Neither of these theories can maintain an exclusive position since technological systems can never be separated from political processes, nor can politics be analysed independently of technology (Ibid). Once we accept the interrelated nature of politics, technology and education, many of the puzzling 'how' and 'why' questions of curriculum, pedagogy and assessment of both technical and technology education become clearer. Technical innovation like education can never be neutral or value free:

> ... technology becomes, like our economy or our political system, an aspect of the way we live socially. It becomes something whose changes are part of wider changes in the way we live (McKenzie & Wajcman, 1992, p. 3).

Early settlers came to New Zealand with first hand or familial experience of two industrial revolutions in Europe and the accompanying social revolutions of the 18th and 19th centuries. State rhetoric on its value must have evoked mixed emotions because many had experienced the brutal reality of these technical and societal changes on individuals, families and the wider society.

Subject Status

As I argued earlier, scientific and technical thinking is the dominant source of authority in Western culture and therefore carries very high status. Why then does technical education carry the stigma of a low status school subject? The answer revolves around the important distinction between *levels* of technical education with *technologists* as the upper echelons, *technicians* as the middle group and *tradesmen* as the lower levels

(Currie, 1956). While only a few of the first group are required and need high status qualifications in science and technology, many more are required to work within the capitalist structure and fill low status jobs.

Subject status is linked to historical and societal attitudes that also determine the worth of credentials gained in these subjects.[5] These sort and select students for employment and also legitimate the cultural capital held by some students and not held by others (Shuker, 1987, p. 119). The failure of technical education to gain examination status in High Schools was one reason suggested for the low status of the subject. This is summarised in the 1914 statement from the Wellington Board of Inspectors:

> ... so long as success or failure at the formal written examination continues to be practically the only public criterion of the efficiency or value of our education system, so long will courses of instruction in which practical training forms an important feature be depreciated in the eyes of both pupils and parents, (*Appendices to the Journal of the House of Representatives* (hereafter cited as *AJHR*), 1914, cited in Openshaw *et al.*, 1993, p. 114).

At secondary level elitist forms of academic education, those that led to university, were favoured by the middle classes. They could afford the fees that ensured access to such institutions as the Auckland Grammar School and Otago Boys' High School. These schools were based on the preservation of the humanities and liberal traditions (Shuker, 1987). This sort of education was considered the 'best knowledge' and had always dominated education in Britain and in New Zealand since before the 1877 Education Act (McKenzie, 1992). It is characterised by academic curricula, a considered body of knowledge and highly specialised vocabulary, and is conceptualised through rigid subject boundaries (Codd, Harker, & Nash, 1990; Harker, 1990; Shuker, 1987). This was a direct transfer from Britain where the mark of a gentleman in early 19th century Britain was linked to qualities acquired from receiving a classical education which conferred status.

Academic high school boys in New Zealand in the 1920s captured this idea concisely. They commented on the low status of technical education and its associated perceived lack of social graces, as opposed to their own (supposed) high status and good manners, as seen in the following chant:

> With the hob-nailed boots and the unwashed neck, they don't come here they go to the Tech (Dakin, 1973, p. 27).

Manual and technical education is the antithesis of high status, academic education (Peters, 1963; Selleck, 1968; Lewis, 1995). It is based on practical activities and offers strong potential for cross-curricular approaches but lacks a clearly defined body of knowledge and the ensuing university status. The vocabulary, while specialised, is technical in nature or aligned to everyday 'down-to-earth' discourse. Application of such pseudonyms as 'preparation for life' or 'skills for living' reinforce manual and technical education as an element of working class culture, essentially a vocational subject. This idea is strengthened through its early association with apprenticeship schemes for boys and domesticity and training as servants for girls.

Technical Education: An international Phenomenon

Battles for the control of education in the late 19th and early 20th centuries were being waged throughout the developed world (Kliebard, 1995; Selleck, 1968). Control of school curriculum, pedagogy and assessment was sought by social reformers, economists, practical educators, naturalists, scientists and moral educators, all of whom wanted the opportunity to promote their ideological beliefs through public education systems. These conflicts produced new approaches to education often referred to as the 'new movement'. Common elements of this approach included a less bookish and examination-bound education and stressed the need for more science education. It was based on the need to recognise the intellectual value of hand/eye exercises, the development of 'thrifty habits' in the lower classes, and was in general a supposedly more 'relevant' education. Manual and technical education had the potential to incorporate these criteria and was becoming a central feature of proposed changes in Australia (Miller, 1982), in America (Kliebard, 1995) and in Britain (Peters, 1963; Selleck, 1968; Donnelly, 1989).

In New Zealand by the end of the 19th century, the push for national 'supremacy' in technical development and its corollary, a skilled workforce of trained artisans, was becoming a dominant discourse in Parliamentary Debates (discussed in Chapters 4 and 5). Within modern capitalist economies technical change is inextricably linked to economic enterprise and market competition and pressure from beyond the country will exert "massive pressure for technical change within" (McKenzie & Wajcman, 1996, p. 14). The

push for technical education in the late 19th century can be seen as one aspect of the dawn of a 'modern capitalist economy' for New Zealand.

The following extract from *the Twenty-Second Annual Report on Education* by the Minister of Education William C. Walker to the New Zealand Parliament in 1899 demonstrates his belief in the need to expand the states commitment to implementing the 'new movement' in New Zealand:

> ... the Act of 1895 is bearing fruit by educating public opinion and by preparing the way for larger and more comprehensive measures. What has been done in Great Britain, in America, and on the Continent of Europe has become more widely known through the medium of public journals and magazines, and the recent publication of Mr. A. D. Riley's Report on "*Manual and Technical Instruction*" has undoubtedly stimulated the minds of people throughout the colony, and tended to remove misconceptions as to the aims and methods of the new movement on education (*AJHR*, 1899, p.1).

The Purpose of Education

The question of whether manual and technical education should be part of the formal school curriculum strikes at the very heart of the purpose of education. It raises questions around who benefits from education, its nature as a public or private good, and its role in personal development and growth and/or the preparation of students with skills for the economy.

Two major value positions underpin educational provision. A liberal humanist view emphasises personal and intellectual development, individual freedom and the worth of human relationships. A technocratic perspective revolves around the technological imperative of a planned economy and is based on assumptions around efficiency, cost maximisation and productivity (Olssen *et al.*, 2004). Both of these value positions have a long history in the context of New Zealand education. A broad general distinction between these two ideologies is the difference between education and schooling. Tensions around these is exemplified in the statement presented by Prime Minister Muldoon to the 1982 Post Primary Teachers Association (PPTA) Conference:

> If we have the choice between education which produces and throws off benefits into the economy and education for the sake of knowledge which produces simply an educated person, then I stand firmly for the former. To fail to differentiate between the two is, in my view, a luxury this country cannot afford (cited in *PPTA Journal*, 1982, Vol 3, p. 9).

This citation captures the essence of the two value positions discussed above. These are not a total duality because elements of both underpin education at different times and for different reasons. The power and authority to make changes to education must constantly be re-negotiated, which raises the vital questions of what counts as knowledge and culture and in particular whose values become validated in policy making. As Prunty (1985) argues:

> The authoritative allocation of values draws our attention to the centrality of power and control in the concept of policy, and requires us to consider not only whose values are represented in the policy but also how these values have become institutionalised (Ibid, p. 136).

This contestation of values is part of the ebb and flow of educational policy discourses. These reflect the nation's economy and government policies, both of which were undergoing a crisis of confidence in New Zealand at the end of the 19th century. Furthermore, the push for the expansion of manual and technical education reflects the demands for a more utilitarian approach to education to meet those of a changing industrial economy. Such demands become "most shrill at times of pervasive crisis in the economic and social system" (Goodson, 1988, p. 27). This thesis argues and demonstrates that between 1877 and 1900, a series of social, political and economic crises imposed pressures on the New Zealand State that resulted in the 1900 Act.

Changing Values in the 'Modern' Era

Giddens (1997) proposes that in order to show that there is significant change in any society it is necessary to identify alterations to *underlying structures* (his emphasis). He identifies three factors that consistently influence social change as "physical environment, political organisation and cultural factors" (Ibid, p. 522). This thesis demonstrates that these changes were occurring rapidly as New Zealand entered this 'modern period', which

Olssen (1992) defines as that between 1880 and 1940. The greatest influences on the physical environment were related to economic factors, in particular the impact of industrial capitalism. Culture also began to reflect the tenets of a westernised, modern, civilised society. Indications of this lie in more a complex economic system, a shift from cottage industry to industrial production, a market economy, a nation state, and mass democracy. Also central to the ideology of 'modernity' is the specialisation of various segments of society, such as the division of labour. Other significant factors include the emergence and adoption of scientific and 'rational' modes of thought (Ibid).

A sequential account of how the dominant ideas underlying this process and how it was managed will be covered in the thesis, a synopsis of which is outlined below.

Thesis Outline

In Chapter 2, I outline the theoretical framework of this Thesis, the methodological tools of historical case study and discourse analysis, the concept of technical rationality, and theories of class and gender analysis. In order to grasp the contested nature of politics at this time in New Zealand, I outline the doctrines associated with classical liberalism and social democratic liberalism and give an overview of their effects in the changing role of the state in late 19th century New Zealand.

Chapters 3, 4 and 5 together provide an account of the sequential development of technical education in New Zealand and the existing social, political and economic issues between 1877 and 1917. These Chapters draw upon documents of original sources, in particular Parliamentary Debates and educational, sociological and historical texts from the pre and post revisionist era. I will endeavour to:

> ... use sociological and other contemporary theories to interrogate matters of concern to the educational community while regarding a scholarly scepticism regarding its utility in the historical context (Openshaw *et al.*, 1993, p. 15).

Chapter 3 identifies the institutions of technical education that were established in New Zealand prior to the 1877 Education Act. I also examine the genesis of these institutions from Britain and their replication here. Social changes during the latter years of the 19th century will also be outlined, in particular the legitimation crises of the state and changes in social, political and economic development.

Chapter 4 examines Parliamentary Debates about manual and technical education, outlining the intense political changes that occurred when the Liberals won the election in 1890. International pressures pushed discourses of social efficiency during the last decade of the 19th century and the needs of a competitive economic system were emerging in education. The authority of a few powerful men and their significance in the passing of the 1895 Act will be outlined.

Chapter 5 examines the period between 1900 when the 1900 Act was passed and 1917 when domestic science was made compulsory for girls in order to access a free high school education. The 1900 Act was a far more powerful piece of legislation than the symbolic 1895 Act, because it made resources available. With the battle to have technical education established through legislation now won, attention turned to the education of girls. The push this time coming from the community, in particular women's groups and a small posse of eloquent and well-known male supporters. However, even with the legislation in place, technical education continued to be strongly resisted by parents and teachers.

In Chapter 6, I use critical theories of social reproduction, gender, class and technical rationality to analyse why the 1900 Act took the form that it did and how the discourses contributed to the curriculum content and pedagogy of the Act.

Conclusion

In this Chapter I have outlined the key elements of this thesis and the close links between the development of manual and technical education in New Zealand and in Britain. I have shown that discourses around technical progress and manual and technical education where part of the dominant discourses that settlers brought with them to New Zealand. This Chapter also sets out concepts of 'technical' and its links with capitalism and 'technical education'.

I have argued that at the end of the 19th century the push to make manual and technical education part of compulsory education was intrinsically linked to discourses of the developing capitalist state, the establishment of a competitive trading economy and the preparation of a populace destined for specific roles that fortified existing inequalities in society. Procedures supporting the capitalist mode of production ensured the marginalisation of women into domesticity and the endorsement of Maori and working class students into low status, low pay occupations.

Whether the structuralist theory that schools reflect the relationships in the wider society is true or whether ideological hegemony (discussed in depth later) is successful in convincing those who fail in the system that the fault is theirs, is all part of the enigma of education. But for many students education has failed to become the passport to highly paid prestigious employment and because schools are part of the state apparatus through which children may achieve these goals, we need to ask why and to look for:

> The subtle connections between educational phenomena, such as curriculum, and the latent social and economic outcomes of the institutions (Apple, 1979, p. 34).

Notes

1 Elementary education at this time was made available between the ages of 5 and 15. It was supposedly compulsory but attendance was the responsibility of parents to ensure that children who lived within 2 miles of the nearest school attend for at least half of the periods when the school was open.

2 Settlements are constantly negotiated between the state and groups with different agendas and different levels of access to power. Policy development becomes a continuous struggle between dominant interests while the role of the state is to manage a consensus or construct social policy hegemony which defines the best educational policy.

3 The signifier of the first industrial revolution was the superceding of hand work by mechanical power. This often instigated a hierarchical system of line management with skilled people being given positions of authority and worker autonomy was maintained. Craft ability remained vital to production during the first industrial revolution. The second industrial revolution and the use of scientific management and machinery inspired Marx to present his treatise on the relationship between capital as a social form and the capitalist mode of production as a technical organisation (Braverman, 1974) which will be explored further in Chapter 2. The second industrial revolution was shaped by the application of scientific management and removed knowledge of the production process and control over the organisation of work from the shop floor to management. Skills were diluted, labour costs lowered and greater productivity made possible. For a fuller discussion of this see Olssen (1995) and Braverman (1974) Chapters 3 and 4.

4 I am grateful to my colleague Helena Baker for this information shared with me when we were working as facilitators on the Ministry of Education Contracts during the early development of *Technology in the New Zealand Curriculum* 1995. The source of the information was her late mother Ria Gerretzen (nee te Vira) who had the status of te tangata ringa raupo.

5 The following statistics demonstrate a university perspective on low and high status knowledge. In a survey carried in British universities to rate the knowledge status, *Acceptability of 'A' Level Subjects to a Sample of University Departments (n=84),* pure mathematics topped the scale at 0.92 while, engineering drawing, geometry and engineering drawing, and housecraft came in at 0.27, 0.24 and 0.15 respectively (Goodson, 1993, p. 34).

Chapter 2: Methodology

> Research takes place within a context of embedded theoretical assumptions. Such assumptions compose all manner of things to do with the angle from which the scholar views the stuff of history; the level of generality from which he/she views it; the way in which he/she selects organises, arranges, presents and interprets the evidence; as well as many more fundamental views concerning what counts as evidence (Olssen, 1987, p. 22).

Introduction

Epistemology

All researchers need to identify their specific orientation to epistemology, or what counts as valid knowledge. In this qualitative study I have recognised the important role of facts but like all critical social science I treat as real the underlying structural mechanisms of class, race and gender. The methodology used here is qualitative and the format is case study, which assumes an interactive relationship between the researcher and the researched.

Olssen (Ibid) proposes that all research takes place within an *a priori* theoretical perspective, which means that the contemporary assumptions of an era are internalised by researchers and are integral to the methods used. As I argue in Chapter 1, positivist discourses were central to the management of society but they were also the dominant method of carrying out research during the period being studied. This 'means/ends' approach to research into the history of education was integral to the liberal ideology of educational provision and the belief that education policies were leading society toward a state of nirvana. The reporting and glorification of the acts and facts of early historical research in New Zealand and overseas was based on what Shuker (1987) calls the 'liberal progressive' view of education. This approach is captured by Elton (1967) who argued that history should be studied "for its own sake" and that only the "surviving past", of which "a crucial element is the present evidence", should be studied (Ibid, p. 32). He denounces causal relationships such as concepts of class, gender and race in studying history believing that:

> The historical event is like the modern physicist's atom, composed of analyzable ingredients but so composed as to be itself complex and in a measure predictable (Ibid, p. 11).

In this thesis I reject the "domination of thought" (Carr & Kemmis, 1986, p. 129) inherent in positivist ideas of rationality, objectivity and truth and adopt a critical approach to examine the central questions of this thesis.

A Critical Approach to Educational History

A critical approach to research involves looking beneath the surface of what is happening to identify sources of domination. Only when these sources of domination are identified is there an opportunity to bring about change. These ideas emerged in the 1920s through the work of early critical theorists Horkheimer, Adorno and Marcuse (cited in Carr & Kemmis, 1986), based on their belief that:

> ... the instrumental rationality of positivism had begun to generate a complacency about the role of science in society and about the nature of science itself.... Science it was argued, had become 'scientistic', believing in its supreme power to answer all significant questions (Ibid, 131).

This paradigm shift in social science research underpinned qualitative methods as an alternative and adjunct to the previously dominant quantitative methods. The application of theories about social change is a pivotal element in carrying out critical research because these theories identify sources of power and authority (Shuker, 1987, p. 11). Theoretical concepts and tools used in this study have their origins in the work of the early critical theorists using analytical tools developed by neo-Marxist scholars of critical theory, Gramsci and Habermas, and those who interpreted them educationally, Althusser and Bourdieu.

Carr's (1961) approach to historical research exemplifies an alternative and critical approach to Elton's positivist approach described above. Carr places the researcher's value position central to decisions on how facts and information are chosen and analysed. This critical perspective acknowledges the centrality of the causal relationships of class, race and gender and draws on social theory to interpret the evidence. This approach shifts the

focus of historical study away from a mere examination of the 'documents' and 'facts' and onto the historian:

> No document can tell us more than what the author of the document thought – what he thought had happened, what he thought ought to happen or would happen, or perhaps only what he wanted others to think he thought. None of this means anything until the historian has got to work and deciphered it (Ibid, p. 10).

In this Thesis the 'deciphering' process is based on CDA, a deconstructive reading of text that uses the broad definition of discourse as both written and spoken language. CDA applied to spoken and written text shows how power is mediated between those who rule and those who are ruled, a process that is essentially political. Once those who hold positions of power are able to control 'perceptions of reality' through language use, the values and beliefs of a culture will be far more effectively adopted than by the use of coercive methods.

This Chapter outlines the methodology used in the study and seeks to justify the reasons for the choices made. I will then provide an overview of the way in which Fairclough's (1992) text-oriented discourse analysis is useful for identifying how language may be studied dynamically within the context of social and cultural change. The final section, building on previous arguments, outlines the central tenets of case study and explains why it is an effective format for studies such as this.

New Approaches to Historical Educational Research

The main assumptions of the 'liberal progressive' view of education are the acceptance of the legitimacy of a given economic system and the advocacy of reform and of liberal justice. Within this view, the role of schools is seen as one that develops individual enlightenment and opportunity. This view placed faith in schools as a dissolver of class barriers and also as a key agent in developing the skills necessary for economic development (Olsen, 1987).

The Sociology of Education

Emerging from Britain and the United States in the 1970's, new analytical tools were used to study and explain why certain groups of students were consistently failing to

achieve education success or social mobility, thus challenging existing assumptions about education. In New Zealand, empirical research showed that working class children, girls and Maori were achieving a lower degree of educational success comparable to other groups. Analysis of class, race and gender inequalities in education began to explain that this reflected the wider, structural inequalities in capitalist society (Shuker, 1987; O'Neill, 1990). This new approach examined structural issues of poverty, homelessness, unemployment, racism and sexism as central to the questions of educational inequality. Previously these were seen as the fault of the individual (an enduring strand of classical liberalism). At the centre of these analytical and methodological changes the question of 'what is education for?' was fundamental but the focus moved away from the positivist view of knowledge, based on the premise of finding out 'what is?' towards a critical one of 'what might be?'.

This 'new' sociology of education became a catalyst for a different approach to studying the history of education and resulted in revisionist studies which problematised the role of the state in education. Katz has argued that this approach to educational history:

> ... tells a story of how elite groups prompted by self interest, middle class parents concerned with status, and an emerging class of professional educators worked to impose particular educational reforms in line with their own interests (Katz, 1968, cited in Kliebard, 1995, p. 235).

New Zealand work (Harker, 1990; Nash, 1990; Shuker, 1987) revealed that the 'liberal progressive ideology of education' was indeed a myth. The school curriculum was identified as being far from a product of "idealised educational debate" (Openshaw *et al.*, 1993, p. 18) but was rather the product of social, political and economic forces operating in the wider community.

Doing Revisionist Historical Research

My interest in the area of policy development of technical education was ignited by personal experience. This involved working in the development of the policy for technology education and the need to critically examine the persuasive arguments presented by the New Zealand state in the early 1990's for the proposed introduction of this new compulsory curriculum area one hundred years after a similar process to make

technical education compulsory. In carrying out this study I was mindful of the dangers of using the past to throw light on the present and offering a 'presentist' view (explaining the present by drawing on the past).

Critical Discourse Analysis (CDA)

Fairclough's (1992) model of CDA uses a three-dimensional framework of language, which is an amalgam of three aspects of analysis; text, discursive practice and social practice. It is based on Foucault's materialist conception of language, the premise that text constitutes 'material social practices', but it incorporates analysis of the relationship between texts, their production, distribution and consumption and the social conditions from which they emerge. It allows both micro and macro analysis of text. In describing the social practice dimension of CDA, Fairclough (1992) identifies the need to position discourse in relation to ideology and power and to "place discourse within a view of power as hegemony, and a view of the evolution of power relations as hegemonic struggle" (Ibid, p. 86).

Ideology and Hegemony

Marx's prediction that the labouring classes would rise against their oppressive treatment by the capitalist class failed to eventuate. When by 1920 there had been no such revolution, Italian Marxist philosopher Antonio Gramsci proposed that ruling groups maintained their power not by coercion but through their control of ideology. Giddens (1997) defines ideology as "shared ideas or beliefs that serve to justify the interests of the dominant groups" (Ibid, p. 583). People, often without conscious thought, draw upon institutional practices because they "embody common sense assumptions and may, directly or indirectly, legitimise existing power relations" (Fairclough, 2001, p. 27). With constant and unquestioned use, these ideas become 'naturalised' and this ideological power allows elite groups to project their ideas as universal. In this way, control may be preserved and wealth, power and prestige maintained.

Gramsci's work clarified the potency of how ideological effects work by "suppressing the contradictions of people's experience in the interests of preserving the existing social formation" (Olssen *at al.*, 2004, p. 64). The dominant ideology appears to be neutral because of links to unchallenged assumptions. These ideas become difficult to challenge because ideology is not symbolised by discourse but is inscribed in it. It is a

domain of language use and therefore a domain of lived experience. Belsey (1980) defines ideology as written and spoken in discourse:

> ... it is not a separate element which exists independently in some free-floating realm of 'ideas' and is subsequently embodied in words, but a way of thinking, speaking, experiencing (cited in Olssen *at al.*, 2004, p. 65).

Ideological hegemony is a subtle and invasive form of power, a way of ruling, which allows those groups who hold control, to maintain their supremacy. It "mystifies and conceals existing power relationships and social arrangements" (Shuker, 1987, p. 22). Fairclough (1992, p. 86) suggests that the concept of hegemonic struggle provides a "rich framework for investigating discourse as a form of social practice". Hegemony within a society is never static but must be constantly re-negotiated by groups which have power or who wish to gain power.

Gramsci (1971) believed that because the hegemony of the ruling class was achieved through ideology, the mass of people needed to understand how political and economic leaders maintained their right to rule. His work led to the development of critical pedagogy that he saw as vital to the development of the intellectual. He believed that all people should be encouraged to think, to recognise and to confront ideological assumptions. He was particularly critical of the vocational schools established in Italy in the 1920s, believing that far from being democratic, these were destined "not merely to perpetuate social differences but to crystallise them" (Ibid, 1971, p. 40). Gramsci proposed that society was made up of the relations of production (capital and labour), the state, which had control of the coercive elements of society such as police, army and court systems, and civil society composed of all non-coercive institutions. Using Gramsci's concept of the 'Historic Bloc' to understand the tensions inherent in this triangle of capital, state and civil society, Dale (1989) argued that the following questions provide a useful framework for analysing the links between education policy and capital accumulation strategies. He asks:

> What are the leading sectors of the economy? What is their mode of capital accumulation (competitive, monopoly or state monopoly)? How do they relate to the national and international economy (are they exporters, producers for the home market or state monopolies)? What are

> the societal pre-conditions of their continued expansion and how is their growth facilitated by the action of the state? (Ibid, p. 39).

This framework has informed the analysis set out in this Thesis.

Text, Discourse Practice and Social Practice in CDA

In the context of CDA, features of texts are not discussed without reference to text production and/or interpretation (Ibid). Texts are made up of forms from past discursive practice and have diverse and sometimes contradictory meanings that are open to multiple interpretations. The central components of text analysis are vocabulary, grammar, cohesion and text structure. In addition to these, Fairclough (1992) offers three other concepts; force of utterance, coherence of text and intertextuality (Ibid). The seven concepts identified above, facilitate the analysis of the production, interpretation and the formal linguistic properties of texts (Ibid).

This means that CDA consists of a layering of text information, a layering that remains fluid at all times. The choice and sequencing of words, sentences and paragraphs is one layer (the text), this is linked to knowledge of who did the writing or speaking and why and to whom it will be delivered or distributed (the discourse practice), and finally how social, political and economic changes have contributed to what is being written and said (the social practice). All of these factors together constitute CDA.

The majority of texts used in this thesis fall into two categories. The first is the spoken records of the speeches of MPs that range from the formal presentation of reports through to informal discussions. The second is the formal reports prepared and presented in the New Zealand Parliament. Those writing these reports and the MPs presenting them were well aware that their audience needed to be persuaded or dissuaded from a specific course of action. Furthermore they had a 'captive audience'. Fairclough identifies the importance of members' resources, referring to "internalised social structures, norms, and conventions" (Ibid. p. 80) that people bring to the discourse. While acknowledging that these MPs were individuals, they shared several commonalities, being white and male and, until the Liberal Party gained power, middle aged and rich.

Because this research is an attempt to identify 'why things turned out as they did', I have interest in the intertextual nature of the debates and reports being examined, in particular the intertextual chains of which they are a part. Intertextuality refers to the ways

in which texts are shaped by prior texts to which they are responding, and, subsequent texts that they anticipate. Manifest intertextuality refers to the actual content of other texts that are 'manifest' on the surface of the text being analysed.

Discourse representation refers to the ways in which texts offer a specific representation of an idea, while different and even contradictory readings are possible. How ideas are 'represented' is linked to the hegemonic status of the person or group expressing the idea and is a very powerful way to manoeuvre the opinion of readers or listeners, without actually telling untruths. Identification of pre-suppositions is also an important element of discourse practice and a very effective textual tool used by politicians to manipulate ideas and reinforce their own particular stance. It is often the elements left unstated that have the greatest impact (Ibid, p. 234).

Discourse as Social Practice

Text, both spoken and written, is the medium through which socially constructed identity and subjectivity are made and remade. This is based on the post-structural assumption that human identity is constructed and contested through textual practices that are "part of the dynamics of everyday life" (Luke, 1995, p. 14). These subjectivities are not unitary or singular. They are multiple and mixed as will be demonstrated below in the accounts of my own life. People's ideas, beliefs, morals and ethics are formed by the recurrent use of dominant discourses in texts, speech and symbols. In this way people categorise their world and, importantly, may also change it.

Text has three constructive effects, 'identity', 'relational function' and 'ideation' (Fairclough,, 1993). The 'identity' effect facilitates understanding of how personal identities are set up in discourse; 'relational function' identifies how social relations between discourse participants are enacted and negotiated and 'ideational' effect identifies ways in which texts signify the world, its processes, entities and relations.

Understanding Policy Development

The education system supports capitalism directly by producing people with the scientific and technical expertise to facilitate corporate capitalism as well as those destined for low status menial work. Marxist theorists (Bowles & Gintis, 1976) suggest that the state's role in supporting capitalism is strongly deterministic, producing a segmented workforce. Offe (1984) presents a less deterministic view, proposing that what the state

actually protects and sanctions is a set of institutions and social relationships that support capitalism, but which also consider the needs of all members of society (Codd, 1990, p. 134).

The central questions in this thesis are derived from education, sociology and history and they seek to show ways in which recurrent statements, claims, propositions and wordings across official texts, reports and Parliamentary Debates were integral to the introduction of the 1900 Act. In particular the thesis highlights how texts reinforced other texts and how they reflected actions that supported certain specific state and capitalist interests.

Discourse in institutional life naturalises and disguises power relationships leaving unquestioned the inequities arising from policy decisions that favour the acquisition of symbolic and material resources to some and not to others. CDA is a way to strategically uncover, analyse and interrupt this accepted natural flow of talk and text in instututional life that sits in the domain of 'common sense'. CDA has the potential to:

> ... destabilize[s] 'authoritative discourses' (Bahktin, 1986) and foreground relations of inequality, domination and subordination (cited in Luke, 1995, p. 12).

This process is what Luke decribes as a "constructive moment" that positions people to see and understand that texts and talk arise not from individuals or groups with impartial agendas but from those positioned to represent the world according to their particular interests (Ibid). Within a socio-cultural approach to education we need to look not only at children and schools but also at "human lives as trajectories through multiple social practices and various social institutions" (Ibid, p. 4). This thesis demonstrates how the policy process for technical education followed a course of action that embraced the specific selection of goals, definition of values and allocation of resources (Codd, 1988). This selection advantaged and reinforced the views and aspirations of some individuals and groups at the expense of others. This exemplifies the construction of 'truths' about social, political and economic issues, which are:

> Taken for granted definitions and categories by which governments rule and monitor their populations and by which members of communities

> define themselves and others (Foucault, 1972, cited in Fairclough, 1992, p. 49).

Once this defining process is in place a critical perspective is required to change peoples perceptions. Once this shift in perception occurs it makes accessible an analysis of how the power of the state is legitimated and consent 'engineered'. In the following three Chapters I will show specific ways in which policy texts and reports "contain divergent meanings, contradictions and structured omissions so that different effects are produced on different readers" (Codd, 1988, p. 235).

A technical empiricist view of policy formation normalises the values of the dominant groups in society (usually the policy makers) while marginalising those of non-dominant 'others'. The power of the capitalist class depends upon the state, and the state in turn depends on the economic success of capitalism to keep workers employed and make taxes available to fund public works, services and infrastructure. The state cannot maintain this control alone but must depend on the other groups whose interests are tied to capitalist success, such as employers and business groups and sometimes even unions who may have a different agenda but also a vested interest in maintaining worker employment. I argue that during the period covered in this study the 'historic block' discussed above was being established in New Zealand and these 'tensions' between capital, state and civil society were reflected in decisions made about education policy. In order to understand this process I needed a research format that would facilitate access to the 'how' and 'why' questions. Case study offered the potential to do this within a reasonably narrow framework.

Using Case Study

Case study facilitates insight, discovery and interpretation of the data. Merriam (1998, p. 21) describes it as "an intensive, holistic description and analysis of a single instance, phenomenon or social unit". The aim of this methodology is to illuminate the readers' understanding of the phenomenon being studied, possibly adding new meaning, extending the readers' experience or confirming what is known (Ibid, p. 30). Its uniqueness lies not so much in the methods employed (although these are important) as in the questions asked and their relationship to the end product. The most defining characteristic of case study is the setting of the boundaries of the study and restricting it within stated,

specific margins. The boundaries of this study are the years 1877 to 1917. I identify specific discourses that shaped the Act, which I have indicated in the title as, *Capitalism, Class, Craft and Care.*

Case study enables examination of the 'how' and 'why' questions at the centre of the research. 'Why' questions are pertinent to the development of manual and technical education because it was a 'contrived' subject with no intellectual foundation. It did not emerge out of "identifiable organised tradition of men of knowledge" (Goodson, 1988, p. 5). The aim of case study is to "provide rich, 'context bound' information which will lead to patterns or theories which help explain a phenomenon" (Cresswell, 1994, p. 7).

Because case study seeks to establish what is going on at a particular time and whether there is there a relationship between x and y, it is particularly useful in the search to establish the relationship between the changing social, economic and political issues in late 19th and early 20th century New Zealand and the introduction of manual and technical education.

The case study presented in this thesis follows in the tradition of educational research into school policy and subject development (Goodson, 1993; Goodson, 1984). It allows 'local detail' of change to emerge, conflict to be interpreted and identifies the individuals and sub-groups influential in a specific 'case' (Goodson, 1993, p. 4).

Undertaking this Study

My first priority was to 'get a feel' for the era I was studying, which I did by reading pre-revisionist and revisionist histories[1] of education in general and of manual and technical education in particular. The former identified the important 'acts and facts' and the latter helped in triangulating these and also showed the way in which revisionist views added a theoretical dimension, strongly accentuating possible answers to 'how' and 'why' questions. I then used a selection of New Zealand Parliamentary Debates (*NZPD*s) and reports. These were chosen for analysis because they comprised the major debates and reports of the era relating to manual and technical education. They made a substantial contribution to understanding the discourses that underpinned the policy process and, in addition, also marked a significant move that reflected discursive change. Other documents marked a major change in the resources made available for policy development or indicated a major shift in social, political or economic forces. The inclusion of data after 1900 allowed some discussion of the gender discourses of the era following the passing of

the 1900 Act because prior to this time the education of girls in manual and technical education had been marginalised.

Selection of Categories

In order to refine and condense the information I used Cresswell's (1994) approach by selecting a series of major categories to establish the parameters of the study. I began by carrying out an overview of one of the texts I was using for analysis chosen at random as suggested by Cresswell (1994). This was the report, *Sloyd and Kindergarten Occupations in the Elementary School* (*AJHR*, 1896) by J. Struthers. The Report gave a narrow and distorted view of the complexity of changing discursive practice, because it was the first Report to parliament and one that centered strongly on educational issues. I then extended this initial attempt to identify categories by adding two other texts. One of these was a set of Parliamentary Debates in 1990 prior to the passing of the 1900 Act (*NZPD*, 1900), and to this I added the Report by Josiah A. Hanan, who in 1916 summarised educational progress in a Report to the House of Representatives entitled, *Memorandum by the Minister Dealing With Some Phases of Educational Progress and Reviewing Existing Conditions in the light of National Requirements* (*AJHR*, 1916). These three represented a good selection drawn from different sources and time frames.

I then listed the main topics from these three documents and put these into clusters, narrowing these down into the four main categories, capitalism, class, care and craft. 'Care' discourses emerging only after the passing of the Act. Following further reading of the corpus, noticeable shifts emerged in the discourses relating to these four categories, which both coincided with and could be linked, sometimes quite overtly and sometimes in a less obvious way, to social political and economic events and practices at a particular time.

Research and Personal Values

This section serves two purposes. The first is to outline my own value position. The second is to provide my own examplar of the way in which human subjectivities are formed and re-formed, not as singular, fixed, social, cultural and gendered beings but as people who have agency which may be "strategically constructed and contested through textual practices which are part of the dynamics of everyday life" (Luke, 1995, p. 14).

Discourse refers to the various ways in which people are informed about what is going on in their world and how they make sense of it. Discourses position people, for example, as women, men, daughters, sons, workers, environmentalists or atheists. The process of operating within these specific roles is dynamic, one person may be a man, a worker, and an atheist but each of these persona will be dominant depending on circumstances and interactions with other people, groups and situations.

Education is one of the key institutions within which dominant discourses, which arise from specific cultural backgrounds and historical and social circumstances, are mediated and become naturalised as part of the 'taken for granted' ideas at any given time. Other societal institutions such as the family, workplace, and media, also contibute to the dynamic and dialectic nature of discourse.

Personal Background

I grew up in working-class home near Wigan in the centre of the Lancashire textile industry. My family worked in the factory, and discourses around things 'technical' were part of my life. The factory dictated the level of financial security, the threat of being on short time or worse getting your cards, constant and frightening.

Discourses around becoming a woman in the 1950s, were linked both to separate spheres ideology but also in my particular family to 'getting an education'. Ideologies of 'perfect wife and mother status' were reinforced through texts, magazines, newspapers, television advertisements and programmes of the time, and through the totally gendered domestic science lessons at grammar school.

Education ceased for both my parents at 14 as they worked to support their respective families. My three daughters, with all the advantages of educated middle-class parents, work as a medical consultant, a lawyer and an industrial chemist. Introduction to Bourdieu's theory of cultural capital, in particular the way in which the culture of the family of primary socialisation is embodied in the individual as 'habitus' (Harker, 1990), came as a revelation. My own state funded academic grammmar school education was strongly resisted by me despite my mothers encouragement. However, I gained enough qualifications for a place at Ilkley College of Housecraft (Domestic Science) in Yorkshire where after three years I gained a Certificate in Education.

At the end of my teacher training I questioned the assumption on which it was based, in particular that the domestic role was the only one which women fulfilled, pointing out

that in Lancashire, women had always worked both in factories and at home. 'Yes', said the tutor looking puzzled, 'I never thought of that!'.

My fleeting attempt at critique was soon forgotten, or at least marginalised, in favour of the more pressing issues of becoming a teacher and an adult, and by the age of 21 I was a working class woman, teaching 'housecraft' to girls in Wigan. The course was based on middle class values of housewifery and it all seemed perfectly natural!

Growing up working class in the class dominated British culture I learned the importance of hard work, honesty, perseverance 'respecting my betters', 'speaking when I was spoken to', and later as a teenager, 'acting like a lady'. My religious background also reinforced discourses around morality and ethics which were carried through in the compulsory religious lessons in school, regular church, Sunday School and Bible Class. On reflection, I had been well prepared for what my family considered the ultimate roles of 'wife' and 'mother' and, in the meantime, for the secondary role as 'worker'.

During my teacher training, subject content, pedagogy and assessment had been well taught but a critical perspective on education, its political nature, was never broached. Nor was it raised during my 20 years as a teacher both in Britain and New Zealand. My 'road to Damascus' in terms of a critical view on education policy occurred in mid-life, in England in 1991[2] while working in a Middle School[3] in Leeds. During that year radical changes in the education system in England in general, and in my specialist area of domestic science, now designated technology education, inspired my curiosity about how decision-making processes in education were made. I wanted to know who had the power to make such radical changes and why.

In the area of domestic science, curricula based on domestic management cooking and nutrition had been replaced by a strongly commercial, profit making, business studies format (O'Neill & Jolley, 2004). This seemed a conundrum given the complexity around personal food and nutrition management and the endemic health and well-being problems associated with child and adult obesity. The approach, now operating in schools as 'food technology', has become what Stitt (1996) terms 'industrial pedagogy'. This approach had totally changed the focus of studies of food. For example, safe food handling became 'hazard analysis' and budgeting for food became 'unit cost', key words such as 'prototype', 'sensory profiling', and 'designated tolerance' only had meaning in the industrial contex. The domestic approach had become marginalised and this ensured that a

subject that had once guided students towards healthy eating and making food at home had been replaced by discourses of factory 'experts' and of efficiency. This narrow frame of reference, designating food as something to be manufactured or processed rather than cooked, was exactly what the food industry needed, the very best way to increase profits and disempower children from managing their own food intake. And all of it state initiated!

Who could be making these decisions and why? The Home Economics sorority in Britain made appeals to politicians to re-consider the policy but without success. Reflecting on my reactions *now*, 16 years later, I felt anger that children were being denied the chance to learn simple cooking skills. At the same time I was becoming increasingly aware that these changes might remove the low-status of domesticity from food studies, which I believed was a positive step. This is an example of how contrary discourses often remain unresolved as individuals operate within a minefield of contradictory experiences. Reading feminist analysis of the history of domestic subjects meant that the personal became political. The following year I returned to tertiary study to complete my B.Ed at Massey and in middle age realised that education policy development was not (as I had believed) a neutral process but a highly political one that reflected the complex relationship between education, existing social and political conditions, and economic development. Policy documents, I began to realise, were not merely statements of a proposed course of action and that through ideological critique it was possible to:

> Penetrate the ideology of official political documents and expose the real conflicts of interest within the social world which they claim to represent (Codd, 1990, p. 147).

Conclusion

This Chapter outlined the methodology used to carry out the study and justified the reasons for the choices made. It has summarised ways in which the positivist approach to the study of educational history underlined the liberal-progressive ideology of educational outcomes and the challenges to this approach to educational history made by the work of neo-Marxist scholars. The 'new' sociology of education provided the impetus for educational history to move away from the positivist approach that embraced an 'onward and upward' view of education. I have argued that this earlier view was based on the

negligence of pre-revisionist historians who failed to recognise the pervasive influences of the structural mechanisms of class, race and gender.

The key tenets of CDA have been outlined to show that an amalgam of texts, discourse practice and social practice makes this form of analysis useful for educational policy analysis. The Chapter has also outlined the purpose of a case study and a synopsis of the multiple discourses that have been relevant to my own life to show how my own values were shaped and continue to be re-shaped and I have shown that discourse is influenced by experience and that these experiences also shape discourse.

Notes

1 A revisionist history of education acknowledges the importance of social background in understanding the role of schools in reproducing and challenging social and economic divisions within society. In particular, the role of the state and its relation to capitalism is placed at the centre of educational studies.

2 In 1991 I was working in Britain as part of the Commonwealth Teacher Exchange scheme. I received an award of $3000 from the Ministry of Research Science and Technology to research how the introduction of technology education had affected home economics, my specialist teaching area of twenty years. In 1993 I was a member of the New Zealand Ministry of Education working party set up to ensure that the policy writers were fulfilling the terms of their contract during the development of the policy document Technology in the New Zealand Curriculum. Later I worked at Massey university as a facilitator and then as manager of the Ministry of Education contracts established to induct teachers into this new curriculum area. Between 2000 and 2002 I worked as a lecturer with pre-service students in Education on a range of papers based on *Technology in the New Zealand Curriculum* (1995).

3 Middle Schools were part of a three tiered system in Leeds local authority at that time and they catered for children aged 9-13. All of these schools were disbanded in 1992 as part of the retrenchment of education in England.

Chapter 3: The Social, Political, Economic and Educational Antecedents of the 1900 Act

> The pioneering phase was over, and the colony had to enter a secondary phase of consolidation: the individualism of the frontier had to be supplemented by collective action on a new scale (Gardner, 1992, p.70).

Introduction

Emigration for many settlers was an escape from the exploitative relationship of workers by capital, and although the reality of social and economic differences in New Zealand was openly acknowledged it was not seen as oppositional or exploitative. It was part of a balanced and accepted social stratification that had initially worked to the mutual benefit of all classes (James & Saville-Smith, 1989). This balance had been upset when the gold rushes made land ownership highly profitable and land prices increased. Recession during the 1880s showed that divisions in society were based on wealth and often founded on land ownership (Dalziel, 1992; Trotter, 2007). The chasm between rich and poor widened during and after the long depression[1] when degrading living conditions became a mirror image of those left behind in Britain.

As New Zealand entered the 'modern period' economic factors were impacting upon and changing the physical environment and, in particular, refrigeration technology led to increasing production. This, coupled with increased production in rural areas, had resulted in the exponential growth of primary produce for export. Other significant factors affecting social change included the development of New Zealand as a nation state and the application of scientific method and technical rationality to many facets of life, including the management of the developing bureaucracy. Technical rationality was increasingly used as an effective way to manage all areas of life and it informed the scientisation of the home and child care (Olssen, 1992). In New Zealand during the period 1877 to 1917 the changes were occurring:

> ... in a world where individuals seemed increasingly impotent, a society, moreover, in which such words as city and class not only referred to reality but warned against Old World evils (Ibid, p. 255).

This Chapter summarises the major social, political and economic changes and significant events in the educational sphere between the passing of the 1877 Act and the year 1895 that were pre-cursors to the 1900 *Manual and Technical Instruction Act.* I will begin with an overview of manual and technical education institutions established in New Zealand since pioneering days. The philosophical and pedagogical bases of these are significant because they reinforced particular discourses on the nature and purpose of manual and technical education adapted from Britain. The programmes of these institutions were informed by contemporary discourses around capitalism, class, care and craft. The 1877 Act was the principle Act under which the 1900 Act was legislated. In 1878 the O'Rorke Commission was set up by the Government to make recommendations on how New Zealand should proceed with a range of educational developments. The inclusion of manual and technical education in the terms of reference signaled its presence on the political agenda.

Catalysts of the long depression and the results of the ensuing hardships will be analysed in this Chapter. I argue that there was a symbiotic relationship between this depression and the changing political, social and economic changes that impacted upon education policy in the 1890s. In addition to these changes technical artifacts and systems were also changing many facets of life with their status in the colony progressing from the *novel* to the *ordinary.* This rapid adaptation of things technical, and their beneficial economic repercussions, reinforced the powerful effects of technocratic rationality (Brooking, 1992).

Manual and technical education had been established long before 1877 and continued to operate outside of the 'main-stream' systems of primary and secondary education. Like other areas of education in New Zealand these examples had been adapted from Britain.

Early Models of Manual and Technical Education in New Zealand

Industrial Schools

In I847 Governor Grey's *Ordinance for Promoting the Education of Youth in the Colony of New Zealand* identified industrial training as an appropriate adjunct in schools (Cumming & Cumming, 1978, p. 16). By 1853, the *New Zealand Constitution Act*

established provincial governments and enabled the principal churches to access public education grants (Ewing, 1970, p. 15). The basic curriculum of religious education, industrial training, and English language mirrored the English 'Schools of Industry' (discussed in Chapter 1), which were set up in Britain at the end of the 17th century. These had recruited from those receiving poor relief and children were taught the three 'R's and practical skills in such areas as cobbling, agriculture, sewing and laundry-work (Peters, 1963). In New Zealand the *Neglected and Criminal Children Act* 1867 (Sutch, 1966) had given the provinces power to establish Industrial Schools in response to the numbers of vagrant children.

Native Schools

The early Native Schools were established to support missionary work among Maori and emphasised manual and domestic skills. On September 11 1850 the Reverend J. Buller reported to the Wesleyan Missionary Society at Tangiteroria that the establishment of such a school added:

> ... zest to his endeavors to ensure that Maori developed a taste for the decencies and the advantages of the habits of civilised life as well as an intellectual culture (cited in Cumming & Cumming, 1978, p. 19).

Intellectual culture does not however appear to have been a priority in these schools with only two and a half hours a day spent on the basics in contrast to the eight hours set aside for manual tasks. While boys tended sheep, cattle and the gardens and undertook carpentry, girls washed, ironed, sewed and cooked. Under the guise of humanitarianism the main objectives of these early schools for Maori were based on their assimilation into European values and practices (Simon, 1998, p. 9). They were intended to socialise Maori into middle class Victorian values similar to those of the Industrial Schools. They reflected the way in which European settlers viewed the 'Native' in society and the perceived 'natural bent' of their minds integral to discourses that positioned them as suited by nature to manual work and later more specifically to farming and technical rather than academic education.

Maori were not just seen as culturally different but culturally inferior and this was reflected in the focus on health, hygiene and cleanliness and the teaching of skills in

agriculture and horticulture in preparation for a rural existence (Openshaw, *et al.,* 1993). Although Maori brought sophisticated technical and apprenticeship systems to New Zealand, the bid to eliminate the "demoralizing influence of the kainga" (Barrington & Beaglehole, 1974, p. 4) ensured that such expertise was marginalised. Industrial Schools and Native Schools exemplified the central tenets of Social Darwinism and Eugenics discussed in Chapters 1 and 5.

The Non-Compulsory Sector

The Mechanics Institute[2] in Lambton Quay in Wellington had offered training in specific vocational and technical expertise as early as 1850. Their evening classes also offered courses in music, chemistry, drawing and mathematics (Nicol, 1940, p. 11) and they provided knowledge that allowed the poor the chance to better themselves. During the last few years of the 19th century, classes in technical education became popular with young men and women prepared to pay for them (Day, 1992, p. 70). The Technical Classes Association established in Dunedin in 1889 also offered classes in literary, scientific and technical subjects, predominantly to unemployed school leavers.

Prior to 1895, the development of manual and technical education in the secondary sector was based upon initiatives from individuals or small groups (Nicol, 1940). It was non-compulsory and resulted from enthusiastic teachers willing to improvise according to endowment or fees. While Wanganui Collegiate erected a carpenter's shop, Rangiora High School could do little on only $233 a year. Wellington College started industrial classes in 1885 in the Tramway Workshops (Cumming & Cumming, 1978, p. 122). This inconsistency of availability to resources and uneven standards of existing technical courses were later used as a political lever by politicians to push for expansion and state control of manual and technical education.

The Tertiary Sector

Layton, Davey, and Jenkins (1986) point out that the development of science and technology at tertiary level is usually linked to specific commercial needs for technical expertise. In New Zealand, such examples include the School of Agriculture at Lincoln established in 1880 and the School of Mines in Dunedin established in 1876. Educational provisions at this level, while linked to commercial ventures, are also key elements of

economic growth and subsequently influence education policies at primary and secondary level (Apple, 1979; Feinberg & Rosemont, 1975).

A wider political lobby for technical education was also in evidence. For example, the political programmes of the Otago Trade and Labour Council in 1881 and of the Wage Earners of Wellington in 1890 indicate that the public desired the 'learning a trade aspect' of education. The push for technical and secondary education could be seen in various deputations to Government Ministers based on the belief by parents that such measures would ensure job security and possibly white collar positions for their children (Sutch, 1966).

The Legacy of 1877

Establishing Free, Secular and Compulsory Education

The end of the provincial government of New Zealand in 1876 was used as a lever to introduce state managed elementary education[3] that aimed to ameliorate disparate levels of access to and quality of education. Questions around compulsory status, the place of religion, curriculum content, funding and management were highly contested between the Bill's introduction and its passing in 1877 (Bates, 1969; Openshaw *et al.*, 1993; Simons, 1994). The Act signified the beginning of wider power struggles in primary education as the locus of control over curriculum and assessment shifted from province and church to state. Decisions on curriculum, pedagogy and assessment were centralised throughout New Zealand. This included examination by inspectors to test 'standards' and the beginning of a bureaucracy with a three-tiered administration system. The Education Department was controlled by a Minister with a permanent secretary and inspector and other officers considered necessary to control finances, classify and examine teachers, and maintain standards. Twelve regional education boards were set up to plan and implement their own policies, but final decisions for these policies rested with the Minister of Education. This was a very early example of a bureaucratic management style. State-controlled education took on the characteristics of a prescriptive technology (it was analogous to the industrial 'division of labour' with very clearly defined roles).

The passing of the 1877 Act had little effect on manual and technical education for girls with the established subjects of sewing, needlework and domestic economy surviving the culling process. Drawing and elementary science was also now included in the

curriculum. This was a small but distinct indication of the 'new' approach to education discussed in Chapter 4.

The creation of District High Schools[4] under the 1877 Act allowed rural children access to secondary education (Shuker, 1987, p. 48) and by 1895 fourteen of these had been established. Despite the best efforts of the Department of Education to maintain a rural (technical) bias in these schools, parents demanded an academic education for their children and few practical subjects were offered (Ibid, p. 270).

By 1878 access to manual and technical education was haphazard and fragmented. During 1878 the Government set up the O'Rorke Commission to "inquire into and report on the University of New Zealand and other educational institutions" (Cumming & Cumming, 1978, p. 112). Technical education was identified as an area to be examined, a further indication that it was on the political agenda.

The O'Rorke Commission

In 1878 four male members of the O'Rorke Commission were asked to make recommendations on the future of technical education in New Zealand. Not one of these men had contributed anything of value to technical education in institutions lower than special university schools. The four commissioners consulted four other men all of whom were known to be strong advocates for technical education. One of them, Professor Bickerton, proposed that technical education become part of science education, based on the English Science and Art Department at the University of New Zealand (Ibid, p. 120). However, those who had established the University did not believe that science had a place among university studies.[5] In their Report, the O'Rorke Commissioners cautioned against narrowing university curriculum for vocational needs, believing that success in industry rested on a sound academic education (Ibid). This view was later reinforced during discussions on the possible establishment of the Auckland Technical School, when O'Rorke, himself a leader of the Auckland Grammar School Governors, expressed concern that technical education would interfere with the proper functions of academic education and with primary education (Ibid, p. 149). University Councellors, also led by O'Rorke, saw technical education as a complement to evening Continuation Schools. They believed it should be managed by the Education Board.

Cumming and Cumming (1978) argue that the O'Rorke Commissioners failed to recognise the numerous international pressures that were bearing upon the development of

technical education in New Zealand. They also argued that the personal backgrounds of these Commissioners lay in the Arts and Humanities, making it probable that they had little understanding of either the breadth of scientific authority or of scientific method and probably even less about technical and technological knowledge.

In their response to the more general task of advising on systematising the High Schools in relation to the other educational institutions in the colony, the Commissioners endorsed the divide between classical old world secondary education and primary education. Their only accommodation of the 'new movement' was a recommendation that because so few pupils actually matriculated, a more 'modern approach' with more science and mathematics might take the place of Latin and Greek (McLaren, 1987).

Manual and Technical Education – an Enigma?

Definitions of technical education, what it was for, to whom it should be taught and why, remained elusive and its proposed expansion at this time appears to have taken on the status of a moral panic[6]. For example the *New Zealand Schoolmaster*[7] in 1883 expressed horror at the 'technical education craze', which they believed:

> ... threatened to create in the colony a series of industrial establishments in every hamlet turning out thousands of amateur joiners, tailors and blacksmiths (cited in Cumming & Cumming, 1978, p. 122).

In 1877, Thomas Huxley (Ibid) proposed that technical education was learning "specially adapted to the needs of men whose business in life it is to pursue some kind of handicraft". Ten years later it had become synonymous with drawing and the object of a multitude of spurious claims around its potential for enhancing children's cognitive development (discussed in Chapter 4). Parliamentary debates in 1899 moved the focus for the introduction of manual and technical education to New Zealand's economic growth and the building of nationhood (discussed in Chapter 5). However, barely was the ink dried on the 1877 Education Act when New Zealand began to feel the effects of the long depression that had begun in the 1870s and continued for 16 years (King, 2003).

The Long Depression

In the early 1860s the British economy was beginning to lose its competitive edge in the production of manufactured goods to the United States of America and Germany. This

instigated a downward economic spiral in Great Britain, and in the decade between 1871 and 1881 as wool and wheat production increased in New Zealand, the value of these exports when sold in Britain decreased. This was the reality of the worldwide depression (King, 2003) and a clear reminder of the peaks and troughs inherent in managing capitalism. Wool prices in New Zealand continued to decline, except for a 3-4 year period in the mid 1870s, and did not reach 1871 levels until 1906 (Ibid). Major economic problems resulted from our dependence on wool as the major export to the primary market, Britain. Contracted bank credit there had also compounded the problems by placing restrictions on New Zealand's borrowing (Gardner, 1992) . The state was seen as "the only agency with the financial power to lift the colony out of its stagnation" (Ibid, p. 70).

A change of government occurred in 1869 when the opposition ousted the sitting government and this placed economic decisions in the hands of treasurer Julius Vogel[8]. He persuaded Parliament to borrow $20 million from the London Capital Market to fund assisted immigration, build infrastructure in New Zealand through Public Works Schemes, and purchase Maori land. Immigration increased during the 1870s buoyed by more borrowing and Vogel's faith in developing a manufacturing economy (Ibid). A significant proportion of immigrants had some industrial experience but many were unskilled. Of the ten thousand immigrants arriving during the 1870s, many cleared bush and eked out a subsistence living on farms. However, during the 1880s there were too many people living here for it to remain a pastoral economy and too few for a balanced pastoral-industrial economy, a situation that resulted in high unemployment and associated social problems (Ibid).

From the earliest days of settlement wealthy landowners and professional men had taken on the role of political leadership. This had worked well when only selected people had the franchise. Members of Parliament[9] were not paid and so an independent source of income was vital. However, their government roles allowed them to enhance their own investment portfolios (Ibid). Government controlled all land settlement, the development of the country's infrastructure and economic management, and therefore political issues and the financial interests of individual politicians were intertwined.

Thirteen budgets were presented during the 1880s. During this time the economy lurched between near bankruptcy and modest profit while the state sought to maintain legitimacy in the eyes of the public and MPs their hold on power. By the 1880s the Public

Works Programme was six million pounds over budget. However, funding continued for road and rail construction and employed unskilled men often in remote areas. This left women and children without support and added to social problems (James & Saville Smith, 1989).

By 1882 optimism within the colony was improving, wool prices increased, further loans were approved from Britain, and more assisted immigrants arrived (King, 2003). By 1883 wool and grain prices had dropped again and the government raised the cost of freighting grain. Premier Atkinson[10] went to the country and was defeated. Stout[11], a liberal lawyer in the opposition party, became Premier with Vogel as Treasurer. These two argued convincingly for more borrowing to support public works, native land purchases, and the revival of neglected goldfields. Depression continued through 1886, when civil servants salaries and the education budget were cut.

When farming investments became less lucrative and cheap labour became available, investors explored economic returns from non-farming production. Between 1881 and 1886 the industrial labour force increased by almost 40%. Several industries had capital worth more than $200,000. These included saw milling, gas works, grain mills, printing establishments and clotheries (Stenson & Olssen, 2002). On a low-cost, low-wage basis, New Zealand began to achieve limited exporting capacity of manufactured goods (Gardner, 1992, p. 42). Between the mid 1880s and 1890s there seemed to be a possibility that "New Zealand was becoming a little England" (Sutch, 1966, p. 74). Manufacturers fared well during this period because tariffs were applied to cottons, boots, shoes and metal goods. The need for trained workers for these manufacturing industries intensified when "the economic future seemed to be in manufacturing rather than family farming" (Ibid, p. 28). But the prospect of highly mechanised, large-scale industrial development matching that of Britain soon declined and the manufacturing boom in secondary products was short-lived. By 1890 it was clear that New Zealand's economic future lay in the land (Gardner, 1992).

Economic Problems: Social Effects

At the height of the depression regional unemployment was rife and the developing manufacturing industries were able to employ women and children at low rates in sweated workshops.[12] Conditions for many low paid workers now matched the degrading and harsh employment conditions of Victorian England. Men tramped the countryside looking for

work and "subsisted on odd jobs, sleeping in sheds and doorways, under bridges and in haystacks" (Harrison, 1961, p. 9).

A petition seeking relief from these conditions, from the unemployed of Dunedin to the Victorian (Australia) Parliament in 1885, summarised the level of desperation of those "facing the bitter reality of parading the streets, hungry and ill-shod, with no prospect of a better future" (Salmond, 1950, p. 29 cited in Sutch, 1966, p. 63). In 1887 Queen Victoria was also petitioned by the Canterbury unemployed to send relief to the starving people of New Zealand because "government refuses to provide work and private persons have no work to give" (Sutch, 1966). When a reduction in public works caused further unemployment, it became clear that New Zealand's capacity to absorb immigrants had declined. People voted with their feet and there was an exodus of 20,000 to Australia between 1885 and 1891(Gardner, 1992).

The multiple social and economic problems that continued from the 1870s to the early 1890s were a major challenge to discourses of equality and fairness, values believed to be the bedrock of this developing colony. Faith in education took on a greater intensity as desperate workers looked for ways to survive. The egalitarian myth was exposed. As the state grappled to maintain its legitimacy the populace sought relief and social justice.

Progress in Manual and Technical Education?

The omission of manual and technical education from the 1877 Act had concerned Stout because he was aware of scientific and technological achievement in Europe, which he associated with strong technical education systems (Ewing, 1970). Education budget cuts during the Depression indicated that this was not the time to build specialist facilities needed for the new approach to education (Sutch, 1966). However, in 1885 Stout endorsed a site for a School of Design in Wellington. Following a curriculum review of elementary education in the same year, enhanced status was given to drawing. Stout realised that even this compromise was one for which teachers, many of whom had only rudimentary skills, would require "specialist guidance" (Ewing, 1970, p. 23). This was about to become available in Wellington with the appointment of Arthur Dewhurst Riley to the Wellington School of Design.[13] These small but important moves towards resourcing and curriculum changes to accommodate manual and technical education were significant indicators of the state's intention to ensure its eventual adoption.

During the Depression, Political Reform Associations argued for cuts to the education budget by restricting primary education to commence at age seven and by allowing only 105 of the children who passed standard 4 to go on to standards 5 and 6. Reeves[14] who was the Liberal party's spokesman on Education called this 'class warfare'. Stout, the Minister of Education, protested that if the rich did not restrict their children to Standard 4 why should everyone else (McLaren, 1987). Educational reform had been prominent in the Liberal Party's election platform in 1887 but was sidelined by the 1890 campaign with only Conservative candidate Rolleston urging it as a way to level class distinctions and antagonisms based on access to secondary education (Ibid). As one newspaper editor suggested, the 'Education Question' during the election campaign could be quickly dismissed with the statement that "one is in favor of the present system and against any change" (Ibid, p. 70). In fact, there was very little change and distinctions between curricula for primary and secondary education continued to reflect the different strata of society.

The matter commanding the greatest urgency for the Government in the 1890 election campaign was another class issue, land distribution. As Premier Seddon remarked, "our policy is simplicity itself, it commences with settlement of people on the land and ends with it" (Ibid, p. 71). The challenge of shifting the land-owning oligarchy from their entrenched positions of power had arrived in the form of a motley coalition of working class leaders, farmers who owned small areas of land, and some manufacturers. These groups combined to form the Liberal party and achieved political power probably as a result of the male franchise conferred in 1879.

Time for Change

Liberals in Power

> "Liberal principles, Liberal measures and the Liberal party" (*Lyttelton Times*, December 6, 1890 cited in Richardson, 1992, p. 204).

The above headline marked a new era in New Zealand politics, the beginning of a revolution centered in issues of social justice. The Liberal Party was the first organised group to gain power in New Zealand through the democratic process. King (2003) argues that at the heart of this revolution were policies for establishing the welfare state and the

setting up of twelve new government departments that provided "the apparatus of modern government" (Ibid, p. 260). Liberal policies included a commitment to economic protectionism and a much stronger role for the state underpinned by utilitarian philosophy. The Liberals wanted the benefits of property ownership to be widely spread to those who were prepared to work hard and lead morally worthwhile lives. In addition, they set in place the beginnings of a wide-ranging social welfare programme. Legislation instituted during this time designated New Zealand a 'social-laboratory'.[15]

The Liberals won the 1893 election with an increased majority. In 1892 McKenzie, the Minister of Lands, introduced a leasehold tenure that gave a 999-year lease in perpetuity. Alternatively the land could be bought outright or by paying a higher rental to ensure a right of purchase. This mix of different types of tenure "fostered Liberal support in the countryside" (Richardson, 1992, p. 205).

Access to land ownership instigated by the Government had altered the social structure of society slowing down urbanisation and establishing family farmers as a new and increasingly powerful societal group. This access to land created a new capitalist group and the movement of the mode of production into rural areas. Linked to this there was exponential growth in the number of dairy farms, increasing from a very few in 1891 to 5,000 in 1901 to 15,000 in 1911.

Farming methods also became increasingly mechanised and this increased productivity levels (Brooking, 1992, p. 236). By the mid 1890s export profits began to reflect rising world prices. New secondary industries were established and butter and cheese exports increased by a third. It is not surprising that part of the state's push for manual and technical education, which was about to be further prioritised on the political agenda in 1895, centred on its potential benefits for farming.

Technical Rationality and the Impact of 'the Technical'

The turning point out of New Zealand's economic gloom began in 1882 with the first successful shipment of frozen meat to Great Britain. This superceded the system of boiling down sheep flesh to extract fat for tallow and then canning the meat (Gardner, 1992). As Trotter (2007) notes, New Zealand "adapted and adopted this technology like no other people on the planet" (Ibid, p. 100). Refrigeration changed the whole economic and social structure. It was a form of 'technology transfer' (defined below) clearly fitting its intended purpose and the culture of the country.

The development of the dried milk company Glaxo in Bunnythorpe near Palmerston North in 1886 exemplified the potential of the combined power of the state and private enterprise to promote economic development (Glaxo, 1991). Technical artifacts imported from the United States (a milk separator and the machinery to dry the once discarded skim milk) allowed dried milk to be produced. Road and rail networks had been initiated through Public Works Schemes. Technical products, systems and environments were beginning to infiltrate every aspect of life in New Zealand. Many of these had their genesis in Britain.

Technology Transfer

The New Zealand Ministry of Research Science and Technology (MoRST) defines technology transfer as:

> Activities directed at encouraging the exploitation of knowledge by a specific recipient in a different place to its origin through a range of media and means including concepts processes and products, with the aim of its application to social and environmental areas (MoRST 1991, p. 27 cited in Spoonley, 1993).

The usual context for technology transfer is in the area of science and technology innovation, particularly new products or artifacts, but as the Ministry notes:

> ... [it] may be considered as the transformation of an idea into a new or improved saleable product or operational process in industry and commerce, or into a *new approach* (my italics) to a social or environmental science (MoRST 1991, p. 23 cited in Spoonley, 1993)

A major identified weakness of technology transfer is that cultural context is often overlooked (Pacey, 2001; Street, 1992). This renders the technology inappropriate but the transfers are often legitimated through faith in technical progress and the greed of governments and transnational corporations. I argue that the systems of pedagogy, curriculum, and assessment that operated in areas of manual and technical education were no less an example of 'technology transfer' than was refrigeration.

Faith in 'technocratic reason' and its associated capacity for exerting power and control is clearly discernible in the development of technical education. The early New Zealand models discussed at the beginning of this Chapter operated at two ends of the spectrum. At one end they prepared certain groups for low status, vocational jobs designed to engender social control and, in the case of Maori, assimilation into the European culture, while at the other end a small but select group of tertiary institutions supported industrial and commercial development and prepared the chosen few for high status careers. The latter category signifies high-status knowledge associated with economic success, the former low-status skills and knowledge, associated with punctuality, neatness, and repetitive skills. Both categories are critical to the capitalist mode of production. 'Technical Education' describes both forms of knowledge but the meanings change in different contexts, illustrating how dominant discourses may be deceptive, not necessarily intentionally so. The failure to acknowledge the differences between these two forms of education may have arisen from the best of liberal intentions but indicates the way in which economic power and control are linked to cultural power and control (Apple, 1979).

Technical Rationality

> Technical rationality submerges moral and ethical aspects of decision making beneath those of *technical problems* that only necessitate instrumental strategies and information produced by technical experts (Apple, 1979, p. 111).

By the end of the 19th century technical rationality was emerging as the system of industrial management, which later became known as time and motion study. In essence, this system was the backbone of the second industrial revolution. Capitalism utilises a form of industrial management called Taylorism, central to which is the withdrawal of all decision-making from workers. This restricts worker activities to a rigid pre-determined plan often associated with absolute control of all aspects of their work in the hands of management, thus enhancing efficiency and increasing profits. The most well known adaptation of this method was in the Ford Motor factory (Braverman, 1974)

Technical rationality was soon adapted to any human activity that power holders perceived required compliance with this "science of exact measurement and precise

standards in the interest of maintaining a predictable and orderly world" (Kliebard, 1995, p. 77). During the late 19th Century, New Zealand society became increasingly unpredictable and disordered, intensified by the long depression, urbanisation and industrialisation. Social efficiency concepts were beginning to be utilised as "both a social ideal and an educational doctrine" (Ibid, p. 78). Technical expertise underpinned by technical rationality was believed not just to guarantee unlimited wealth but to contribute also to the common good. This distorted view of public communication and decision making are elements of what Habermas (1971) describes as 'technocratic reason', which is a threat to human freedom and which masks the real distribution of power and control in society.

Education for Capitalism

During the last 30 years of the 19th century the system of capitalist production became firmly established in New Zealand. Rural unemployment during the depression had brought people into towns and cities where factories, freezing works and dairy factories were being established. Production methods for meat and dairy products in rural areas were also expanding in response to the development of small farms. Technical artifacts and systems were also slowly infiltrating social service agencies

As machines replaced tools and technical expertise permeated society, the 'technical' became omnipotent. As Street (1992) points out, it is important to recognise the dramatic effect of technical change in the way politics are conducted, on which issues occupy the political agenda and how this affects "the interests at play within the political arena" (Ibid, p. 3). For any country operating in a competitive world market, technical changes were, and continue to be, inextricably linked to economic enterprise and market competition. Thus pressure from beyond that country will exert "massive pressure for technical change within" (McKenzie & Wajcman, 1992, p. 14).

During the last twenty years of the 19th century, Selleck (1968) observed that education reform was seen as the remedy to Britain's declining industrial and commercial strength. Economic rationality was used as a lever to overhaul pedagogy and curriculum at all levels of education. I believe this also describes the situation in New Zealand at the end of the 19th century. But the focus in New Zealand was not in preventing industrial decline but in ensuring that there was a sound basis for industrial expansion. The state believed that manual and technical education would be a catalyst for ensuring this expansion and I

argue that faith in economic instrumentalism was the most important precursor to the 1900 Act because:

> ... from the realisation that higher education was necessary in international competition, it was a short step to an examination of the elementary education upon which the secondary or technical schools had to build (Selleck, 1968, p. 106).

Conclusion

This Chapter provided an overview of the 1877 Act, the Act under which manual and technical education was later enacted. Between 1877 and 1895 there were small but significant indications that manual and technical education was becoming increasingly entrenched in the political agenda. Extreme poverty and desperate living conditions were experienced by working people during and after the long depression. An expanding population, and the effects of contested politics following the attainment of the male franchise and the success of the Liberal party in 1890 signalled that changes were needed. I have argued that existing discourses around the politics of capitalism, class, care and craft and around manual and technical education were based on established institutions transferred from Britain.

Educational provision in general and the two forms of manual and technical education in particular exemplified the rigid separation between rich and poor that occurred in New Zealand society in the latter half of the 19th and the early part of the 20th century. This separation was based on wealth, land ownership and educational opportunity and I have linked this to the growing use of technical products, systems and environments and the all-encompassing influence of technical rationality, reinforcing the benefits of things 'technical'. The capitalist mode of production was expanding through industrial and primary industry and the drift to urban living was slowed by government action to make land available to working people.

The emergence of New Zealand as a modern economy, the increasing role of the state in the regulation of multiple facets of life, the growth of a new middle class and the success of the Liberal party in the 1890 election, all contributed to a turning point for education, in particular manual and technical education.

The social, political and economic background that instigated a renewed vigour by the state for the promotion and establishment of manual and technical education was set out in this Chapter. The state was beginning to address the social problems, a legacy of the long depression, and the time was now ripe for the state's attention to turn to ways of supporting the social laboratory. In 1900, just as in 2007, education was identified as the major factor in ensuring the country's economic development. Manual and technical education was considered to be central to this process, as I will argue in the following Chapter.

Notes

1 Sutch (1966) argues that the long depression lasted from 1865 to 1895 with 4-5 years of prosperity in the 1870s. The worst misery occurred in the 1880s. King (2003) argues that the beginning was 1877 and resulted from falling wool prices. It lasted about 16 years with the economic turn-around coming in 1893.

2 Mechanic's Institutes, or 'Schools of Art' as they were also known, had little to do with Art, rather they placed emphasis on 'natural science', which was believed to provide uplift through the objectivity and value neutrality of scientific thinking. In particular it was believed that this sort of education would serve as an antidote to the bad influences endemic in the working classes shifting their recreational 'objects of sense', drunkenness, debauchery and promiscuity onto a higher plane. Through the study of matter and the laws of nature a reverence for God would be developed and due acknowledgement given to his 'natural wonders'. If 'mechanics and 'operatives', the working class aristocracy, could be persuaded to accept and to identify with this ideology then the employers and late 19th century bourgeoisie would enjoy the benefits of greater social control.

3 Elementary education at this time was made available between the ages of 5 and 15. It was supposedly compulsory but attendance was the responsibility of parents to ensure that children who lived within two miles of the nearest school attended for at least half of the periods when the school was open.

4 The Statutory definition of the District High School curriculum: "All the branches of a liberal education, comprising Latin and Greek Classics, French and other modern languages, Mathematics, such other branches of science as the advancement of the colony and the increase of the population may from time to time require" (Education Act, 1877).

5 At this time science and technology were seen as part of the same subject but science was the more prestigious. Science itself was only just gaining acceptance as a suitable subject for university study.

6 A moral panic occurs when a condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests (Cohen, 1980, p. 9).

7 *The New Zealand Schoolmaster* was a journal started by Henry Hill and edited by him for several years. He had come to New Zealand from England in 1873 under the sponsorship of the Canterbury Provincial Council to organise the education system there. He was later a school inspector and was a prime mover in the first Teachers National Association, which was the forerunner of the New Zealand Education Institute (http://archiver.rootsweb.com/th/readNZ-Hawkes-Bay-N-PovertyBay/2005-01/1105729090).

8 Vogel, a non-observant Jew, was an entrepreneurial politician, who, as a journalist had shown a strong appetite for politics and public affairs. He had strong expansionist views believing that the state should use its power to borrow money. He negotiated a $20 million loan in 1870 believing that rapid growth and a strong manufacturing sector was a sign of economic maturity. This was spent on funding 100,000 more immigrants from Europe and on public works programmes that provided for roads, railways and bridges to be built. These also provided work for the unskilled unemployed (Gardner, 1992; King, 2003). Vogel's economic ideas had much in common with those of the later Keynes. Both believed that it was economically justifiable for government deficit spending to boost economic growth.

9 New Zealand politics at this time did not mirror the British bi-partisan system (Olssen, 1992). Until the Liberal victory in 1891 those entering parliament either joined 'the government' or the 'the opposition' in what was known as 'the continuous ministry'.

10 Atkinson was the minister who set up the state bureaucracy following the abolition of the provinces. He was a more cautious borrower than Vogel, becoming increasingly so as the country experienced depression.

11 Stout became Premier in 1883. A Liberal, he was the trustee of the Tailoress's Union in 1889. He was a very strong advocate for technical education.

12 Sweated workshops referred to the practice of employing women and children for long hours on low pay, to cut production costs in manufacturing industries to compete with overseas competition. These were the same industrial miseries that many immigrants had come to New Zealand to avoid.

13 Riley was appointed as principal of Wellington Technical School by the then premier Stout. He strongly influenced the form of the 1900 Act following his visit to Britain in 1898.

14 Reeves was a socialist, scholar and a thinker. He came to prominence as Minister of Labour in the Liberal Government from 1892 to 1896. He viewed urban labour as a strong political force.

15 Social laboratory was a term that encompassed the view of New Zealand as a state that exemplified the egalitarian philosophy.

Chapter 4: Education for the Mind or for Industrial Development?

> The two great leading methods of education are the literary and the scientific; and the danger nowadays, I think, in our schools is that we are exalting the literary and taking little notice of the scientific (*NZPD*, 1895, p. 322).

> ... there is a faculty of the hand as well as of the brain ... and a reasonably complete education will not neglect the development of the former. It has a value to all men, but especially ... for those of the industrial classes (Struthers in *AJHR*, 1896, p. 3).

Introduction

The two citations above encapsulate the dilemma with which New Zealand politicians grappled during the last five years of the 19th century. At the heart of this were questions around the identification and prioritisation of the main purpose of education. This centred around whether its role ought to be encouraging people to think and develop intellectually, or whether it was it a buffer established by the state to manage society, to support capitalist expansion and give New Zealand an edge in economic development through technical expertise.

As New Zealand's industrial economy expanded, the 'invisible hand' theory of classical economic liberalism did not level but rather increased the existing divisions in society. Polanyi (1969) argues that state intervention in 19th century Europe had not been part of any grand plan but a reaction to "pragmatic demands of the 19th century market order" (cited in Olssen, Codd, & O'Neill, 2004, p. 111). The embryonic market order being established in New Zealand was just one of many changes in society. Educational policy changes, I will argue, were a response to the increasing complexity of this new order. The most powerful of the changes and one that impacted on all areas of life was the Liberal Party victory in 1890. This election was a turning point, an end to the privilege and protection of the ruling oligarchy, and the beginning of policies linked to the aspirations

and needs of working people. In their turn, working people were beginning to organise in their own interests. Although the 1890 Maritime strike, the first major national confrontation between capital and labour, ended in total defeat for the unions (Trotter, 2007, p. 66), it was an indication that workers were prepared to fight against the sort of exploitation experienced during the long depression. Class issues increasingly dominated policymaking.

Education policy was not a central issue in the early years of the Liberal government. Access to land overshadowed everything else on the political horizon. Once the land question began to be resolved the need for a workforce with specific qualifications to meet the expanding needs of capitalism and to fill positions in an expanding state bureaucracy turned state attention once more to education.

In this Chapter I analyse the state's efforts to expand manual and technical education between 1895 and 1900. It begins with an overview of the way in which society was changing and the state's initiation of, and response to, these changes. I outline the ways in which small but significant steps indicated a growing support for manual and technical education. An overview of the dominant discourses on the nature and role of manual and technical education in Britain and the United States, and, the ways in which these reflected new theories and ideas about the role of education in so called 'developed' societies at that time, will be presented. The 'new movement' in education (sometimes referred to in the literature as 'new education') varied between countries but shared some key elements that I identify and discuss. This Chapter also teases out the strong international influences in New Zealand from the movement of people and ideas between Britain and her colonies and the United States. During the last five years of the 19th century powerful individuals and emerging theories around education contributed to a renewed and vigorous push for the expansion of manual and technical education. I argue that this was linked to the growth in primary industries and capitalism. New jobs were becoming available as a result of the Liberal Party's expanding bureaucracy, which I will argue also contributed to the state's push for educational change. Central to this process were a group of enthusiastic politicians and bureaucrats, an elite, vital group of 'social agents'. In particular, the appointment in 1899 of George Hogben as Inspector-General of Education was controversial and significant because of his major contribution to the development of manual and technical education. His Report, included in the Minister of Education's

Report to Parliament (*AJHR*, 1899) is analysed in depth here because it illustrated his personal philosophy on educational provision. This mirrored the Government's way of thinking and is an excellent exemplar of political rhetoric.

There were no strong lobby groups outside of Parliament instigating the need for a 'settlement' for manual and technical education prior to the 1895 Act but there was a very strong resolve by the state for this *initiative.* This Chapter examines the key discourses and events shaping manual and technical education in New Zealand between the years 1895 and 1899.

New Zealand – A Changing Society

Equal access to education had been argued on the basis of its social control potential and the need for an educated electorate and workforce and individual rights since the 1877 Act (Harker, 1990). These rationales in support of state education remained largely unchallenged but by 1895 new educational discourses were emerging. These were based on social efficiency concepts of 'fitness for the purpose in life', preparation 'for the battle of life', and the need to offer 'options' to academic schooling. The global 'race for progress' ensured closer links between education and capitalism.

Cuts to education budgets during the long depression had highlighted its financial drain on the economy (Sutch, 1966). Economic outcomes and the role of education in building New Zealand's economic status were increasingly voiced by MPs in *NZPD*s between 1895 and 1900. While primary education was free, secondary education still remained the domain of the wealthy and maintained its academic bias. However specialist institutions, Technical Schools, and the university departments, which offered courses in manual and technical education, also received state funding.

The need to gain optimal benefits from machinery, land and labour to boost agricultural and manufacturing industries and enhance the country's Gross Domestic Product were now imperative to support the Liberal's expanding welfare state. They recognised the importance of a sound infrastructure to support and enhance economic production. Education was an important element of this infrastructure. The state needed to be independent of overt coercion but supportive of capitalism and the revenue it generated (Codd, 1992).

Changes to traditional ways of 'thinking' and 'doing' previously imposed by religion and tradition were supplanted by ideas based on science and 'rationalisation' or

'technicalisation'. The need for the state to provide conditions amenable to capitalism and at the same time alleviate its excesses was as necessary then as it is today. Marx believed that only the violent overthrow of the capitalist system could liberate workers from the bonds of capitalist power. However, in the last decade of the 19th century, New Zealand industrial organisations, trade unions and the universal franchise were all facilitating social change within established structures and many of these were instigated by the state. Social welfare liberalism was beginning to be applied to policy processes in New Zealand.

Not surprisingly, class position and class struggle increasingly dominated politics. Trotter (2007) has argued that the Liberal government 'frog-marched' employers and workers into an industrial regime where the state acted as referee (Ibid, p. 69). Until the late 1890s employers and the employed rarely quarreled but after 1900 there was contention and the beginning of a 'class war' (Olssen, 1992, p. 274). I demonstrate that this class struggle that had emerged in 1895 was increasingly apparent in education policy making.

As the end of the 19th century approached there was a resurgence of interest in the 'new movement' featuring a more realistic approach to education, i.e. one that was more directly related to life beyond school, of which manual and technical education was a dominant factor. Within the international context a range of options regarding specific curricula and pedagogy were available. I argued in Chapter 3 that the particular form of technical education developed in New Zealand was a form of technology transfer from Britain. Even so, the 'how' and 'why' questions of the policy development programme had to be debated but these debates were confined to the parliamentary milieu. Any educational benefits remained at best amorphous, at worst elusive.

Examination of the *NZPD*s on educational issues between 1895 and 1900, shows MPs wanted education to increase New Zealand's economic advantage through international trade expansion. The need to foster agricultural science and increase production rates was just one indicator of the intensification of education for economic instrumentalism.

Influential Individuals in Policy Development

Since 1877 Stout had argued that the state should not "lose sight of boys on leaving primary school and must organise schools to continue their education till they are seventeen or eighteen" (cited in Harrison, 1961, p. 16). In 1886 as Premier he had urged

secondary Principals to recognise their dependence on state funding, reminding them that since the professions were overcrowded they might consider a bias towards industrial education (Ibid). Initially a lone supporter of manual and technical education, Stout was soon joined by a small but influential group of politicians and bureaucrats.

Arthur Dewhurst Riley had been appointed as drawing master at the Wellington School of Design (later Wellington Technical College). Stout had been aware of Riley's work in Sydney and supported the Board in raising the £400 for his salary (£125 in excess of the original offer). Riley had trained at the South Kensington Art School. His drive and vision for technical education are demonstrated in the range of courses and capitation payments, far in excess of other similar establishments at that time (*AJHR*, 1899, p. 3). In his text *The School that Riley Built*, Harrison (1961) argued that the Report presented to Parliament by Riley after his return trip to Britain in 1898 was pivotal in shaping the 1900 *Manual and Technical Instruction Act.*

Another strong advocate for manual and technical education was Richard John Seddon who had become Premier in 1893. He had been a union representative for West Coast miners in New Zealand and believed that academic education was a waste of time for most pupils and that it should be superceded "by a practical course of training" (Harrison, 1961, p. 19).

The 'New Education' Movement and Social Efficiency

The United States

In the United States two educational movements, Scientific Curriculum-Making and Social Efficiency were particularly relevant to manual and technical education systems (Kliebard, 1995). The institutions of family and church in the United States of America were under pressure from social change. Just as in New Zealand, schools were seen as a way of maintaining equilibrium and offering the promise of social stability, "the social utility role of the school became the supreme criterion against which the value of school studies was measured" (Ibid, p. 78). The strong push to develop utilitarian aspects of curriculum reflecting adult activities was also linked to general dissatisfaction with schools. In particular the high dropout rate at Secondary Schools was believed to be caused by the esoteric nature of existing programmes (Ibid).

Two movements in the study of psychology reinforced efficiency discourses in education. The 'transfer of learning theory' premised that learning was automatically transferred from one activity to another but this was coming under challenge. Disproval of the 'transfer of learning theory' raised questions about other mental operations, memory, perception, reasoning and observation, the basis on which learning theory had been based (Ibid, p. 91). Once these pedagogical theories were challenged the way was open for alternative approaches. Curriculum became viewed in a more utilitarian way, mirroring skills deemed relevant in adult life. This fitted well with the theory that certain people were adept at using ideas while others had a talent for the manipulation of things. These assumptions were echoed through both efficiency and differentiated curriculum discourses (Ibid).

Once IQ testing became available this was also believed to prove that certain people and groups were suited to certain types of employment. Such discourses gained momentum if 'proven' scientifically. Taylor's Principles of Scientific Management (1911, cited in Braverman, 1974, p. 140) was developed initially to apply stringent efficiency methods to industrial and business processes so as to maximise profits by the imposition of order and regulation, its application to education evident in enhanced bureaucratisation, standardisation techniques, and the language of scientific management.

Dewey's Approach to the 'New' Movement.

Dewey's (1966) 'instrumentalism' offered a very different perspective on manual and technical education. His model was based on involving pupils in practical, problem solving activities, believed to foster social progress. Students were placed in the role of 'active pursuers or constructors of knowledge' by carrying out experiences designated as 'occupations'. Such exposure was neither narrowly focussed nor occupationally specific (Hyland, 1993, p. 94). His philosophy was based on a cross-curricular approach thought to:

> ... break down the 'antithesis of vocational and cultural education' based on the false premise of 'labour and leisure, theory and practice, body and mind' (Dewey, 1966, p. 301).

Cooking, for example, was seen as a natural way to teach chemistry and to study the plants from which food was derived. The potential for woodwork to develop mathematical skills

was also utilised (Kliebard, 1995, p. 62). Dewey aimed at development of personal, social and common sense knowledge. This was part of the child-centred or progressive movement in education that emphasised discovery approaches that placed children as active agents in their own learning process.

Ideas from 'Home': Britain

In Britain, between 1890 and 1915, an elite group known collectively as the Practical Educationists were also justifying increased access to manual and technical education (Selleck, 1968). However, the challenge of weaving disparate theories and ideologies into a meaningful whole was proving problematic. Lacking a unifying educational theory, status, and any 'professors of manual training' (Ibid, p. 125), meant that gaining curriculum time and funding was difficult. Social engineering, drawn from discourses of Social Darwinism and Eugenics, was intrinsic to this sort of education. The idea that manual and technical education might be an inferior education became obfuscated (just as in New Zealand) with such discourses as 'preparation for the real world' or 'escape from the tedium of book-work' to make students 'best fitted for future work'. There is, of course, no open acknowledgement that if:

> Punctuality, obedience, and a generally high toleration for meaningless tasks are more commonly found in the training of children than are rationality and insight, it is because punctuality, obedience and a toleration of boredom are the first requirements of a large number of jobs in industrial society whereas rationality and insight are not, (Feinberg and Rosemont, 1975, p. 9).

In Britain three key subjects; drawing, science and principles of agriculture, underpinned the manual training movement proposed by the Practical Educationists (Selleck, 1968). Three distinct sets of discourses justified its development. The first of these were discourses of mental discipline (outlined above), which were beginning to be challenged. Manual and visual activities were also believed to develop mental powers of observation, attention and accuracy, and, inspire the moral faculties of order, neatness, perseverance and self reliance. The second set of discourses linked manual education to liberal education and were given weight through recourse to such educational theorists as

Comenius, Locke, Rousseau, Pestalozzi and Froebel (Ibid). The Practical Educationalists, while probably misinterpreting their writings, relied on the reputations of these theorists to add a degree of credibility to their approach. The third strand centred on the pseudo-scientific beliefs of Dr. James Crichton (mentioned below in the Struthers Report), who proposed that unless brain and muscles were used together, human development would be impaired and such neglect would render the hand awkward and cripple the mind as well (Ibid).

The push from the Practical Educationalists for educational change in Britain was bolstered by the belief that such changes would rejuvenate Britain's failing competitive edge in industrial development:

> ... Germany and France are getting ahead of us, and unless we wish to be beaten in the international race, it is asserted that we must bring our own educational standards up to the Continental standard (Gorst, 1895 cited in Selleck, 1968, p. 105).

The school workshop in Britain was being targeted to meet the industrial challenge through manual training. Many of the contemporary discourses around the benefits of manual education were reinforced by Mr. Struthers in his 1895 Report *Manual Training in Primary Schools* (*AJHR*, 1896). This was a significant indication of the search to find a purpose for manual and technical education. The written Report was presented to parliament in 1896. It presents an authoritative[1] voice on education and interestingly, was written to be spoken. The verbal presentation was made to the House of Representatives in March 1895.

The Struthers Report

This ten page Report presents the author's observations of manual training as a primary school activity in Scotland. It falls into the genre of an 'official Report' and the tenor is authoritative. It includes descriptions of programmes of work based on the 'Sloyd'[2] method, which he claims was:

> ... *the most valuable means* (my italics) available to the teacher of developing in the pupil such qualities as, intelligence, practical

> judgement, exactness, perseverance, taste, power of initiative, individuality (Ibid, p. 1).

Struthers distances the 'Sloyd' method from trade training three times in the Report and cites the science of medical doctor Sir James Crichton Brown, who argued that muscles and brain must be used simultaneously in order to develop the brain. Struthers claimed that this would also challenge the 'bookish nature' of schools and open pupils up to the possibility of "substantially greater freedom in the choice of their life-work when they leave school" (Ibid, p. 3). Manual education, he claimed, is of "value to all men" but particularly "those of the industrial classes".

Having argued the educational justification for manual training, Struthers went on the claim that failure to develop manual skills could have national economic repercussions. In particular, these skills were "vital to those engaged in textile manufacture" (not a major consideration in New Zealand one would think). He also claimed that dwellers in remote country districts and emigrants would gain economic value from such training. Only boys who, according to the findings of the Committee of London Report, cited in the Struthers Report apparently needed these practical qualities because they:

> ... leave school ... are mainly employed in posts such as errand or shop-boy, in which they learn no skill nor anything to qualify them to follow a trade ... they drift into that mass of unorganised and unskilled labour amongst which, whether employed or unemployed, much misery exists, and which constitutes a dangerous waste of national force (Ibid, p. 3).

The Report argues that the costs for the proposed changes would be 'trifling'. This was a gross understatement because, in the next section, Struthers points out that more teachers would be needed and that in Scotland local education authorities sent teachers to Sweden to experience the Sloyd method. The Report further suggested that extensive changes would be needed to the physical environments of schools. It ends with a suggestion that trained teachers were vital to this venture (craftsmen were often employed to do this type of teaching) because its educational aim was to "develop intelligence and build up character". This was another strong attempt to distance manual training from trade training.

A 'rose-coloured spectacle' view of manual education using the 'Sloyd' method was presented. The timing of the Report presented to Parliament in March of 1895 made it particularly powerful because manual and technical education was about to be re-introduced for consideration by the New Zealand Parliament. Its tenor is one of knowledge of, and faith in, the educational advantages of manual training (at primary level), suggesting national economic advantages will be gained from these educational efficiencies.

While the Report foregrounds the educational value of manual training, social efficiency factors and the economic instrumentalism of education also emerge. Struthers uses intertextuality effectively, in particular the City of London Report cited above, and the verbatim words of 'experts' such as the medic Sir James Crichton-Brown. He reinforced the belief that manual training was vital for general education, by citing Froebel's "man only understands thoroughly that which he is able to produce" (Ibid, p. 5). This is also a reinforcement of the discourses critical of the 'bookish' nature of schools prevalent in New Zealand and Britain at the time.

The Report's strength lies in its identification and use of discourses rationalising the proposed changes to traditional educational practices, and the use of medical and other 'expert' hegemony. He fails to address the fact that he is describing a system designed and adapted over hundreds of years for an advanced large scale industrially developed and rigidly classed society that had very little applicability to New Zealand.

The invitation of Struthers to New Zealand to address Parliament was an astute political move on the part of those seeking reform. An 'expert' from 'home' reinforcing the need for educational change would have added weight to the arguments for change. The influence of the Struthers Report on educational debate and practice in New Zealand is difficult to assess but there is some reference to it in the 1895 Parliamentary Debates leading to the 1895 Act.

Liberals: The Secondary System under Focus

Class differences had always underpinned the differences between primary and secondary education. The *Education Reserves Act* of 1877 legislated three quarters of the funds earned from these Reserves to fund primary education. Many believed that all the funds should go into primary, the costs of which had risen by the mid 1890s. Only the elite, wealthy classes could afford secondary education (McLaren, 1987), and in 1892 the

Otago Trades and Labour Council had lobbied for access for all academically able students to High Schools (Openshaw *et al.*, 1993). The powerful Legislative Council, many of them members of the High Schools Boards, steadfastly vetoed wider access (McLaren, 1987, p. 71). In the 1893 election campaign, traditional academic curricula continued to be scrutinised (Ibid, p. 100).

A Bill seeking free places in secondary education had been presented in 1893 and 1895 by Reeves as Minister of Education but was twice rejected[3]. Why these Bills were set aside and manual and technical education prioritised is unclear but this was an indication that the state was prioritising technical education. This may reinforce Fairburn's (1979) view that as New Zealand became "an increasingly urbanised bureaucratic society, education was to act as a social filter" (Ibid, p. 9). However, there were other pressures afoot.

In rural areas primary industry exports were leading economic growth, and this was an incentive for the government to maintain and support rural capitalist ventures. Industry and commerce needed people with management and accountancy skills. Legislation that had been applied to the management of business and industry required trained personnel with technical expertise to ensure that standards were met. Industrialisation and urbanisation required more sophisticated planning and expertise, which meant that:

> ... a new generation of technocrats imbued with a faith that science and rationality would solve societies problems, became influential in administration at the national level and in most urban areas (Olssen, 1992, p. 258).

By 1895 the New Zealand economy was improving, and the Liberal party supported manual and technical education (Sutch, 1965). Reeves, its long time proponent was now Minister of Education and the Premier R. J. Seddon clearly supported educational instrumentalism. This combination of supportive policy makers, pressures to maintain a growing economy and recent memories of the long depression, combined to make compelling arguments for an education system that might better reflect this emerging 'modern society'. Coupled with this, society was becoming increasingly dependent on science and technical expertise in both urban and rural areas. The Liberals had held power for five years and needed to maintain legitimacy. Extended education provision in manual

and technical education must have seemed to be an attractive option to them for reinforcing public support, especially in the light of the often unspoken but accepted links between technical development and jobs.

The next set of debates demonstrates dissension around this 'new' movement. In particular there were tensions between the different needs of urban and rural electorates. The push for 'practical' education was overtly linked to farming efficiencies through science and technology. This was promoted by MPs who viewed this as a vital precursor to economic development. Discourses emerging from the next set of *NZPD*s strongly suggest the need for agricultural expertise through manual and technical education. But there was strong opposition by some MPs to any commitment that directed funding away from the primary education system.

New Zealand Parliamentary Debates 1895

Training Both Sides of their Nature

Another challenge to the education system emerged in July of 1895 when MP McGowen suggested its academic bias was outmoded. He proposed that "farm training and such occupations" should supercede the existing system that was only 'training one side of their nature' (*NZPD*, 1895, p. 280). Minister of Education, Reeves was asked by McGowan to amend the 1877 *Education Act*:

> ... so that boys and girls may have the opportunity of obtaining that highest aim of education - *viz.*, a fitness for the position in life they may be called to occupy (Ibid, p. 281).

Reeves responded that he had prepared a Bill two years earlier that had received little interest, furthermore he had "very grave doubts as to whether it would be right to take any of the time now given to the rudiments of primary education and give it to technical education" (Ibid). He also voiced his belief that in higher education the way was to "pay the utmost possible attention to drawing and the elements of natural science" (Ibid). However, he notified the house that he had 'just heard officially' that delegates from Board Representatives were meeting at a Conference to discuss technical education and that possibly "they might – though he did not know if they would – approach the Minister on the matter in which case he would be very glad to meet them" (Ibid). By October of 1895,

and following his meeting with Education Boards, Reeves appears to have had an epiphany on the value of manual and technical education, stating in the House of Representatives:

> I do not think I need detain the House by arguments to show that manual teaching and technical teaching are *very highly important branches of instruction* (my italics) and, that in my opinion, it is well worth the time of the Education Boards, and the time and attention of Parliament, to see if we can settle on some arrangement by which a more general and more systematic instruction may be given (*NZPD*, 1895, p. 318).

MP McGowen reiterates his earlier comments on the current systems inadequacy:

> ... our system of education at present ... (is) unfitting many of them for the walk in life they have to take (and) gives them a distaste for it ... they are not anxious to take up forms of manual labour and want to walk about with their coats on (*NZPD*, 1895, p. 329).

Reeves claimed that he needed to respond to the resurgence of interest in manual and technical education from the Education Boards, who were seeking a 'systematic' arrangement for 'these branches of instruction' (*NZPD*, 1895, p. 318). This need for systematisation had been a crucial argument in promoting primary education during the passage of the 1877 Bill. Manual and Technical education was once again on the political agenda with a Bill presented to Parliament in 1895. However, Reeves presentation of this Bill lacked dynamism and he mistakenly assumes that "he need [not] detain honourable gentlemen by arguments as to why these branches of teaching are desirable" (Ibid, p. 319).

The Bill proposed minimum provision only for manual and technical education, classes to be held outside of school-time and subsidies for Education Boards and those with qualified instructors. Primary Schools would carry out instruction but specialist Technical Schools would be set up for secondary education and receive a lower subsidy. Reeves assumed that there would be little demand and financial commitment 'quite small'. He concluded his presentation with the rather lack-luster statement:

> ... this is a simple Bill to foster the beginnings of a system. I do not think there is any harm in it whatsoever.... I think good will result from it (Ibid, p. 320).

A heated debate followed with outright discord from a small group of MPs strongly opposed to the Bill who feared that money would be diverted from the under-resourced primary system and that the primary curriculum was overcrowded.

It was clear that some MPs had little understanding of the nature of manual and technical education but the main concerns of dissenters are outlined in the excerpts from MP Earnshaw's response to the Minister's speech:

> The Minister has just said this a simple Bill ... but it is important as to finance and ... whether it will do what those who are fostering it think it will accomplish. .... If we are to become an industrial country [children] must receive a full technical training ... to compete with the older nations ... (Ibid, p. 320).

MP Hall agreed, insisting also that children were too young at primary school for 'this sort of education' arguing that it would be impossible to teach all trades in schools and that skills were much better acquired 'on the job' (Ibid). MP Saunders labelled the proposal 'mischievous', and was concerned that while urban districts may benefit, rural areas would miss out because they had not been well represented when the Minister met with Education Boards:

> The country districts were very little represented .... The cities were well represented ... it could be the means of obtaining more education money for the cities.... In that way it would be giving to the rich and taking from the poor (Ibid, p.319).

MP Earnshaw doubted whether it would:

> ... teach ... all the industries that we hope to foster in the colony ... to compete with the older nations of the world (Ibid, p. 320).

Reeves clarified that it was not the purpose of the Bill to teach trades in schools.

Sir Robert Stout (long time advocate) argued that scientific education had been marginalised in favour of a literary education for too long, and that this anomaly needed correction. He suggested a list of ideas to achieve this, offering a bonus to teachers with science qualifications because:

> ... if our country teachers were to teach our children chemistry, and botany and perhaps a little physiology, it would go towards fitting the children for a farming life and enable them to analyse soils and manures and other things for farming (Ibid, p. 323).

Stout also believed that science education and drawing ought to be made available through Continuation Schools[4] (Ibid, p. 322), as was the case in Britain. He proposed that the sixth and seventh standards in Country Schools should be taught agricultural chemistry and botany. His response to what was being proposed lacked any show of enthusiasm, which was surprising given his long-term commitment to the area, but was an indication that the system being proposed was not what he had intended.

MP McGowan pointed out that because older countries of the world were seeing the benefits of manual and technical education:

> ... it is time that some advance should be made in this direction in connection with the system of education in this colony, so that we may not have our youths fall behind others in the race for progress (*NZPD*, 1895, p. 329).

MP Dr. Newman endorsed the belief that the 'civilised world' had gone far ahead of New Zealand in technical education. "We know exactly what has been done in England; only this hardly goes as far as they do" (Ibid, p. 325). He goes on to urge the house that because all 'modern people' are agreed upon this, we should teach the whole boy (Ibid, p. 326). MP Russell also noted that there was an evolution of thought around education and believed that even a small amount of manual instruction would "greatly improve many a settler as he goes on the land" (Ibid, p. 324). Disparaging of current curricula that included, for example, the Norman Conquest and the Battle of Waterloo, he favoured establishing school gardens to help prepare children for the 'battle of life'. This would:

> ... make our boys more fitted for being handicraftsmen and our girls for being the mothers of our future families should in my opinion receive the careful consideration of the House and not be met ... as in one or two cases tonight ... with sneers and ridicule (Ibid, p. 325).

MP Meredith pointed out that important elements of technical education identified by Stout were already part of the curriculum and he claimed that the Minister of Education had overstated Education Board support for this Bill because:

> ... members of the House who are also members of Education Boards declined to accept the liability connected with such recommendation and voted against the resolution when it was put to the meeting at the Conference (Ibid, p. 328).

It was suggested that the Bill be sent to the Labour Bills Committee for an opinion on its usefulness to the economy. This course of action was not taken. MP Jenkinson made the point that Continental (European) Schools, which appeared to offer such a strong economic competitive edge for their nations, were actually controlled by employers who dictated which skills would be taught. He also questioned whether the proposed changes would be covered by the £2,000 budget to be made available, noting that if parents had to pay fees, free education system would be under threat.

The Legislative Council debated the Bill in late October. The most perceptive comment on the validity and role of manual and technical education came from the Hon. Mr. Jenkinson:

> This cry of and agitation for manual instruction is to a great extent a 'fad' I think, because really tools are going out of date altogether and in most of the workshops you will find that tools are greatly supplanted by machinery, and it is impossible to get instruction in the management of machinery ... in any school (*NZPD*, 1895, p. 694).

Economic growth was becoming increasingly identified as the driving force behind this proposed policy. The Bill for the *Promotion of Elementary Technical Instruction* was

passed and became the *Manual and Technical Elementary Instruction Act* (the 1895 Act) on the 31st of October 1895 with thirty-two Ayes and five Noes.

The Significance of the 1895 Act

The 1895 Act formalised the difference between manual education in Primary Schools and technical education in Secondary Schools. Its £2,000 budget covered only basic requirements with no funding for buildings, inspectors, or teacher professional development. What was clearly a token gesture, proved to be an important advance in the development of a more substantial policy for manual and technical education in 1900.

Symbolic Policies

Rein (1983) proposes that implementation of a policy is always affected by three factors, the clarity of the goals, the complexity of implementation and the extent or otherwise of the resource commitment to it. The 1895 Act is typical of symbolic policies, which tend to be:

> ... broad, vague, ambiguous, abstract goal statements with little or no resource commitment and little thought given to implementation strategies (Taylor, Rizvi, Lingard, & Henry, 1997, p. 34).

This does not mean that the significance of such policies should be underestimated. Weaker than material policies they have an important strategic function legitimating views of certain groups and altering the political climate around key issues. Once a policy becomes part of the political agenda there is often a firming of support and increased financial commitment, placing it in a much stronger position. Subsequent changes may depend on the extent of support from the electorate (Ibid, p. 34). However, in 1895 there had been no strong lobby outside of Parliament for manual and technical education and even within, support was inconsistent.

The 1895 Act exemplified an elite model of policy-making (Crump, 1993, p. 17) because it placed disproportionate power in the hands of a few politicians. It was not representative of a groundswell of support from the community. Invocation of such a model of policy-making accommodates elite groups and their control of the social, political and economic structures. Within such structures, ordinary citizens are viewed as passive, disinterested and even ignorant (Ibid).

With the passing of the 1895 Act, the scene was set for the application of a deterministic, top down policy model to manual and technical education. Such political arrangements are technologies designed to carry out specific functions and activities that contain not only material components but involve "organisation, procedures, symbols, new words, equations and most of all a mindset" (Franklin, 1990, p. 2). Such decisions made through processes of development are significant because they involve the making of social choices. Options taken in the initial developmental stages of technical instruments, systems or techniques, become entrenched when material equipment, economic investment and social habits become firmly committed (Winner, 1992, p. 30). Technologies may be liberating or limiting and in the developmental process of all technologies:

> ... different people are differently situated and possess unequal degrees of power as well as unequal levels of awareness (Ibid).

A Belgian Report on Technical Education in England (*AJHR*, 1896) was presented to both Houses of the General Assembly by Director of Education Wm. J. Habens. The Report noted the rapid rate of development in Britain in technical education, a move that was believed to be giving them an advantage in the commercial struggle with foreigners. It also showed that great care was being taken in England to show that technical education was not a substitute for primary education but "ought to rest upon it as a foundation" (Ibid, p. 3).

The Search for Alternatives

In 1896, MP Kelly put a further motion to the Legislative Council proposing the establishment of Technical Schools of agriculture and manufacture. He favoured a move towards a more scientific approach to "chemistry, biology, high class drawing, and engineering of a practical sort" (Ibid, p. 469). He believed that New Zealand had all the necessary systems and natural conditions to:

> ... compete in manufactured goods ... and develop not only our agricultural produce, but [also] manufacturers. .... Capital and labour form the basis of all productive work; but more was required.... brains, and trained brains (Ibid, p. 470).

Drawing on his recent experiences in Britain he noted the international struggle for supremacy in manufacture and trade (Ibid, p. 470). Money, he proposed, *must* be found to "keep pace with Australia and also with England and the Continental nations in establishing our own manufacturers" (Ibid, p. 471). The Minister of Education's response reflects his continuing uncertainty around manual and technical education, it was, he said:

> ... a matter which required thorough comprehension of what it meant, and it was much better to do as we were now doing in a small way than to set aside large sums of money without a very distinct knowledge of how the money could be spent (Ibid).

This was a significant acknowledgement by the Minister that the government lacked 'a very distinct knowledge' of what a policy for manual and technical ought to contain. The motion put by MP Kelly for Technical Schools of agriculture and manufacture to be established was rejected. What seems to have been overlooked in all the discussions was the fact that there was an existing solution to meeting the country's need for technical expertise through the expansion of existing institutions.

Extract from the Nineteenth Annual Report of the Minister of Education (*AJHR*, 1896)

This Report by the Minister of Education shows that a wide range of subjects was being undertaken in Technical Schools in Wellington, Wanganui, Dunedin, and Christchurch. All of these had claimed available subsidies for 1895. Qualifications could be obtained in all these Technical Schools through the British Science and Art Department of South Kensington or through the City and Guilds of London Institute. The Report showed an excellent success rate in achieving these qualifications. In addition the Departments of Mines and Agriculture and the Otago Medical School and School of Engineering in Christchurch had sent separate reports to the Minister of Education and, as institutions of the University of New Zealand, they continued to do their designated job to produce people with tertiary level qualifications in specific areas of technology. Half of the Report outlines the development of manual and technical education in Britain, citing as its source the *Report of the School Board For London, March 1895, Chapter VII.*

MP Jenkins later made a request at the Legislative Council Meeting (1896) that this Report be circulated throughout New Zealand because he believed that:

> ... very little was known as to how technical classes were to be started and carried on, and the hints and directions contained in this paper would do much to show how simple and easy such classes were formed (*NZPD*, 1896, p 241).

Was there a Settlement Process?

The specific 'learning a trade' aspect of education had received some early support from Trades and Labour Councils (Sutch, 1966, p. 94) but had not been embraced with any enthusiasm by students and parents except where it directly related to employment. Manual and technical education in Britain was state initiated and supported by Guilds and Manufacturers Associations and local education authorities (Selleck, 1968). Lamenting the lack of public interest here, Arthur Alan Riley (discussed in previous Chapter), principal of Wellington Technical School noted:

> It is disappointing to find employers ... do not interest themselves.... I hope ... they will awake to the enormous importance to themselves, their workmen and the colony ... it is undoubtedly a strong step towards commercial prosperity (Extract from Annual Report of the Minister of Education, *AJHR*, 1896, p. 8).

Following a trip to Britain to attend the Queen's Jubilee, Premier Seddon observed developments in manual and technical education there and this experience became an inspiration for another initiative here. In the Governor's speech in 1897, the drafting of a new Technical Education Bill was announced. Its acceptance was pre-empted with the announcement that £25,000 would be advanced for "buildings and for furnishing schools with apparatus and requisite appliances" (Nicol, 1940, p. 48). This was significant for two reasons. It was a major commitment by the state to the expansion of manual and technical education and it was particularly unusual to designate funding for a Bill *before* it passed through the legislative process to become an Act. Even with this level of financial support, statements during the Parliamentary Debates from 1895 to 1899 show several issues were hindering policy development. Debates on the matter during this period had related to

denominationalism, regionalism, centralism and, in particular, the power of the Minister to make changes without consultation. Such matters dominated debates again in 1897 and delayed the passing of the new Bill. After a second reading that year further amendments were required and by the beginning of 1900 the Bill was still not passed.

An enthusiastic and strong leader was required to manage this watershed in educational change, someone who could 'sell' the benefits of manual and technical education to the political dissenters and to the general public. Such a leader was about to take the reins as Inspector General of Education.

New Broom ... Old ideas! 1899-1900

As a long-standing enthusiast for manual and technical education, George Hogben believed that academic curricula should be confined to prospective university students (Openshaw *et al.*, 1993). One of Hogben's first assignments upon taking up this position was the investigation of complaints regarding conditions at the Stoke Industrial School.[5] His biographer suggests that "one sequel to the inquiry was the *Manual and Technical Instruction Act* of 1990" (Roth, 1952, p. 91). I argue that this opinion conveniently overlooks the twenty years of debate that had taken place prior to this time.

Noting Hogben's appointment as that of 'an able man', The Christchurch Press (1899, March 2) added:

> We are utterly at a loss, however, to understand why the government has selected him to the important position (cited in Roth, 1952, p. 83).

During his appointment as Rector at Timaru High School he had gained the respect of predecessor Habens, who noted Hogben's methods in his Parliamentary Report of 1894. "I mention with special approval the use made of the workshop as part of the Timaru High School, where the pupils make their own scientific apparatus" (Ibid, p. 6). Hogben was the first person in New Zealand to introduce Sloyd Methods into the classroom (Ibid, p. 67) and with the 1895 Act in place, a budget of £25,000 approved and a new Bill on the agenda, the role as Inspector-General of Education was critical. Furthermore Hall-Jones, MP for Timaru and Hogben's patron shared his views on education, stating in Parliament:

> Let them learn chemistry, geometry, and all those kind of things; teach them the initial stages of photography.... Technical education is very

> necessary for their development. If boys once get a taste for learning that will lead the clever boys on, and it is the clever boys we have to depend on for the forming of our national character (*NZPD,* 1895, p.321).

Hogben had demonstrated a burning passion for educational change aligned to the 'new' movement. Now as Inspector General of Education he was positioned to extend these personal values into the state system. As a liberal embracing progressive and social efficiency ideals (Openshaw *et al.*, 1993), his was the perfect appointment for endorsement of the current state educational discourses of efficiency and instrumental purpose. He saw his role as Inspector General as part of the search for a better world. This better world was reflected in the social welfare legislation enacted by the Liberals. New Zealand was seen to be a nation ostensibly pursuing equality, independence, security and opportunity for everyone.

Hogben's Rhetoric

> Rhetoric is the skill of elegant and persuasive speaking, perfected by the ancient Greeks. The Oxford English dictionary defines it more precisely as 'the art of using language to persuade or influence others' (Thomas, 2004, p. 45).

In the *Extract from Twenty-Second Annual Report of the Minister of Education* (*AJHR,* 1899), Hogben identified the benefits to the state of manual and technical education for social efficiency, international economic competitiveness and national development. He also noted its perceived educational potential. The Report exemplifies Hogben's commitment to the 'new movement' and demonstrates his belief in Progressive Education. His personal commitment is emphasised throughout the Report by the use of the pronoun 'our' instead of the definite article 'the'. For example, 'our pupils' replaces 'the pupils' and 'the best hope' becomes 'our best hope'. The understatement that it "would not be difficult to waste large sums of public money" (Ibid, p. 2) to establish manual and technical education is astutely placed. Cost had been a major consideration in the debates of 1895 and the 1900. In fact, the general cost of education to the state was exceeding expectations and causing on-going tussle between political factions.

Hogben uses intertextuality to powerful effect, reiterating ideas from the Struthers Report 1895, the Belgian Report 1896, and Riley's Report 1897[6] in his own Report to Parliament. All of this reinforced his argument for emulating the 'new movement' in Britain, Europe, and America. Riley's Report (1897), he proposed, had removed misconceptions about the 'new movement'. Hogben claimed that Froebelian methods (used in kindergarten education) were the *best approach* for all levels of education and this 'new' approach would identify the natural bent of the pupils. While these assumptions lacked substantive evidence they were the pseudo-scientific ideas and theories of current psychology and medical theory.

Metaphors related to 'nature' endorse the wholesomeness of these changes. The Report claimed that the 1895 Act was bearing fruit, because manual training had become an organic part of primary education. Furthermore, subjects should be "coordinated with nature" and practical education would "open out new avenues" (Ibid, p. 3).

In the Report, major economic discourses are prevalent in discussions surrounding manual and technical education and argue that unless major changes are made to education New Zealand will falter economically. However, when he states that "the path of progress is closed to us" there is no substantiating evidence to support this assertion. Claiming that it is "vital to know what is happening in Great Britain, in America, and on the Continent of Europe" further reinforces the prevailing discourses linking manual and technical education to a competitive trading edge. There is a presupposition here that manual and technical education could achieve this trading advantage. All of which is powerful rhetoric and while lacking any actual evidence it reflects contemporary discourses.

Hogben's Report is persuasive, plausible and perfectly judged rhetoric. Pre-supposition is used extensively and while many of these 'taken for granted' ideas may or may not be based on evidence, or may simply reflect general opinion, these are very effective tools for manipulating the debate and persuading the perceptions of others (Fairclough, 1992). Contemporary use of such language is for selling products but in this Report ideas were being promoted.

Evidence of Progress

The view presented in Hogben's Report, that the 1895 Act was working to expand areas of manual and technical education, contrasts sharply with that given in the *Extract*

from the Twenty-Third Annual Report of the Minister of Education to Parliament (not this time written by Hogben), which noted:

> Progress that can be recorded in New Zealand during 1899 is little if any; in some places the movement has gone forward a little in others it has gone back – in fact no substantial progress can be looked for until substantial provision has been made by the legislature for its encouragement (*AJHR*, 1900, p. 1).

The following Chapter shows how substantial progress occurred following the 1900 *NZPD*s. Concerns that had been expressed about the Bill, including, the cost, the need to prioritise primary education, the lack of any specific 'purpose' and the teacher shortage were now marginalised. The overwhelming objective behind the 1900 Act was to emulate or better American and German industrial expertise. Discourses around the requirements of capitalist production gained momentum as all politicians promoted the expansion of manual and technical education through state education.

Conclusion

This Chapter demonstrates that the push for wider access to manual and technical education was part of an international movement often referred to as the 'new movement' in education. This had links to the belief that countries, such as Germany and the USA, were achieving their strong economic position through their sophisticated systems of manual and technical education.

I have argued that the extension of manual and technical education in New Zealand was highly contested in Parliament, especially in the early stages of debate. A values consensus was clearly elusive during the early 1895 Parliamentary Debates and there was no strong pressure for technical education during the early years from employers (McKenzie, 1992) or from the general public. Neither was the push for manual and technical education a response to demands made by industrial organisations.

The Chapter has demonstrated that there was a system already in place both within the University of New Zealand and a small group of Technical Schools that could have been expanded to meet New Zealand's needs for technical expertise outside of the compulsory education framework. I have argued that as New Zealand developed into a 'modern' nation, a changing political arena and the effects of technical rationality in many

facets of life offered different types of employment. The need for change was exacerbated by the exponential growth of primary industries and the capitalist economy. The 'how' and 'why' decisions of developing manual and technical education were based on a multitude of discourses and articulated by key men who were the decision makers in the process of policy development. This elite group of men were both the initiators and the managers of the process.

Notes

1 Selleck (1968) points out this was the era of the 'nineteenth century cult of amateurism' (Ibid. p. 205), and so an assumption of Struthers's knowledge or experience might be misplaced.

2 Sloyd means skill or dexterity of hand and has a close relationship with what was known as 'kindergarten occupations'. It was used mainly in Elementary Schools and was trade training. Specific elements to this sort of education are: use of tools from simple to complex; working with wood, iron and other materials; paper-folding and cutting; mat-weaving; basketwork; drawing, colouring and brushwork.

3 McLaren (1987) links this to Reeves's personal political misfortunes. He and Seddon did not have a good relationship, he was a socialist and seen as an idealist, while Seddon had a much more pragmatic approach. He resigned in 1896 (having just managed to get the Manual and Technical Instruction Bill through parliament) and went to London to become Agent-General.

4 The term Continuation covered a variety of forms of education, from a 2 to 3 year course in a technical day school to a 1-hour course held 1 day a week. They were always an add-on to Elementary Schools and always related to vocational needs.

5 Director of Education George Hogben reported to parliament on his visit to The Stoke Industrial School in response to complaints by the Charitable Aid Board, Nelson. This account reflects the dire circumstances of children in such establishments but also indicates Hogben's belief in the value of technical education. His visit followed allegations made by the Charitable Aid Board of confinement in cells, use of fetters, cruel treatment, insufficient food, insufficient clothing, wages irregularities, irregular burials and 'more serious charges of a more or less criminal character'.

Comments on the training of the students illustrates Hogben's passion for technical education. He believed that Industrial Schools should have a good teaching staff and a proper carpentry workshop.

The numbers of children placed in Industrial Schools increased during the long depression and following the government inquiry into The Stoke School these institutions were gradually taken over by the state (King, 2003).

6 Riley's report made specific recommendations for the introduction of manual and technical education. It is commonly believed to have formed the basis for the 1900 Act (Harrison, 1961; Nicol, 1940) and contained the following central ideas: the Education Department should have control; tertiary work needed the support of the upper primary and Secondary Schools; no exams should be done; sufficient funds for facilities for teachers and inspectors were vital; there should be a trial of Farm Schools to promote agricultural education; employers associations and unions should be invited to participate in course planning (Nicol, 1940).

Chapter 5: The 1900 Act, The Cohen Commission and the Politics of Gender

> ... policy is more than simply the policy text; it also involves processes which continue after the text has been produced, both in modification to it as a statement of values and desired action, and in actual practice (Taylor, Rizvi, Lingard, & Henry, 1997, p. 28).

Introduction

This Chapter begins with an overview of the social and economic changes that took place during the period 1890 to 1912 when the Liberal party was in Government. It briefly considers the impact of employment and education on their policies, aimed at creating a fairer and more just society. The New Zealand state needed to manage the adjustment processes that these changes demanded. Educational change was a central tenet of this management process. The earlier discursive construction of manual and technical education around its cognitive and pedagogical benefits, including the extension of brain development and hand eye training (as discussed in Chapter Four), were now replaced by discourses relating to social control, social efficiency and economic instrumentalism. The employment opportunities that opened up required technical skills and knowledge.

This Chapter demonstrates that the Parliamentary Debates immediately preceding the 1900 Act were remarkable for their lack of dissension, unlike the highly contested 1895 debates (discussed in Chapter 4). Pressure from Britain for her colonies to support technical advances, in the face of increasing international competitive pressure from Germany, added another argument towards the expansion of manual and technical education in New Zealand.

Once the 1900 Act was in place it became clear from the Regulations that the purpose for its introduction was much broader than manual and technical education. It was an attempt to introduce radical changes to secondary education. Most centrally, it signalled the emergence of discursive struggles around gender and the wider social order. These occurred despite the fact that in the lead up to the Act's introduction, the education of girls

had been ignored. The dominance of things technical to the future interests, capabilities and job prospects of males was a distinguishing feature of the 1900 Act.

Although the policy development process had little public input, once in place the 1900 Act inspired a variety of public comments on its perceived value. The universal franchise had been implemented and politics in New Zealand had become a more contested arena. The Government now sought to maintain its public legitimacy and this became a central feature of its education policy. In 1903, free places in Secondary Schools added another dimension to the already complex system.

In 1912, the Cohen Commission offered an opportunity for the public to make submissions on all aspects of education. At this time the role of girls in technical education, completely ignored during the policy development process of the 1900 Act, came under public scrutiny. By this time, the ideology of an education system reinforcing gendered roles was publicly promoted and also contested. By 1917, legislation was passed that required all girls accessing free places in Secondary Schools to undertake a course in domestic subjects, usually at the expense of high status science subjects and mathematics.

The opening of the School of Home Science in Dunedin in 1910 had been a major milestone in reinforcing the belief that a woman's place was in the home. It also signified the potency of continuing class differences in education. Girls accessing free places in Secondary Schools were denied access to the university if they had not studied high status science subjects. On the other hand, middle class women graduating from this institution gained teaching positions in intermediate and secondary education teaching the middle class values of home science to working class girls. The technical/scientific approach to education for domesticity further institutionalised the separate spheres ideology.

Prunty (1985, p. 13) argues that the "reified systems terminology of educational policy always embody an image of society". This Chapter teases out aspects of the image of early 20th century New Zealand society reflected in the discourses shaping the 1900 Act. Middle class values were validated and manual and technical education became integral to managing the colony's transition to a 'modern' society.

Moving towards 'Modern' New Zealand

The Liberal Party had been the first group to successfully achieve the mass organization of a political party in this country. Although defeated in 1912, their 22 years of rule laid the foundations of the Welfare State introduced by the 1935 Labour

Government. Mirroring developments in other industrialized countries the Liberal Party recognized that New Zealand "required the state to intervene in the management of the urbanized industrial economy if civil order was to be maintained" (Polanyi, cited in Olssen *et al.*, 1999, p.111). This intervention sought to counteract the disorder that 19th century market relations had engendered. The nationalization of values integral to the smooth management of a democratic society was now facilitated by technical systems of communication including newspapers, telephones, road, and rail systems and increasingly state-provided education. The state also had to address the negative effects of technological change. They did this through legislation. In 1891 Reeves established a Bureau of Industries (later the Department of Labour) and by the end of the year employment had been found for 2,000 men. Labour Bills introduced by Reeves in 1891 had been thrown out by the Legislative Council, however, a Truck Act that required employers to pay workers in cash was passed. In addition, an Employers Liability Act allowed workers injured in the course of their work to recover 'fair damages'. The most important of all labour legislation was a Factory Act that restricted hours of work for women and boys and provided registration and inspection of factories (Stenson & Olssen, 2002).

Workers now had some protection from the economic fluctuations endemic to capitalism. These were experienced during the long depression, and highlighted by the Sweating Commission (discussed in Chapter Four). The state-provided old age pension and improved health services showed that it recognized that a balance was needed between the needs of a capitalist economy and the emerging expectations of a democratic system.

The Liberals championed the beginnings of the social democratic version of liberalism, recognizing that:

> New ideals were needed for classes that had won the franchise ... problems were related to ... new class divisions consequent upon the rise of capitalism and a series of related social problems which unchecked capitalism generated (Olssen *et al.*, 2004, p. 117).

From around 1875 the classical economist Adam Smith had reinforced the ideology of 'free markets' as a liberating force for capitalist expansion and as a catalyst for economic growth. While the Liberal Party clearly endorsed this view, it was mediated by a more

utilitarian approach to governance that accommodated the social pressures and changes brought on by colonial expansion and technological and trading advances.

Living off the Fat of the Land?

During the early years of Liberal rule, MPs Seddon, McKenzie and Ward advocated expansionist rural policies, closed-land settlements and renewed public works programmes. They also championed improvements in farming standards (Richardson, 1992). This was to be expected because farming had become the mainstay of economic development. Economic ventures through dairy co-operatives and freezing works also increased, although these were often in British ownership (Trotter, 2007). Land and cheap loans for farmers in the 1894 *Advances to Settlers Act* created 'family farmers', a group now becoming a powerful sector of society. The two factions of urban and rural were emerging and between 1911 and 1926, 40% of the population had migrated from rural to urban areas. By 1899, rural prosperity was filtering into urban areas.

A Dairy Farmers Union was established in 1899 and from 1900 they became a new pressure group with a political voice demanding rights to freehold land, free trade, access to Maori land, better roads and bridges, freedom from government inspectors and security from socialists and trade unions (Richardson, 1992). After Seddon's death in 1906, this group swung towards the conservative opposition eschewing support for the Liberals who had put them on the land. They now considered 'socialist' interference by government in factory legislation an unnecessarily intrusion as did the New Zealand Employers Federation that was set up in 1902 (Ibid). From the early 1900s the Liberal Party, the party of the people, found its support base eroding.

Olssen (1992) suggests that prosperity after 1890 was facilitated rather than managed by the Liberals and while farmers benefited from improved prices for wool, frozen meat and dairy produce from Britain, these benefits did not extend to the general population (Brooking, 1992). In particular, wage earners endured a 10% unemployment rate up to the beginning of the Great War. Increased worker militancy during the years 1912-1913 "is to be understood in the context of significant unemployment and a growing gap between wages and prices" (Ibid, p. 230).

An Expanding and Changing Job Market

Between 1911 and 1926 manufacturing made up 20% of the workforce and contributed 5% of export earnings. However, factories were small with only 6% of them employing more than 50 people. The market and labour force in New Zealand was too small to support heavy industry (Olssen, 1992). Demands for workers in the white collar and clerical sectors had increased rapidly with the establishment of twelve government departments.

Specific skills and qualifications were required of this expanding workforce (Ibid). Unskilled labour needs were reduced as industries grew and major public works ended. Opportunities were now available in the public and private sector for those with clerical, secretarial and management skills. As life in New Zealand became urbanised and work more specialized, occupations became more clearly associated with status, income and lifestyle, and by 1900, the relationship between education, credentials, and upward social mobility was apparent.

The Parliamentary Debates analysed below demonstrate that boys and men were expected to be the main protagonists in the expanding job market – the public world of work and governance. However, Day (1992) argues that in 1897 women were accessing training in the Continuation Schools in the traditionally gendered areas of needlework, millinery and domestic instruction. By 1912 they were expanding their horizons as opportunities in typing and clerical work opened up. This sort of training was an entrée for women into Civil Service careers. By 1913, in response to the discursive pressures discussed in this Chapter, women were barred from taking Public Service Examinations, placed on a lower pay scale, had restricted job options and were forced to resign on marriage.

In this rapidly changing social and cultural context of New Zealand, women "were probably affected by these changes more than any other category of people" (Olssen, 1980, p. 159). At one end of the spectrum, women had received the franchise in 1893 and now had access to wider job opportunities, better maternal care and lower infant death rates. At the other end, a growing movement informed by technical rationality sought to entrench and scientise the roles of wife and mother. The expansion of both economic growth and the labour market required attention to be paid to the material and emotional needs of workers. Historically undertaken by women, and deeply entrenched within biologically essentialist

ideologies (central to the 'cult of domesticity' which was to emerge), this work and role was ignored during the debates prior and after the passing of the 1900 Act.

Pursuing Industrial Supremacy

Following unification of the German states under the leadership of Bismarck, Germany was rapidly achieving industrial dominance (Braverman, 1974). At the beginning of the 20th century German and American factories outstripped British ones in steel and pig iron production, technical achievements assumed by New Zealand politicians to be directly linked to technical education. Britain's trading advantage had declined also through trading tariffs on British goods (Selleck, 1968). In the face of this economic competition the colonies were viewed not just as the 'outposts of empire' but as the great hope for Britain's future. They were seen as:

> ... young nations vigorous, productive and with immense resources, and they could be a source of strength ... as the competition of other nations becomes keener (British Parliamentary Debates, 1904, Vol. CXXIX, cited in Selleck, 1968, p. 88).

A key aspect of maintaining the political legitimacy of the Liberals was the faith in education to maintain social cohesion. Increasingly, it was linked to sustaining the objectives of social efficiency and the expansion of New Zealand's productive capacity. As I have outlined in the previous Chapters, faith in manual and technical education to achieve these goals had been promoted by visiting speakers, reports to Parliament, and influential politicians and bureaucrats. Not surprisingly the debates leading up to the 1900 Act show that any doubts on the functionality of manual and technical education to deliver a prepared workforce had disappeared, as indeed had any justifiable educational purpose. The leaders of the 'new' society were about to accommodate the 'new' movement in education with palpable enthusiasm.

Debates Prior to the 1900 Act

When the *Manual and Technical Education Bill* was re-introduced in 1900, Premier Seddon, who had ordered the re-writing of the Bill in 1897 and made generous funds available, indicated in parliament his unreserved support:

> If our youths are to be placed in the position and on an equal footing with the youths of the Mother-country and of other nations; if our industries are to be a success; if our education is to be complete ... you must follow up what is now proposed (*NZPD*, 1900, p. 468).

The Hon. Mr. Bowen was also a strong supporter, believing that trade was now "guided by science" and that the impetus of German rivalry "will push us hard to pay attention to mechanical education and systems of work" (Ibid, p. 699). While arguing that German Schools, were better than ours, he believed that the "English Artisan will be able to hold his own ... with ... any other nation with which he has to compete" (Ibid, p. 699).

MP Monk (Waitemata) concurred with Premier Seddon noting that it was not possible to look at what had been achieved in Europe "without feeling enraptured with the very great industrial success that in so many ways is making itself felt throughout the world" (Ibid, p. 469). MP Willis (Wanganui) also reinforced the ideology that technical education was linked to economic success:

> ... when I was Home some three or four years ago ...I paid a visit to the Royal Polytechnic Institute.... I thought it was a great pity we were not in the same position to give that education to our young people here ... there is nothing that has brought Germany more to the front than the technical education they have had for so many years (Ibid, p. 472).

MP Pirani proposed the radical move that Secondary Schools receiving Education Reserves funds should be excluded from the Regulations:

> We have had the premier ... talking about the expensive nature of our secondary schools, telling us children are in secondary schools who have not passed through primary schools ... many of these schools are being used for the education of the wealthier classes (Ibid, p. 471).

MP McKenzie suggested converting District High Schools into technical institutions with a further proviso that it would be acceptable to 'displace higher subjects' with technical education because "we ought to influence the very best of our youths to pursue

the primary industries of the colony ... and in this country... agriculture and mining take these ranks" (Ibid, p. 472).

There was an endorsement of social efficiency discourse that had emerged in the debates prior to the passing of the 1877 Act underpinned by the belief that people were 'naturally' intended for specific roles and that schools must train them for these. For example "the mechanic should learn the value of co-operation in work, and of strict obedience to the highly intelligent foreman" (Ibid, p. 702).

The social control potential of manual and technical education was also endorsed. MP Jennings reported his experiences living with young 'foreigners' who had the benefits of 'the advanced system of education'. He noted that they did not loaf around the streets as many young New Zealanders did, but carried out interesting and useful work and did not misbehave. Minister of Education MP Walker, remarked on the benefits of the proposed legislation for manual and technical education, which was also related to aspects of social control:

> ... most of the mischief which young people get into is not the result of vice either inherited or acquired: it is simply a practical illustration of the old adage, "Satan finds some mischief for idle hands to do", and therefore the more you can keep young people occupied the less they are likely to fall, into bad ways (Ibid, p. 696).

This middle-class, Victorian morality reflected assumptions that supported the existing social structure. These included ideas such as 'the deserving and undeserving poor' and the view that unemployment was akin to ungodliness. These discourses reflected middle-class fears around welfarism and demonstrated the middle-class hegemony underlying educational provision.

Survival of the Fittest

MP Bonar linked the need for manual and technical education to the very survival of New Zealand as a nation, commenting that "if we do not cultivate the practical talents of our people, isolated as we are, we shall dwindle, and wither, and disappear, and this country will be occupied by some greater race" (Ibid, p. 702). This was not just a 'flight of fancy' but also a response to the economic and social hardships of the 1870s and 80s

(Sutch, 1966). The dependence on technical development is further reinforced in the speech by MP Jennings in his support of the Bill in the Upper House:

> If the British races do not take more interest in regard to obtaining training by means of manual and Technical Schools of instruction we shall lose our place of superiority in the world as industrial workers.... Owing to the want of thrifty habits in the English housewife, and the indifference to details on the part of the English workmen ... he is handicapped in the race, and is in danger of losing the supremacy (*NZPD*, 1900, p. 698).

The 1900 Act

The Regulations

At a surface level the on-going search for a 'purpose' for manual and technical education was reflected in the difference between the Statute headed *Manual and Technical Instruction*, and the actual name of the Act, *An Act to make better Provision for Manual, Technical and Commercial Education* (The Statutes of New Zealand, 1900). In the Act Technical Education was described as meaning:

> ... instruction in the principles of any specified science or art as applied to industries, accompanied by individual laboratory or workshop practice, or instruction in modern languages, or in such other subjects connected with industrial, commercial, agricultural, or domestic pursuits (Ibid, p. 216).

The 1900 Act was based on the English Act of 1889 (Harrison, 1961; McKenzie *et al.*, 1990; Nicol, 1940). McKenzie suggests that it provided ingeniously for "attendance support and equipment subsidy for special classes to be developed in the existing management system" and the Department of Education was empowered by the Act to design Regulations for grant support (McKenzie *et al.*, 1990, p. 8).[1] Hogben believed that the generous grants available might be the impetus needed for Secondary Schools to accept differential curricula, i.e. a less academic approach to education and one that was believed to prepare students for their expected roles in life.

Under the 1900 Act manual education became compulsory from Standard 1 to 6. Liberal capitation grants were made available to primary institutions. Statutory time allowances of two hours a week for thirty weeks each year added some status and recognition to manual education. The 1904 primary syllabus proposed subject integration and a more practical approach to lessons but strong opposition was still evident among primary teachers. This suggests that Hogben may have "overestimated the ability of primary teachers to cope with such syllabus intricacies as well as the difficulties many faced coping with large classes" (Openshaw *et al.*, 1993, p. 99).

Public Perceptions of the 1900 Act

The implementation of the 1900 Act generated increasing public interest both in the Act and the role of manual and technical education in curricula. For example, *The New Zealand Herald* (19 January, 1901) commended the use of public money to support technical instruction, suggesting that "no more profitable investment of state money could be made". It maintained, "it can no longer be said that the state is neglecting its duty" because, "we all know the benefit to the individual and the state of intelligent and thoughtful workmanship". As for girls the paper maintained:

> Efficient training in housewifery and dairy work cannot fail to improve their prospects. The capable housekeeper never need beg in any country, she is the dream of mistresses and the sought-after of single men (Ibid).

Less well disposed to the changes, Hill (1902) speaking to the Hawkes Bay Philosophical Society regretted that education in New Zealand was directed by "men of no practical training and scientific experience" (Ibid, p. 153). He was appalled that the Farmers Union (discussed in Chapter 4) had made only one recommendation to the government regarding education, that "sewing may be taught to girls in all schools" (Ibid, p. 160). Of the 1877 and 1900 Acts he is particularly scathing, commenting they "represent what we have become accustomed to for so long – the product of inexperience and immature thought". He further claimed that while New Zealand's legislation for education was 'fashionable' it presents to the outside world a "semblance of progress that facts do not warrant" (Ibid, p. 161).

Mr. Pirani, the Chairman of the Wanganui Education Board between 1903 and 1927, outlined the changes made by that organization in response to the 1900 Act (as reported in the centenary publication of the Wanganui Education Board - *Beyond the Horizons of the Day*, 1978). The public he claimed had seized the opportunity to take technical classes and that this had led to the establishment of a 'day' technical school in Wanganui, followed quickly by others in smaller communities in the Board district. He noted that the Board could now boast 130 schools offering classes in dairying and agriculture, and, 46 schools with garden plots. On the other hand, while acknowledging that agriculture was a subject of importance, he pointed out that traditional attitudes that supported the hegemony of an academic education were still prominent:

> Last year we were sorry to hear of teachers, among them, strangely enough, country school teachers, who actually recommended pupils whose future vocation was to be wholly practical, to take up the literary course (cited in Ibid, p. 30).

As McKenzie (1990) points out, after 1900, secondary level technical education was offered alongside a system based on the long-standing hegemony of academic subjects and courses. Parents continued to seek these for their children. Three years on from the passing of the 1900 Act, the *Secondary Schools Act* of 1903 added further complexity to the system by making free places at secondary available to those passing Proficiency.

Secondary Free Places and Access to Technical Education

This scheme was extended in 1904 to suitably qualified pupils attending evening classes in Technical Schools. In 1905 at the request of W. S. La Trobe, the Director of Wellington Technical School, free places were also made available in day Technical Schools (McKenzie *et al.*, 1990, p.8).

In 1906 Hogben challenged the centrality of Proficiency to primary education and at the Conference of Inspectors tried to justify the establishment of Technical High Schools. His argument rested on the practical consideration that access to free places, combined with the short stay in the system for practically minded pupils, was over-taxing space and teaching resources at Secondary Schools (Ibid, p. 105).

In 1907, Inspectors from the Department of Education noted that in Technical High Schools there was a decrease in the numbers of students taking domestic and agricultural courses (in other words the legislation had the opposite effect to the one desired by the state). On the other hand 65% of all students were taking commercial courses and pre-vocational industrial courses for boys were popular (McKenzie *et al.*, 1990, p. 12). In 1908 free places were made available in all Technical High Schools (Openshaw *et al.*, 1993, p. 98).

Those with enough money could still make choices denied the less wealthy. For example, Tennant (1977) notes that in order to avoid compulsory domestic courses linked to free place schemes; some women at the Auckland Technical College attended private fee paying colleges to acquire shorthand/typing expertise.

State Pressure for Separate Secondary Systems

In 1908, MP for Invercargill Hanan proposed that to cut costs pupils be *drafted* into secondary education according to their perceived capabilities and interests. Two years later these ideas gained momentum with his statement that schools had a duty to train boys and girls for future roles (Openshaw *et al.*, 1993, p. 106). By this stage, it was also clear that Hogben had underestimated the numbers of students seeking free places (Ibid, p. 104) and the secondary high school system was now oversubscribed. Technical High Schools were seen by politicians initially as an ideal compromise to providing a general secondary education with a practical bias, which aimed:

> ... not to furnish an inferior education to persons who cannot afford a better, but to give a large class of people in the community a training aimed at cultivating personality by the means that are most effective for the purpose (Nichol, 1940, p. 237).

In 1910, Technical High Schools were established in the major centers but popular resistance continued because of the dominance of academic education (McKenzie *et al.*, 1990, p. 10). Secondary Schools held on tenaciously to traditional academic curricula but Technical Highs also offered access to public examinations. By 1910, Minister of Education Fowlds:

> ... accepted that the only way in which the Department of Education could hope to gain some measure of support for its special courses in agriculture and domestic science was to attempt to ... 'secure adequate opportunities' for these pupils to prepare for public examinations (Openshaw *et al.*, 1993, p. 115).

Social Control

Social control discourse emerged once again in response to youth resistance to compulsory national service. For example, numbers of young men were seen to be roaming the streets of South Dunedin. In response to this T. K. Sidey, MP for the area, sought a solution through a Private Members Bill suggesting that those:

> ... not intended for the trades, but likely to become in the majority of cases unskilled labourers ... should be fed a compulsory diet of technical subjects, supplemented by disciplined collective activity, (*NZPD*, 1910, cited in McKenzie *et al.*, 1990, p.16).

The Bill was received with some enthusiasm by parliamentarians, but not from Technical Colleges and it was eventually defeated. As McKenzie points out this was a foretaste of things to come (Ibid, p. 14). Twelve years on from the passing of the 1900 Act it seemed that no matter how intensely politicians tried to push students towards technical education, the greater their resistance and the greater their demand for academic education. Dissatisfaction around educational provision was the reason for the establishment of the Cohen Commission in 1912 (O'Neill, 1996).

The Cohen Commission

The Terms of Reference of the Cohen Commission were to 'inquire into certain matters relating to the systems of education in New Zealand' (Cumming & Cumming, 1978, p. 182). This kind of response to educational concerns marked the emergence of a pattern of governance in this country. Governments under pressure are always keen to deflect attention away from themselves and apportion blame beyond Parliament. This is a political ploy that is particularly relevant when elections are imminent as they were in 1912.

In his presentation to the Commission, Hogben reinforced his belief in the application of 'modern' methods of education to the problems of everyday life (*AJHR*, 1912, cited in Openshaw *et al.,* 1993, p. 100). He expressed his desire to see more gender specific, vocational instruction in High Schools. As I have argued, from 1900, public interest in manual and technical education gathered momentum. Much of the evidence presented to the Commission reinforced the ideology that education was understood to be the preparation of children for predetermined life roles (O'Neill, 1996, p. 52). For example, William Martin, Secretary of the local printers union, advocated compulsory attendance in technical institutions until the age of 21 with a state subsidy to cover the cost, "because every one of them represents an asset to the state ... it has become vitally necessary because of the progress other countries are making in industrial life" (*AJHR*, p. 506). David E. Henson, principal of a Day Technical College suggested that pupils were attracted to his school by an offer of education and vocation at the same time. "The offer of a vocation is a means to an end, and that end is education ... if a girl takes a commercial course it's insisted that she takes domestic instruction" (Ibid, p. 336).

Millicent Wolf, instructress in cooking, hygiene and physiology, had worked under the London School Board and had been encouraged to come to New Zealand by Mr. George George the Inspector of Secondary Education. She stated her pleasure that early prejudice against cookery had been overcome, noting that "cookery as a training for the eye, ear and hand is simply invaluable ... it was my proud boast that all my High School girls can cook meals tempting enough to even the taste of the sterner sex" (Ibid, p. 470).

The granting of the vote to women in 1893 was a significant manifestation of the belief in women's emancipation and egalitarianism. At the same time the more evangelical churches and sectors of the middle classes sought to impose new social functions on mothers and families (Olssen, 1981). The surge of social equality for women was also rendered less effective because in the early 1900s the Women's Christian Temperance Union and the National Council of Women turned their energies away from the 'first wave of feminism' which promoted civic and political emancipation towards the 'separate spheres' ideology (Ibid). This was demonstrated through their support for compulsory home science for girls and in this they had the support of a small but vocal and influential lobby group of medical doctors (discussed below) promoting what became known as 'the cult of domesticity' (James & Saville-Smith, 1989).

Girls had been rendered invisible during the Parliamentary debates and the reports leading up to the 1900 Act. However, by 1912 girls were accessing secondary education both in the private sector and through the free place legislation of 1903. O'Neill (1996) outlines the wider social struggles of the day reflected in the basic educational struggle between:

> ... those who wanted to retain the pre-meritocratic (socially elite) secondary system (and a classed social order) and those who desired the social fluidity a meritocracy (secondary education for those with talent) would ensure (Ibid, p.52).

Historical Precedent

In 1888 the Cross Commission in England had carried out a major two-year study on the workings of elementary education, which did not go unnoticed in New Zealand (Ewing, 1970, p. 35). They had designated needlework for girls and linear drawing for boys essential subjects, recommending also that domestic economy and manual training be carried out in properly equipped workshops. They also recommended that the arithmetic syllabus for girls should be thoroughly practical. All of these recommendations were soon adopted in New Zealand.

Within the secondary sector the 1879 Royal Commission, set up to examine the role of the University of New Zealand, had suggested that there was 'no reason why the curriculum of a girls school should differ materially from that of boys' (Tennant, 1970, p. 143). In 1908 the Minster of Education, George Fowlds also noted that the curriculum in girls schools cannot be said to differ in a marked degree from that found in schools for boys only (Openshaw *et al.*, 1993, p. 108). Like so many of the dominant ideas of that era the push for greater choices for women had its foundations in movements imported into New Zealand from the United States of America and Great Britain.

The Victorian work ethic taught girls that family duties came first and middle class Victorian values promoted the idea that a man's status was defined by how well his wife and daughters cultivated the art of being idle and decorative. For working class women, housework was both drudgery and a source of employment. The value of domestic skills for girls had long been reflected in primary school curricula while female accomplishments

such as music and art had been the domain of middle class girls and frequently incorporated into secondary school education (Fry, 1985).

A Woman's Place

Domestication ... Liberation ... Domestication!

By the turn of the century women were entering the work force in unprecedented numbers. State and voluntary agencies had now taken up roles previously filled by women. For example, most children were in school making use of the state provided, free compulsory education and some state institutions provided care for the elderly.

By 1901 domestic service, a job that carried long hours, hard physical work, poor pay, and low status, was still the major employment for working class women. Between 1906-1907 there was an unsuccessful move to establish a union of domestic workers (Olssen, 1980, p. 164). The shortage of domestic servants, a long-term problem for the rich, had intensified with increasing job opportunities in cleaner, easier employment. Manufacturing industries that had developed in the 1880s continued to offer jobs in dressmaking and wool mills. Between 1900 and 1914 jobs in the service industries as waitresses, clerks and typists became available. The expansion of the education and health systems also offered employment opportunities, which further decreased the numbers of domestic servants available to the middle classes (Ibid).

In 1908, as a result of the large number of women in the workforce, the Department of Labour set up Women's Employment Branches in four cities. The following year the Departmental Heads of the State Services reported that women were 'better workers' than men (Ibid). However, women's employment was still seen as a short-term prospect between leaving school and marriage. This discourse was reinforced by the Industrial Arbitration and Conciliation Court in 1908, which defined a man's 'living wage' to be inclusive of the maintenance of a wife and children (Ibid). With a surplus of women in the population it was becoming clear that some women needed to work while others wanted to work.

The move by women into the workforce coincided with international concern on the mental and physical deterioration of the Anglo Saxon race. With a low birth rate among the middle classes it appeared they were becoming 'willfully sterile' (Fry, 1985; Olssen,

1981). It was assumed that this was caused by young women turning from motherhood to paid work. This was seen to threaten the future of the race (Olssen, 1981, p. 10).

Back to Domesticity

Re-emphasizing the need for the training of girls in the housewifely arts was seen as a simple solution to a raft of wide-ranging societal problems, including wife-desertion, poverty, child neglect, and juvenile delinquency, which had emerged throughout and following the long depression. Education for domesticity was based on the premise that it would "make the wholesome charms of the home more compelling than the suspect attractions of the urban street or public bar" (Tennant, 1977, p. 146). This idea was part of the dominant discourse on women's roles – including the notion of separate spheres as prescribed by and emanating from 'nature'. The society projected by this discourse promoted an internal nationalism based on the hegemony of middle class values, but was also part of an international view that had:

> ... direct links to the maintenance of a world order based on overt racism; the superiority of the Anglo-Saxon race; the sanctity of Protestant Christianity; the supremacy of the British Empire; and the centrality of the monarchy (O'Neill, 1996, p. 24).

These deep-seated ideas encompassed the central tenets of liberalism that accommodated traditional roles for men and women, and an expanding faith in science and technical rationality. Olssen (1981) refers to this as a 'prescriptive ideology' for a modernizing society, most vehemently pushed by a number of medics including Lindo Ferguson, a Dunedin eye doctor and Ferdinand Batchelor, a Dunedin obstetrician, and the vociferous, persistent and charismatic Frederick Truby King. Their intense efforts to maintain the dualities of male/female and public/private spheres as central to the social structure, through the implementation of compulsory domestic education are well documented (Fry, 1985; O'Neill, 1996; Tennant, 1971).

Natural or Scientific Motherhood

Dr Truby King was interested in the care of mental patients and the health of the very young and was well known and influential in both areas. With his wife he founded the Plunket Society, set up to promote the ideology of scientific motherhood. King identified

societal anxieties around the family, nation and Empire and skillfully linked these to the changing roles of women in society. In particular, he abhorred the trend towards a lower birthrate and the disinclination of young women to embrace the domestic role with equanimity. Central to his concerns and the cause of these 'evils' was the 'preposterous farce' of giving boys and girls an identical education (Olssen, 1981, p. 4). Particularly pernicious were King's arguments, based on Herbert Spencer's ideas, which proposed that intellectual activity would render women 'unfit' for their 'natural' roles in mothering and domesticity. By the early 1920's this ideology had been seriously challenged (O'Neill, 1996) but King's beliefs had been central to the promoting of compulsory domestic education for girls. Medical hegemony had proved to be a weighty persuader of public opinion. What was required now was a system to support the scientisation of motherhood and homemaking. The offering of a Chair of Domestic Science at Otago University in 1910, by Mr. John Studholme fulfilled this requirement.

Establishing the Systems

Following the 1900 Act, girls' Secondary Schools had been slow to take up the option of domestic education despite the availability of generous grants for specialist workshops. Practical home-making subjects had been taught in Technical Schools since 1893. Commercial subjects, which also fell under the auspices of technical education, were very popular in these institutions and Continuation Night Schools.

While Hogben believed that *all* girls should have instruction in practical and theoretical domestic science, based on the type of High School attended (Openshaw *et al.*, 1993, p. 104), he did not push for legislation to ensure this. A revised syllabus in 1913 had allowed girls taking cooking, dressmaking and laundry work to be exempt from needlework. Alternatively, those taking needlework plus either cookery, dressmaking, or laundry work, in addition to an appraised course in any science, were given exemption from general science. A series of incremental moves over the following four years intensified the push to introduce compulsory Home Science in 1917.

As Sutch (1960) argues, the early rigid gendering of manual and technical education had long-term repercussions. Girls did not have the chance to tinker with hammers, saws, nails and screws and to be creative with wood and metal, while boys were denied the chance to enjoy the creative pleasures of cooking and sewing. As O'Neill (1990) has suggested, this division had more important ramifications for young women's learning in

the more traditional 'hard' high status sciences. It reinforced the belief that they were naturally (biologically) unsuited to these subjects and meant they were locked out of future careers in science and technology.

Reviewing the 1900 Act: The first 15 Years

Powerful as Hogben's rhetoric had seemed in 1889 (see Chapter 4), by 1916 he was expressing his anxiety that the 1900 Act had failed to deliver the changes needed to meet the demands of a manufacturing economy. There were 12,000 full time students accessing secondary education at this time, 85% as free place students. However, only 70 out of 423 manual classes in Technical High Schools were related to domestic training and 66% of these classes had no connection to trade or industry (*AJHR*, 1916). With these figures at his fingertips a new ideologue for a more efficient system for secondary education stepped up to the dais.

Hanan became Minister of Education in 1914 in the conservative, laissez-faire Massey Government. In 1916 he presented his educational progress report, *Memorandum by the Minister dealing with some Phases of Educational Progress and Reviewing Existing Conditions in the light of National Requirements* (Ibid) (hereafter Hanan's Report) to the House of Representatives. In this Report he shamefully harnessed the strictures imposed by World War I as a rationale for educational change, in particular, a more instrumental role for education in relation to the economy. Hanan's powerful rhetoric illustrates political expedience in that it was a clear attempt to secure and strengthen his and his administration's power base.

Hanan's Report

Hanan's Report is written to be spoken as a formal presentation. Manifest intertextuality is used in this document, but only sparingly. Exemplifying the nationalistic fervour of the era, he used the war and the extraordinary conditions and problems created by it to enlist the co-operation of the Legislature to assess the "future possibilities of education ... so closely interwoven with that of the dominion" (Ibid, p. 1). Credit is given to the existing system for having spawned a generation of citizens that may "claim a great share in the honour of sending forth thousands of our former scholars as volunteers in the great cause" (Ibid).[2]

Hanan's metaphor for war as the 'great national test' fitted well with educational discourse and reflected the spirit of a generation caught up in the Great War. He maintained that:

> Expenditure ... [for education] should be estimated in terms of child-life, child-health, child efficiency and citizenship training ... because there has never been a time when interest, patriotism and honor alike may be more justly pleaded in support of a generous endeavour to remedy the deficiencies of our educational system (Ibid, p. 2).

Greater efficiency, Hanan argued, could be achieved by abandoning the current focus on academic education. It should be based on realities and must shun "abstractions, formalisms and pedantic studies" in favor of "practical applied science and economics" (Ibid). For Hanan, efficiency meant teaching real things in a practical manner. He went on to suggest that "formal, abstract, applied study ... is now fighting in the last ditch all the world over" (Ibid). While this is clever use of a wartime metaphor it had no basis in fact. Indeed in New Zealand, academic courses were still strongly pursued. Nevertheless, Hanan argued there was a false distinction between academic and vocational education. He saw this as nothing more than a relic of old class barriers "stemming from an age when the best educated people were not expected to be or to do anything outside a very limited space" (Ibid).

Hanan's specific suggestions for overcoming inefficiencies in education included a four-tiered approach to secondary education; the University Preparation Course, the general Secondary Course, the Continuation Course and the Country Secondary Course. His statement on technical education fits with the overall 'efficiency' theme that it was largely wasted, unless "really invested in the improvement of our industries and occupations" (Ibid, p. 7).

'Our Girls'

Using the heading 'Our Girls', Hanan emphasized the need to secure their health and physical efficiency in the interests of the state. The need was never greater, more imperative, or more urgent than now for practical education:

> The vital worth of child-life to the well being of the State is being revealed in no uncertain manner by present circumstances. To save child-life is an axiom of State preservation; to remedy defect is an axiom of state economy (Ibid, p. 8).

Hanan reinforced the current discourses of separate spheres and glorified the cult of domesticity:

> Let us act so that we and they may realize that not even the lawyer, doctor, statesman or merchant has a calling so richly fruitful of all that is highest and noblest of in national life as the mother of a good home (Ibid).

The 1916 Report of the Inspector of Secondary Schools, George George (*AJHR*, 1916) reinforced Hanan's argument that only a few schools differentiated between courses for boys and girls. He further argued that domestic science "ought to be regarded as an indispensable part of education for girls" (Ibid, p. 11).

The attack by Hanan and colleagues on academic curricula and their support for the 'cult of domesticity' through differentiated secondary education meant that social efficiency discourses in education intensified. By March 1917, an Education Department circular was distributed directing that a course in domestic training be undertaken in every girl's secondary school and that household accounts should be part of every girl's arithmetic programme. Free Place Regulations had been amended to stipulate that during the tenure of a Junior Free Place, Home Science must be taken by every girl attending a Secondary or District High School (Fry, 1985, p.51). By July of the same year the Free Place Regulations, Clause 6, had been amended to ensure that all girls took a course in elementary science based on the home and domestic hygiene. This was further reinforced the following year (Ibid).

McKenzie *et al.* (1990) remind us that one 'peculiar' feature of New Zealand Technical High Schools was that:

> At no time were its pupils universally and absolutely denied access to the conventional academic syllabus and teaching for public examinations that was provided for in the ordinary secondary school (Ibid, p. 13).

While this is strictly true there would have been many girls whose education was shaped by the restrictions placed on 'free place' provisions. The 'watered down' syllabus ensured the separation of girls from the high-status academic areas of science and mathematics and reinforced perceptions of their weakness in these areas.

As Apple (1979) reminds us, the stratification of society is based on the abilities of people to "contribute to the generation of the required knowledge form" (Ibid, p. 38). This knowledge is linked to technical development and contributes to economic expansion. Denial of access to high status knowledge, in particular mathematics, chemistry and physics, through education policy decisions is a very effective, though not necessarily intentional way of preparing students for their roles in a stratified society. It is also an approach that invalidates the deep-seated belief in the neutrality of state education systems.

Conclusion

This Chapter has demonstrated how the introduction of manual and technical education reinforced existing structural inequalities in New Zealand society. It facilitated a stratified society responsive to the needs of an expanding capitalist economy. I have outlined how this policy further entrenched existing discourses around masculinity and femininity. Male, middle-class and medical hegemony provided an effective power base through which existing elites could use the education system to achieve their aims in this respect.

Between 1877 and 1917, divisions between capital and labour, rich and poor, rural and urban, men and women had become accentuated and these had a profound effect on education policy in general and on the policy for manual and technical education in particular.

Britain's directive to her colonies to support her failing technical and industrial supremacy in the world and the deep-seated effects of our colonial status were evident in both the discursive rationales supporting its expansion and the subsequent wording of the Act.

I have argued that the 1900 Act was essentially a state initiative that encountered resistance in both the primary and secondary sectors. Discourses promoting the potential educational benefits of manual and technical education were usurped by those reiterating its economic benefits. I have also shown that the increasing involvement of senior bureaucrats in educational policy development meant that from their privileged positions

they were able to influence curricula, pedagogy, and the general management of the 1900 Act.

By 1912 there was a move towards consulting much more widely on education policy. This was evident in the vigorous response to the Cohen Commission by a number of individuals and groups who by this time had a strong vested interest in the continuation of technical education. The early decisions underpinning the implementation of the 1900 Act were influential for long term planning in education. For example, a large outlay of costs in new buildings, teacher training, and the establishment of an inspectorate ensured difficulty in adjusting the organisation and operation of the system. Subsequently, manual education changed little until 1995 when technology education was introduced into the New Zealand Curriculum.

The political rhetoric of the Parliamentary Debates and the ideas of high profile figures were powerful and ensured its development from a symbolic to a material policy. By challenging the academic hegemony of the school curriculum and the freedom of parents to make choices for their children's education, manual and technical education was destined to meet intense resistance, as the figures presented by Hanan in 1917 demonstrated. In the case of girls' education, only by making Home Science compulsory could compliance be achieved.

Notes

1 The 1900 Act made financial support available for Continuation Classes and to voluntary associations that had previously provided commercial classes. Funding to existing Secondary Schools and Technical Institutions were restricted to courses that reflected syllabus reforms. 'Manual Instruction' that was related to contemporary learning theory incorporated modelling in materials and in tool use, all of which were related to hand, eye, and brain development (McKenzie *et al.*, 1990).

2 Trotter (2007) offers a completely different perspective on New Zealand's war effort suggesting that our reliance on Great Britain to take our produce meant it was a case of 'blood for butter'.

Chapter 6: Discussion and Conclusion

> Today political power asserts itself through its power over the machine process and over the technical organization of the apparatus. The government of advanced and advancing industrial societies can maintain and secure itself only when it succeeds in mobilizing, organizing and exploiting the technical, scientific and mechanical productivity available to industrial civilization (Marcuse, 1976, p. 212).

Introduction

This study has examined the dominant discourses around the introduction and early development of the 1900 Manual and Technical Instruction Act. New Zealand's Liberal Government sought to use this Act, and the educational and labour market changes they believed it would guarantee, for the process of harnessing science and technology to increase industrial productivity and economic growth. They believed that it would not only benefit the colony in the global trading market but would also help secure the Liberal's hold on electoral power. An acknowledgement of the relationship between technical development and state power, discussed above by Marcuse, underpins the critical approach applied in this study.

Analysis of the dominant discourses shaping the 1900 Act has identified a number of reasons why the Liberal Government was under pressure at this time. As the first democratically elected Government in a fledgling capitalist colony, the Liberals broadened the nature and extent of state activity in New Zealand. Within the emerging democratic state, this entailed navigating the multiple pressures of servicing the production system (which provided it with vital revenue), protecting the population from market fluctuations, and ensuring the maintenance of social structure and control. In addition, the Liberal Government faced the ultimate challenge of all governments in democratic states, that of defending their own political legitimacy.

I have argued that the 1900 Act's implementation was intended to ensure three significant outcomes directly relevant to the maintenance of the state's accumulation and legitimation functions. These were the need for the development of a stratified workforce, various levels of technical expertise, and the more formal institutionalisation of a

'gendered culture' to support this workforce (Day, 1992; James & Saville-Smith, 1989; O'Neill, 1996; Tennant 1977).

Initial moves in 1895 to expand manual and technical education through the state system were accompanied by a raft of claims regarding its educational benefits. Many of these reflected the changing role of education in other developed countries (Kliebard, 1995; Selleck, 1968). However, educational rationales were quickly usurped by discourses of economic instrumentalism, which linked technical education directly to the country's economic expansion. Other dominant discourses around capitalism, class, care and craft further supported the achievement of these goals. Evidence of the potential for manual and technical education to expand industrial capacity was based on a deeply embedded assumption that continues to dominate education today. This was the belief that technical development, in particular technical education, would ensure New Zealand's competitive trading edge. This idea gathered momentum between the years 1895 and 1900 and reached its zenith immediately prior to the passing of the 1900 Act.

A key role of democratic states was then, as it is now, to generate consent. States must persuade their populations that policy orientations are unequivocally a 'good thing' for as many groups as possible. In reality, and as I have argued, policy changes are often made in the interests of dominant groups. The critical approach to the deconstruction of state policy applied in this study has identified and examined the hegemonic discourses of the period. It is vital that the dominant discourses, which achieve a 'taken for granted' status in a society, are interrogated and analysed in order to understand the deeper reasons behind policy changes and their material effects. Official state policy is one of the major ways in which such discourses are transmitted, legitimated and normalized (Olssen *et al.*, 2004). Indeed, in this role, state policies and policy documents are inherently political because they construct:

> ... particular meanings and signs that work to mask social conflict and foster commitment to the notion of universal public interest.... Policy documents produce real social effects through the production and maintenance of consent (Codd, 1988, p. 237).

This critical deconstruction of the discursive foundations of the 1900 Act has enabled the ideological role, and the political and economic interests of the state at that time to be

uncovered, contextually located and analysed in terms of the wider forces, pressures and alliances they were both responding to and acting upon.

From the 1880s, the political and economic instability and the complex social changes occurring in New Zealand society had necessitated a changing role for the state in civil society. Integral to this was the state's endeavour to change public expectations around the nature and purpose of education. The 1900 Act was an outcome of these attempts. Extensive analyses of these attempts are presented in Chapters 3, 4 and 5 of the Thesis. This Chapter therefore presents a brief summary of the main findings of this study.

Why the New Zealand State Established Manual and Technical Education

The social and economic conditions of the 1880s challenged the autonomy of the Liberal Government, which had to deal with a crisis of accumulation and legitimation. Such a crisis requires states to try to uphold social and economic stability even during times of instability, while simultaneously maintaining their hold on power (Codd 1990; Grace 1992; Olssen *et al.*, 2004). The examination of this crisis set out in the study, revealed that it had multiple origins. Urbanisation had broken down the established social practices and networks of rural life. Industrialisation had further emphasized the sexual division of labour and entrenched biologically essentialist constructions of gender. Struggles over land between Maori and Pakeha, propertied and un-propertied, and between men and women fuelled the fires of discontent in the colony. During this time, itinerant men searched for work up and down the country while women, children and the elderly were left to fend for themselves, often in destitute conditions (Sutch, 1996). The collapse of the colonial household meant that the family could no longer be relied upon to be the stalwart institution of social reproduction and social control. This breakdown in societal order was seen by elites (e.g. professionals, the wealthy, senior civil servants) and a number of politicians, as a threat to New Zealand's capacity to become a viable nation and loyal provider for Britain. It was also regarded as a threat to the established social hierarchies and the power base of the elite. With the tragic experiences and consequences of the long depression still fresh in the minds of the populace and the Liberal Government, rhetoric surrounding the advantages of manual and technical education, in particular the prospect of an education system that might bridge the gap between school and employment, must have been a seductive idea to many.

During this period, education primarily reflected the British system, with class location the determining factor in shaping access to higher education (Harker, 1990; Shuker, 1987). As I demonstrated in Chapter 4, during the last ten years of the 19th century, new ideas about education, including the nature of knowledge, cognition, school organisation and pedagogy were flourishing in the United States and Europe, particularly Great Britain. These reflected the changing social, political, economic and intellectual contexts in these countries. As a result, what became known as the 'new movement' in education emerged. Its most important feature was its diverse attempts to displace a book-bound examination approach to knowledge and pedagogy with a more progressive, child-centred one. Justification for these educational innovations was linked to new philosophies around education, informed by the emerging 'science' of psychology and theories of human nature, physiology and medicine. Of most importance were those discourses proposed by the powerful medico-educational alliance, which linked intellectual development directly to hand, eye, and muscle use.

Social efficiency management discourses, which had their origins in the principles of scientific management derived directly from industrial production methods, were also infiltrating educational discourses during this era. These doctrines maintained that society could be managed to eliminate any wastage of time, energy and money in all areas of human endeavour. Within education, such management strategies were linked to the need for structural changes to the school curriculum. The 'new movement' placed schooling on a more 'relevant' foundation, which in practice meant the teaching of skills and attitudes that would prepare students for their lives beyond school. In short this was clearly vocational and class-specific. Parliamentary Debates suggested that social control, previously the role of the family and church, would be also be facilitated by these changes to curriculum and pedagogy.

In colonial New Zealand there was a strong conviction that wherever Britain went New Zealand should follow. This is evident in the similarities between the legislation for manual and technical education between these countries. As I have demonstrated, the directive from the British Parliament that the colonies should develop technical expertise to counteract the rising threat from German industry, was unconditionally supported by New Zealand parliamentarians and harnessed to the political pressure for the expansion of manual and technical education here.

The ideology of technical rationality (Habermas, 1970) discussed in Chapter 1, was the underpinning rationale or logic driving the introduction of the 1900 Act. As I have argued, as household industry was replaced by privately owned factories, worker's skills were appropriated for work in the factory (or often for women in the home). In both spheres, many facets of life were taken over by experts and institutions. I have demonstated that the dominant discourses and discursive practices around capitalism, class, care and craft had their origins in the logic of technical rationality. This underpinned the discourses of Social Darwinism, Eugenics, scientific management, social efficiency and social control.

The 1900 Act as a Reflection of the Dominant Discourses of the Era

The existence of the capitalist mode of production requires a state apparatus sensitive to, and facilitating of, economic production through the creation and maintenance of appropriate infrastructure and fiscal and social conditions.

Capitalism

As I discussed in Chapter 1, capitalism is a complex economic, social and political system. Capital is privately owned and workers exchange their labour for wages. The relationship between technical development, capital, and the state is complex but a key function of education is to support the capitalist mode of production (Apple, 1979; Bowles & Gintis, 1976; Codd, 1990). The state has a vested interest in ensuring capital's development for several vital reasons. The most important of these is the creation of jobs for its citizens, important for its own legitimacy, and the collection of taxation revenues, which allow the state to provide public services to ameliorate the effects of the market.

The visit to New Zealand by Struthers, the Scottish Inspector of Primary Schools, and the presentation of his Report on Sloyd methods to Parliament in 1895 marked a turning point in the state's formal push to develop manual and technical education here. As the economy improved, the educational benefits claimed in the Struthers's Report became replaced by rhetoric supporting the economic potential of manual and technical education to produce the required trained labour force. This instrumental focus utilized discourses of efficiency, management and competition to justify the rhetoric.

From 1895 the role of education in the promotion of New Zealand's economic competitiveness began to be unrelentingly prioritized in *NZPD*s. Arguments for its introduction were based on the technological advantages achieved by the United States of America and Germany. These were seen to surpass those of Great Britain, whose declining economic power was attributed to a lack of technical education. By 1900, these discourses had become hegemonic and legitimated the passing of the Bill as described in Chapter 5.

The 1900 Act introduced a system of education that was designed to train wage earners in a capitalist society. The purpose of manual and technical training was to nurture citizen/workers who had a rudimentary understanding of numeracy and literacy, were punctual, unquestioning of authority, industrious and unfailingly compliant. The lock-step pedagogy of manual and technical education was thought to be a way to instill such knowledge and dispositions in children. MPs were well aware of the low status associated with vocational curricula. As I indicated in Chapter 3, suggestions to the public of the possible expansion of manual and technical education were at best shunned, and at worst, caused community panic. Undaunted, MPs continued to promote its validity and comparable status with academic education. However, as McCulloch (1992) notes, while the state has the power to institute educational change through policy, it has always failed to convince the public of the value of vocational education. Reaction to the Act, particularly from Maori and Girl's Secondary School Principals also challenged the hegemony of the state's view (O'Neill, 1996; Openshaw *et al.*, 1993).

Class

The settlers who came to New Zealand came predominantly from Europe, mostly from Great Britain. Many of them were escaping the rigid class divisions that dominated social, political and economic life there. The opportunity to escape such entrenched divisions of inequality and to achieve varying degrees of social mobility, was a key factor in their immigration. For the many poor who came, it was an opportunity to escape from lives of hardship and destitution. As colonial society developed, the discourse of egalitarianism emerged to emphasise 'equality of opportunity' or equal access for all (as opposed to equal outcomes). The establishment of the state funded primary system, which eventually became available to all children in the colony, is a good example of this ethos in practice. Prior to 1903, secondary education was available only to those with the resources to pay for it. This reflected the unequal socio-economic hierarchies and divisions that

underpinned social relations in the colony. The availability of secondary education for the elite who valued it and could pay for it, also illustrates the reality of such relations, which broadly mirrored those from 'home'. Moreover, as I have argued, the 1900 Act reinforced and reproduced these socio-economic hierarchies. Following its passing, intense resistance to it demonstrated the value that people from all backgrounds understood that 'the knowledge of the most worth' – traditional high status academic knowledge – had for their children. Such knowledge, and the public examination credentials which demonstrated its attainment, increasingly became the key to labour-market entry and ultimately social mobility.

During Parliamentary Debates at this time, middle class politicians characterised working people as larrikins, trouble makers and the 'unfit' who needed civilising. The idea that working class people should be prepared in schools for working class jobs or, in the case of girls, domestic work in the private realm of the home, was underpinned by discourses of Social Darwinism and Eugenics. These reinforced the idea that genetic potential, which most working class people were assumed to lack, was a dominant factor in future life chances. Such discourses do not support an egalitarian ethos. Below the surface of egalitarian rhetoric, these dominant discourses ensured the maintenance of divisions or relations of inequality. The Victorian attitude that 'the devil finds work for idle hands' comes through in the rationales presented in the Parliamentary Debates and manual and technical education was seen as the answer to social breakdown and worker disobedience.

After 1890 a new middle class emerged in New Zealand. They were influential in promoting educational polices that prepared children to accept the 'roles' they would undertake in the workforce and ultimately in society which also supported their middle class interests. It had become clear, however, that as the need for the industrial division of labour intensified and the economic system grew, a class consciousness emerged and workers became more militant. This reached a pinnacle in the Maritime Strike of 1890 when the state supported the capitalist cause.

As Apple (1979) points out, the production system, the management of workers, and social life more generally, operates more 'efficiently' when a workforce is malleable. Punctuality, obedience and diligence in the service of those in authority, were important elements of the curriculum and pedagogy of schools at that time. Socialisation and aspects of pedagogy that emphasized these ideas were the backbone of manual and technical

education policy, and reflected the broader social efficiency discourses gaining hegemony in New Zealand. The faith in Social Darwinism, that people were naturally suited to specific roles in life, was reinforced through a school system that taught different curricula to different classes and which inculcated specific dispositions and values in different school populations.

Care

The discourses of economic instrumentalism that supported the introduction of the 1900 Act, did not assume any public role for girls in the world of work and the promotion of a competitive, productive economy. It is hardly surprising then that there is no specific reference to them in the debates leading up to the Act and in the legislation on manual and technical education. Prior to 1900, technical education for girls related to the traditional female roles of domestic economy, needlework and cooking. These were part of the curriculum of both primary and secondary schools. However, none of these areas had sufficient status to be discussed as integral components of manual and technical education.

During the years leading up to the passing of the Act, middle class women had promoted compulsory domestic training for girls, a campaign later taken up by prominent medics as I detailed in Chapter 5. This coincided with a sharp decrease in the numbers of girls seeking work in domestic service. This 'problem' was a direct result of the new labour market opportunities opening up for women, particularly in the developing manufacturing industries. The movement of female labour into non-traditional areas was regarded by the elites and the professional middle classes as a serious disruption to the 'natural order' or the established social hierarchies in the colony.

As this Thesis has documented, the dominant assumptions around the re-assertion of the 'gendered culture' embodied biologically essentialist rationales about intellectual capacity, subjectivity, and the ability of women to participate in the public world of work. Women were not seen to be emotionally, intellectually nor physically up to, or 'fit' to undertake public roles. These assumptions were supported by pseudo-scientific discourses such as Social Darwinism and Eugenics. Vitally of course, the reassertion of domesticity for women was integral to the maintenance of the private world of the home, which supported the expanding numbers entering an increasingly diversified and sophisticated capitalist work force.

Craft

Craft capability was socially and historically associated with the manual workforce. It had been the domain of males since at least the 15th century when Craft Guilds had apprenticed boys to learn the intricacies of the craft trades. Craft activity in the early settler culture was highly gendered and was integral to the establishment of the colony, the survival of the settlers, and all aspects of colonial growth and development.

With the coming of industrialization, women were unprepared for the changes having traditionally lacked both capital and education to develop craft skills beyond the home. Women began to enter the workforce as unskilled workers in New Zealand in the 1880s when machinery was becoming part of the industrial scene. Because of their historical association with craft, men were well placed to maintain a monopoly on the new skills required in the industrial sector. They had built up knowledge and skills over hundreds of years from the association between masculine cultures and technology. Their confidence in such areas was no more natural for men than the roles designated for women. Such processes were culturally mediated and, as such, open to the possibility of change. The institution of gender differentiation within the formal curricula of schools reinforced the status quo and the belief that girls were technically incompetent. Furthermore, female crafts were not considered to be technical skills. This idea also ensured that many generations of women viewed themselves as technically incompetent, a view reinforced by the school curriculum. Technical confidence is a key source of men's power over women and this confidence extends into the workforce allowing men to access jobs with status and high incomes.

The inclusion of craft activities in manual and technical education was justified through recourse to the Sloyd method, which was underpinned by assumptions that hand/eye/brain activities were directly related to the growth of intelligence. Those proposing the inclusion of manual and technical education were well aware of the low status of activities associated with hand and practical work. The desire to elevate the status of craft activities was central to its promotion by the state. While the 1900 Act ensured this to some degree it never achieved the status of academic knowledge.

Key Players that Promoted the 1900 Act

The 1900 Act was instigated and promoted by a small group of MPs. Astute choices were made by these men around the state bureaucrats chosen to work beside them and translate their ideas into a workable system. These politicians were Sir Robert Stout, William Pember Reeves, and Richard John Seddon. The central bureaucrats were Arthur Allan Riley, George Hogben and Josiah Hanan. These men shared a powerful personal attribute. They were all able to use the power of rhetoric and they did this very successfully to achieve their aims. The values that they brought to the policy development process were based on their own experiences as privileged, middle-class men. Few challenged their hegemony because the policy rationales underlying manual and technical education were not made available to the public for discussion.

The role of these men in the policy development process exemplified an elite model of policy making. It placed disproportionate power into the hands of a few (Crump, 1993). Elite groups generally wish to maintain the social, political and economic structures that are to their own advantage, and thus the views of ordinary citizens are not sought (Ibid). The political scene was set for deterministic, top down policies driving the establishment of this form of education.

Education or Training

As I argued in Chapters 4 and 5, from the 1890's onwards, the modernization of colonial society, the expansion of the productive sectors and the economy and the expansion in state bureaucracy, required people with diverse technical expertise. Such needs could have been met through expansion of Day Technical and Continuation Schools and university departments. This would have left schools to carry on with providing a rudimentary 'education' while leaving other institutions to undertake such 'training'. If policy makers at the time had been intent on facilitating egalitarianism in education they would have followed the path proposed somewhat later by the Italian social theorist Antonio Gramsci (1971) who argued:

> ... the answer to the question of modernizing education was not to create a whole system of different types of vocational school but to create a single type of formative school (primary-secondary) which would take the child up to the threshold of his choice of job, forming him during this time

> as a person capable of thinking, studying and/or controlling those who rule (p. 41).

This study clearly shows that the New Zealand state, through the actions of the Liberal Government and its 1900 Act was not interested in educating the majority of youth in the development of the capacities outlined by Gramsci. Indeed, throughout the ages to the present time, the process of 'educating' has been considered dangerous with academic and liberating modes of curricula having the potential to encourage critical forms of thinking, which can challenge the power of elites and the state. I have argued that the intention behind the policy for the 1900 Act was not to create persons who would be capable of thinking, studying and becoming critical. Such a system would not have served the requirements of a society dominated by the capitalist mode of production.

Implications of the Study

Being introduced to critical thinking rather late in life sensitised me not just to its empowering capacity but also to the paucity of its use during the policy development process and the introduction of *Technology in the New Zealand Curriculum* in 1995. I was surprised when working with primary teachers (and students in training) how few of them questioned why the state had inflicted a new curriculum area onto an overcrowded curriculum. While they often recognized and pointed out that the language and methods were more relevant to the factory floor than the classroom, few went on the question why such a subject had been introduced. The suggestion by me that this was related to the political nature of education produced shocked looks and sometimes outright disbelief.

Technical and technological change are integral to the ways in which societies operate. Children need to understand the effects of this and to discuss and critique the positive and negative effects of technical change and its effects on society and vice versa. Such an approach would subsume the 'how' questions of technical and technological education beneath the 'why' and 'what if' questions. That this did not occur in 1900 is not surprising given the dominant discourses of the era. That a critical approach to technical change was not integral to *Technology in the New Zealand Curriculum* (O'Neill & Jolley, 2004) one hundred years later, says a great deal about the role of schools in New Zealand society and whose interests they serve.

A key role of teachers, is to understand ways in which education policies shape curriculum, pedagogy and evaluation systems. Such policies are key mechanisms for ensuring the mobilization, organization and exploitation of scientific and mechanical productivity, which is at the heart of all capitalist societies. Education policies embody moral and ethical obligations and only by questioning policy decisions can the values of policy makers be exposed. If we fail to situate the problems of contemporary education historically then we fail to understand the complex dynamics which have *always* been integral to the relationship between the state and the education system. Recognition of this relationship is the beginning of the development of a critical approach to education and a safeguard for democracy.

Conclusion

In this section I have presented a synopsis of the findings of the study using the key questions to guide the answers. This thesis has demonstrated that the presentation of rationales for developing manual and technical education in the *NZPD*s during the policy development process was linked to the social, political and economic changes of the era. In particular, while some educational benefits were identified, the discourses were predominantly related to the expansion of New Zealand's trading capacity following the transition from a pre-industrial to a capitalist society. Integral to these changes was the state's need to create a society in which people were prepared for what was believed to be their designated roles in their future lives. The approach to manual and technical education in the 1900 Act was a limiting curricula. The technical training needs of the developing capitalist society could have been achieved through institutions already set up to 'train' people while leaving institutions of education to educate. This was not the intention behind the 1900 Act, which was put into place to guarantee a biddable workforce, the reinforcement of the gendered culture, and to satisfy the state's need for an education system that reflected social efficiency rationales.

This study has demonstrated the power and importance of a critical approach to understanding the development of and, in particular, the political purposes underlying education policy.

A Final Word

> ... documents are calls for action, calls to use scarce resources and political power for specific ends. Because of this, the language... needs to be analysed not necessarily for its truth value (though... this is not unimportant) but in its rhetorical use (Apple, 1986, p. 175).

Policy documents are significations of the ideologies that dominate a particular era. The analysis of the debates, reports and documents relating to the 1900 Act and the social, political and economic background of the era, illustrates Apple's argument. At the heart of these documents was the political rhetoric of justification for a system that perpetuated the mode of production and the mode of reproduction. Ideologies inscribed within these policy texts emerge from and also reflect the existing relations of domination and subjugation in society. This Thesis has demonstrated that the policy for the 1900 Act was tightly aligned to the economic restructuring that followed the long depression and the exponential growth of capitalism. It emerged from a masculine, middle class hegemony in response to a crisis in public confidence and was designed to produce a specific sort of person for a specific sort of society.

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