

**Gender and tertiary education: Is it
useful to talk about male disadvantage?**

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Abstract

Internationally there is much research showing that achievement within the education sector is a key determinant of positive labour market outcomes as well as supporting many other areas of wellbeing. Against a backdrop of overall strong and very positive improvements in educational participation and achievement, there is evidence that a gendered 'education transition' has taken place in New Zealand. The transition in tertiary education is demonstrated by higher rates of participation and achievement of women relative to men, particularly among the Māori and Pacific communities. Does this transition matter? Certainly in the past higher participation and achievement by men prompted much concern about the need for women to improve their relative outcomes. While now there is some concern expressed about boys' achievement within schooling, the same level of disquiet is not being expressed about the relative underperformance of men in tertiary education. In this sector concerns focus on overall Māori and Pacific under-representation, and there is still attention given to female under-representation in areas such as engineering or building. Is this because the gaps that favour women are minor differences or, in fact, are they new and important disparities? We find there is no objective measure that can tell us when gender gaps are important. However, historically gaps of the size currently found in tertiary education, but in favour of men, did cause concern. And currently similar sized gaps, again in favour of men, in areas such as pay continue to be high on public policy agendas. Further complicating this analysis of gaps is whether absolute gains to both men and women are considered, or whether simply relative positions are examined. Overall, the paper suggests that much of the gender analysis undertaken within the tertiary education sector, as well as within much of the wider policy world, remains based on a premise of female disadvantage or, alternatively, focuses on very specific areas of female disadvantage while often ignoring parallel male disadvantage. Focusing on one part of a binary population, without looking at the other part, has the potential to create new inequalities. We suggest that this needs to change to allow a more sophisticated analysis of gender and ethnic gaps. This includes a requirement to consider the growing heterogeneity of choices and outcomes for women and men, as well as identifying and overcoming the remaining constraints on choice for both men and women.

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Introduction

In New Zealand and internationally there is much evidence showing that achievement within the education sector is a key determinant of participation in the labour market as well as being positively associated with many other measures of wellbeing. There is also evidence of very strong gains over recent decades for both women and men in terms of participation and achievement in education. However, in New Zealand and in other industrialised countries there is also evidence that a gendered ‘education transition’ has taken place (Callister *et al*, 2006&2008; Dobson, 2006; OECD, 2007). This transition, starting within the school system, but strongly evidenced in tertiary education by higher rates of participation and achievement of women relative to men, raises the question as to whether women are no longer a disadvantaged group. In fact, the question is not new. As far back as 1997, an analysis of data from the longitudinal Christchurch Health and Development Study¹ led Fergusson and Horwood to state:

... it is clear that by the mid 1990s, any female educational disadvantage (up to the point of school leaving) has largely disappeared and has been replaced by an emerging male educational disadvantage (Fergusson and Horwood, 1997: 94)

In New Zealand are men, or more accurately a particular group of men, now disadvantaged in relation to education? Is a concept of male disadvantage in education useful and, even if it is a helpful concept, how can we actually measure and

¹ The Christchurch Health and Development longitudinal study has followed 1,265 children, born in Christchurch during 1977, since infancy.
For more information see <http://www.chmeds.ac.nz/research/chds/index.htm>

assess such disadvantage? And can educational outcomes be disconnected from other measures, such as occupational segregation and pay gaps?

There is a long history of analysing the disadvantages women have faced, and may continue to face, relative to men in New Zealand, as well as in most other countries around the world. In New Zealand, there is a considerable body of academic writing that outlines the disadvantages women have historically faced in education (examples include Hamilton and Bird, 1992; O'Neill, 1993&1994; McDonald, 1996; Gilbert, 1999). As an international example of considering gender and disadvantage, the Global Gender Gap Index, undertaken yearly by the World Economic Forum (2007), provides a summary of the types of areas considered when assessing female disadvantage. The report covers four broad areas: economic participation and opportunity; education; political empowerment; and health and survival. In this, and similar measures, the economic component focuses on relative wages and income as well as representation of women in key higher-income occupations. The index for education focuses on literacy levels, then primary, secondary and tertiary sector enrolments. Political empowerment measures cover areas like seats in parliament, the proportion of female ministers in government and how many women have held the top political positions. Finally, health and survival measures focus on areas like life expectancy and sex ratios at birth. Some of these measures are not independent. In particular access to education is a critical foundation to achievement in areas such as paid work, and higher education is often associated with better outcomes in many areas, including health (Nair, Smart and Smyth, 2007). Other analysts suggest a much wider set of gender-based measures are important, with examples including crime, unemployment, unpaid work, social exclusion and time poverty (Briar, 2000). While there can be a wide variety of measures, when considering female disadvantage the tools are often relatively simple, relying on averages or simple ratios of men to women.

In parallel, and at times with a gender dimension, in New Zealand there has been much effort put into analysing ethnic-based disadvantages in New Zealand, particularly in the health and education sectors. Some early conceptualisations of ethnic disadvantage were in terms of 'deficits', but the differences in outcomes are now often portrayed as disparities (for example Ajwani *et al*, 2003). The identification of disadvantage amongst Māori and Pacific peoples results in these being target groups for EEO and special measure policies, while when disadvantage because of gender is the issue, women are usually the target group. At times there are overlaps between ethnic-based and gender-based disadvantage and in some contexts both factors, in complex ways, can reinforce disadvantage.

This paper explores a number of issues in relation to male and female participation and achievement in tertiary education. While it is recognised that many of the influences on participation and achievement are set in place in the early years of a child's life, differences in outcomes between boys and girls pre-tertiary are not specifically explored here.

First, there is a brief exploration of some of the concepts of equality that might be relevant. This includes a discussion of what 'differences' might be and, alternatively, what might be considered 'disparities'. Next there is a section on frameworks for measuring equality between men and women. This primarily focuses on New

Zealand, but examples from other countries are included. Incorporated in this section are examples of calls for more complex analysis of gender in light of the changing patterns of enrolments and completions in both schooling and tertiary education.

Then the paper goes back a step and considers whether differences in educational participation and outcomes actually matter. As part of this we briefly explore whether we are training who society needs in terms of the balance between male and females or whether society simply needs to adjust to the collective choices men and women are making. We also consider what unit of analysis should be used when considering educational differences between men and women. For example, should it be within tertiary providers and, if so, should it be at a course, faculty or overall institutional level? Or should there instead be overall measures at a country-wide level. And should ethnicity and gender be considered simultaneously, or is ethnicity more important than gender?

Next, linking into some recent international debates about equality in tertiary institutions, as well as using some current data from New Zealand, we look at a number of empirical ways of considering differences or disparities between women and men. This includes considering whether averages are sufficient to understand differences or whether understanding distributions is now equally important.

Finally, we consider the educational gender analysis in light of recent changes to funding for tertiary education, in particular the enrolment caps placed on many institutions.

In undertaking this analysis we are very aware that debates around gender have often discussed language. In some analysis 'history' has been seen as focusing on men's lives and so concepts of Her-story evolved (for example, Sochen, 1974). This view that language matters continues. For example, Burnier (2006: 861), when studying performance reports in workplaces notes that 'At the analytic level of the sentence, the figurative language, metaphors, and bridging assumptions privilege experiences and actions that are socially constructed as male and rely on traditional gender stereotypes about work, family, and government service use.' But it equally possible for language to have other types of bias, including the possibility that it underplays the position a group of men find themselves in. Therefore, in this paper we refer to some equity policy statements, including recent statements from both Auckland and Victoria Universities, and consider the language in these statements.

Thinking about equality

Equality, at first sight, seems to be an easy concept. However, as many researchers and policy makers have discovered it is, in fact, a very difficult issue. Even the language is difficult - are we discussing 'equality' or 'equity', terms that are often interchangeably used in discussions?² In our discussion we take the lead from Geraldine McDonald who wrote about education and gender in 1996. She uses the

² The 2008 on-line Oxford dictionary states the following for equality • noun - the state of being equal. For equity it notes a number of definitions but the one relevant to this paper is • noun - the quality of being fair and impartial — Origin Latin *aequitas*, from *aequus* 'equal'.

term equality because it reflected the terminology of the previous two decades of discussion about education and expressed the view that “discussions of equality and equity generally canvass the same issues” (p. 132).

As a starting point, it needs to be noted that there are a wide variety of viewpoints about what constitutes acceptable or unacceptable differences in either opportunities or outcomes in a society. But assuming there is a relatively widespread interest in achieving some level of ‘fairness’, what sort of equality should we be looking at?

The most fundamental level is equal basic or absolute human rights (for example equal right not to be exploited or treated inhumanely). Then there is equal access to basic goods (for example food, clothing, shelter, and perhaps even basic literacy). These would normally be seen as obligations under international conventions, including the Universal Declaration of Human Rights (UDHR) which gives international recognition of universal equal rights for all, without distinction of any kind (including gender) (see Article 2) and was formally declared in 1948 by the then General Assembly of the United Nations (including New Zealand)³. At another level there are equal opportunities, such as an equal opportunity to participate in higher education, and along with equal opportunities can go equal treatment, including freedom from discrimination.

The UDHR underpins two subsequent United Nations (UN) covenants, the International Covenant on Economic Social and Cultural Rights⁴ and the International Covenant on Civil and Political Rights⁵, both adopted and opened for signature, ratification and accession by General Assembly resolution in 1966 and both of which also oblige signatories to ensure equal rights for all without distinction (including gender) (see Article 2 for each covenant)⁶. Implicit in these three documents is the idea of equality of opportunity and treatment for all. In 1979, while recognising the initial three documents but based on concerns that they were insufficient to prevent discrimination against women, another UN convention was adopted, the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)⁷. Article 1 of this convention defines discrimination against women as:

..any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field.

It is important, however, to note that this convention is not intended to tip the balance to favour women over men. Article 4,1 makes it clear that temporary measures designed to address female disadvantage should cease ‘when the objects of equality of opportunity and treatment have been achieved’. There is no equivalent to CEDAW for men.

³ <http://www.un.org/Overview/rights.html>. Broadly, the UDHR covers areas of freedom, justice, peace, dignity, protection, the right to the necessities of life and the right to participate equally with others.

⁴ http://www.unhchr.ch/html/menu3/b/a_ceschr.htm

⁵ http://www.unhchr.ch/html/menu3/b/a_ccpr.htm

⁶ Both conventions were ratified by New Zealand in 1978

⁷ <http://www2.ohchr.org/english/law/cedaw.htm>

Ratified by New Zealand in 1985

The concept of equal outcomes is one where much attention is given to gender in industrialised countries with, as already discussed, outcome measures such as pay gaps having prominence in policy discussions. Underlying the idea of equal outcomes is the view that people have similar preferences, that is, they want similar outcomes to others, a point that we will return to a number of times in this paper.

Just as the types of equality are varied, the drivers for equality can also vary. For some people the driver may be social concerns, that is, that equality is important in its own right. For example, it may be important in its own right that women earn the same as men when undertaking the same work. As another example, when considering boys' relative underachievement in education, Jha and Kelleher (2006) take a 'capability' approach when considering equality as a goal. They note (p 9):

Any practice or trend that prevents either boys or girls, or both, from realising their full potential to grow into responsible and aware individuals needs to be perceived as a hindrance.

They go on to suggest:

It is in the interest of both men and women to move away from existing unequal relations of gender. Education can be and often is perceived as a process of expanding human capacities to contribute to the making of a just, equal and compassionate society.

Some people, particularly those within the education sectors nationally and internationally, may see achieving diversity as an important institutional and societal goal.⁸ This diversity is not fully possible if particular groups, including men or women, people from particular ethnic groups, or those with disabilities, are under-represented in particular areas.⁹ As a local example, Auckland University's 2008 report *Undergraduate Admissions and Equity Taskforce Report* articulates the need for both diversity and quality (University of Auckland, 2008). The taskforce states:

...most universities strive to admit a diverse student body, recognising the enormous academic and social benefits that come from diversity, and attempt to select students in ways that take into account academic achievement and other factors that indicate student potential and ability.

In increasing the intake of Māori and Pacific students, who are the major focus for their equity programme, the taskforce decided to go down the representation route and aims to:

match the proportion of Māori and Pacific school leavers admitted to the University with the proportions of such students in the Auckland and Northland region gaining University Entrance; then, within five years, to match the proportion of Māori and Pacific students to those aged 15 and over in the region.

For diversity to be achieved, there is generally seen to be a need to have representatives of all groups in all areas of public life and in New Zealand, when ethnicity is the issue, there is particular emphasis on Māori and Pacific peoples.¹⁰

⁸ For example Harvard University has an Office of Faculty Development and Diversity. Included in its activities is monitoring the changing demographic composition of the staff and student body of Harvard and helping ensure both staff and students reflect these groups.

⁹ This of course raises questions over how under-representation is measured.

¹⁰ There is a question of whether these groupings are too high a level. For example, Pacific people cover a wide range of groups, including Samoans, Tongans, Cook Islanders as well as people from

Equality of opportunities and/or outcomes may be important in enhancing social cohesion through perhaps minimising conflict or unrest. If some groups are falling behind others, this might be a cause of unrest. In addition, if some groups are disadvantaged society may not be achieving optimal economic and social outcomes. Equality of opportunities and/or outcomes may also be important in creating role models and in enhancing quality of service.

It is sometimes assumed, often without much evidence, that when members of disadvantaged groups start to occupy positions of power and influence they not only serve as role models, but also have a better understanding of the problems affecting other members of their group including those who remain disadvantaged. It is then assumed that, based on this empathy or affinity, they will deliver better services to this group than would people who have never been members of the group. The success of the role models may also help to dissipate stereotypes about the groups they belong to.

As an example it is assumed that having more Māori working in the health system and in education enables these sectors to better serve Māori patients and students. Similarly, it is sometimes assumed that having more women in senior management will change the nature of an organisation, including making that organisation friendlier to other women and those (women and men) raising children.

Of course, while historically not considered disadvantaged, men can also be role models. For example, finding men who are successfully working in non-traditional areas such as childcare may encourage other men to enter this occupation. And having more men in teaching, according to some theories, may also improve some aspects of teaching practice and may help boys (and perhaps girls) lift their achievement in education. It may, as Livingstone (2003: 39) notes, convey “the message that learning and academic achievement are for everyone”. Or it could be simply that role models are created within families with some men or women in high-status jobs encouraging their children, including girls, to seek out these jobs.

One problem with all this type of analysis is that ‘class’ may trump other characteristics such as gender or ethnicity and there may be little or no affinity with the disadvantaged within their groups. Sowell (2004), in relation to people who may become potential ‘role models’ through being given a boost via affirmative action programmes, notes that these programmes tend to benefit the already privileged people within overall disadvantaged groups.

In addition, it is likely that role models will work in a range of complex ways. As an example of the complexity of this complexity, a United States study indicates that in African-American families having college-educated older siblings raises college attendance, but this response is not consistent between male and female (Loury, 2003). Young women appeared to be more receptive than young men to positive family influences.

Melanesia. A more complex version of diversity may have broad targets for each main Pacific group. There is also a question of whether there is a variation within Māori groups, for example by iwi and for those without iwi affiliations.

There is also the important issue of equality and equity for whom. In New Zealand, gender and ethnicity tend to define the group being considered. Across-group equality is generally the main measure in public policy debates, that is, differences between men and women, or perhaps between Māori and European ethnic groups. It is less common for the debate to be about within-group equality. For traditionally disadvantaged groups, such as Māori, the emergence of a small group of well-educated high-income individuals may not change the overall average position of Māori much but may create within-group differences which could be as important as across group differences (Chapple, 2000). For traditionally advantaged groups, such as European men, the emergence of a small sub-group who are disadvantaged may again not change average outcomes much. This can lead to the disadvantage of the sub-group being ‘invisible’.

In thinking about gender equality there is always the very important question of how much outcomes simply reflect personal attributes. Vaithianathan (1995) notes that when evaluating the ‘fairness’ of outcomes it is always crucial to ask what part of the allocation was within the control of the individual. Genetics, family nurture and wider societal structures may influence how much control a person or a group has. But it is likely some differences do result from active choices being made. One idea is that measures of gender equality proceed from the assumption that men and women are free to develop their abilities and make their choices free of the restrictions imposed on them by stereotypic gender roles and prejudices. Gender equality in this context means that the different behaviours, aspirations and needs of men and women are considered and valued. Under such a model women and men do not have to become identical, but their rights, duties and opportunities must not depend on whether they are born as women or men. In this concept it is equality of opportunity that matters rather than outcome. However, a major difficulty is determining whether people do actually have free choice or whether their preferences are constrained in ways that may or may not be gender-related. Problems include: 1) individuals may not have equal knowledge about how resources can help them satisfy their preference; 2) preferences may be shaped by environment and not be within an individual’s domain of control in any meaningful sense; 3) choices may not reveal preferences (Vaithianathan, 1995). This issue of choice, or the lack of choice, is explored further in another section of the paper.

Individual tertiary providers think about equity both in terms of their student population and their staff. Both opportunity (participation) and outcome measures are seen as important. As a first example, the 2007 Victoria University of Wellington Equity Report contains three objectives and associated key performance indicators that relate specifically to equity matters. These three objectives are:

- Objective 10: Achieve a domestic student community, at both undergraduate and postgraduate level, that is representative of the wider community, particularly with respect to Māori and Pacific students.¹¹
- Objective 11: Support Māori and Pacific students to achieve the same educational success as other students of the University.¹²

¹¹ The focus on Māori and Pacific students is backed up by data showing their under-representation at Victoria University and within the overall university sector.

- Objective 12: Achieve proportions of appropriately qualified staff, at all levels in the University, which are representative of the relevant wider community (Māori, Pacific, gender, disability).

Gender is only explicitly mentioned in relation to staff, but could be an implicit part of the consideration of the under-representation of Māori and Pacific students. Yet, in terms of enrolments at Victoria University, in 2006 females represented 55 percent of domestic students and males 45 percent. The imbalances are even higher for completions, reflecting that women are more likely than men to complete qualifications at university. In 2006, the proportion of completions at each level of qualification by women at Victoria University were 61 percent (39 percent for men) for bachelors, 67 percent (33 percent) for honours, 63 percent (37 percent) for masters and 64 percent (36 percent) for doctorates. Whether these are important differences is discussed later in the paper.¹³

At Auckland University, The EedO (Equal Educational Opportunities) office works with three main student equity groups at the university.¹⁴

- Māori students
- Pacific students
- Women in science and engineering

Again, in the first two categories, gender may be an implicit dimension of the target groups. However, it is explicit in terms of participation in science and engineering education. In 2006, women formed only 19 percent of engineering enrolments. But equally, only of 15 percent of enrolments in the education area and only 25 percent of enrolments in health studies were male. Yet men in relation to these areas are not viewed as equity target groups.¹⁵ In addition, looking at Auckland University overall in 2006, women formed 60 percent of graduates from bachelors degrees, 66 percent of honours completions, 57 percent of masters completions and 52 percent of doctoral completions. Overall the imbalances at Auckland University, in favour of women, were the strongest within two target groups of Māori and Pacific. In 2006, Māori women comprised 73 percent of Māori graduates and Pacific women 68 percent of Pacific graduates.

Differences or disparities?

When considering either unequal opportunities or unequal outcomes, sometimes the expression ‘difference’ is used, sometimes ‘disparities’ is used and at times ‘gaps’ are talked about. It is difficult to get a clear idea from the literature as to when something

¹² In terms of the statement achieving the ‘same educational success as other students of the University’ is not defined so there is no transparent way of determining if the objective has been met. Is this some ‘average’ measure (which will, of course, move if any group changes its outcomes), is it a measure of outcomes for European students (in which there will be considerable variation) or is it some aspirational goal representing the highest achievers (of which Asian women are over-represented in most areas of education)?

¹³ More detail on the gender balance of enrolments and completions across the tertiary sector can be found in Callister and Newell (2008).

¹⁴ <http://www.auckland.ac.nz/uoa/about/uoa/equalopp/eedo/eedo.cfm?redirected>

¹⁵ Auckland University is a case study in our wider ‘missing men’ project.

is a 'difference' and when it is a 'disparity'. In New Zealand, the term disparity is commonly used in the health sector and generally in relation to differences between ethnic groups in areas such as morbidity and mortality (Ajwani *et al.*, 2003).¹⁶ Dictionaries generally only tell us that a disparity is a large difference.¹⁷ It may simply depend on the 'eye of the beholder'— if one sees a gap as being negative it is a disparity, if the gap is seen as being positive, it may be seen as only a difference.

It could also be that the choice of wording is purely a political choice. Certainly in relation to gender and education there has been much debate about whether there is actually a problem with boys' and young men's education. Some, such as West (2005) have suggested that, in Australia, teachers' unions, educational academics and government policy makers were very slow to recognise a 'disparity' between boys and girls. He suggests that it was lobbying by 'men's' advocates that shifted political discourse. But others, such as Froese-Germain (2006) who say in a Canadian context that the problem has been overstated, imply it is not a disparity but a complex issue with a need to consider which boys are not doing well rather than assuming all boys are having difficulties. In her view, looking at educational disadvantage should not take a 'girls then, boys now' approach.

But perhaps a type of test of whether a difference is actually a disparity is to bring in a time component and also to look at a cluster of outcomes. If a difference is evident for a long time it might be seen as a disparity. Equally, if for example a difference in education is also associated with differences in many other measures such as income, housing and health, maybe this gap is a disparity.

Equality or representation?

Before looking further at ways of examining equality between women and men, it is worth exploring the concept of 'representation'. When considering both diversity and equity, many education providers in New Zealand and overseas refer to a student body being 'representative' of the wider community. Generally this representation is based on ethnicity, gender and disability. As already noted, the 2007 Victoria University of Wellington Strategic Plan contains some key performance indicators that relate specifically to equity matters. One is to:

Achieve a domestic student community, at both undergraduate and postgraduate level, that is representative of the wider community, particularly with respect to Māori and Pacific students.

What does representation in this context mean? Is it a loosely defined term, so that some 'representative' students from the target groups have to be part of the educational community, to be a 'critical mass', or do the students have to strictly mirror a particular population? If it is the latter then in determining under-representation in any area thought needs to be given to both the denominator and the

¹⁶ However, when difference in mortality outcomes between women and men are discussed, with women having better outcomes than men, these are not commonly seen as disparities.

¹⁷ The 2008 on-line Oxford dictionary states the following for difference • noun 1 a way in which people or things are dissimilar. 2 the state or condition of being dissimilar. 3 a disagreement, quarrel, or dispute. 4 the remainder left after subtraction of one value from another. For disparity it notes: • noun (pl. disparities) a great difference.

numerator. For example, when thinking of increasing the representation of Māori medical students, representation could be equal to their ethnic group's share of:

- the total population;
- the working age population;
- specific client groups; or
- the projected share of specific client groups.

These targets can be significantly different in size. For example, if matched against age-based potential client groups, around a quarter of paediatricians should be Māori and 11 percent Pacific peoples, but only 5.5 percent of gerontologists would need to be Māori. Other issues arise when determining representation. How do we count doctors who identify as both Māori and Pacific peoples?

Gender may be easier in terms of defining representation. If representation is related to relative sizes of the male and female population, then in most age groups one would expect 'equality' in the numbers. That is, about half the students would be female and half male. However, if it is a looser sense of 'representation', what proportion of a class is needed? If 20 percent of the students within a particular course are male (or female) is this 'representation', or is this significant under-representation? This issue of numbers will be revisited later in the paper.

Analysing equality between men and women

In New Zealand, a number of agencies have a role in analysing the disadvantages women may face. These include the National Advisory Council on the Employment of Women (NACEW) and the Equal Employment Opportunities (EEO) Programme within the Human Rights Commission.¹⁸ However the main agency is the Ministry of Women's Affairs (MWA). The MWA has taken the lead in gender analysis and has set out guidelines.¹⁹ This analysis comes from an historic starting point of women being a disadvantaged group. For example, the MWA notes: 'as we continue to seek ways to increase opportunities and advance the status of women in our society, gender analysis offers a new tool in understanding and developing policies and services that promote gender equity' [Ministry of Women's Affairs, 1996: 1]. This type of analysis is supported by a number of international agreements including United Nations Convention on the Elimination of All Forms of Discrimination Against Women, and the Platform for Action document negotiated at the Fourth World Conference on Women in 1995.

The principles underpinning the gender analysis framework proposed by the MWA are (p2):

¹⁸ One of the aims of the EEO program is 'Monitoring of the progress of women moving into leadership roles in the state sector, corporate, legal, academic and other fields through intervention strategies developed with business, unions, industry and the state sector', <http://www.hrc.co.nz>

¹⁹ <http://www.mwa.govt.nz/gender-analysis>

- gender analysis is a critical component of quality policy - one of the tests through which any policy proposal needs to be put in order to predict its outcome and ensure its effectiveness
- policies which reflect the realities of women's lives will assist in enabling women to contribute fully to society, and society as a whole to benefit from the skills women have to offer, and thus contribute to the economic growth of New Zealand
- unless policies and their delivery mechanisms reflect women's life experiences, women will be disadvantaged. Use of this framework will therefore contribute to the improvement of women's social and economic position.

The MWA document goes on to note that gender analysis recognises that: [pp 4,5]

- women's and men's lives and therefore experiences, needs, issues and priorities are different
- women's lives are not all the same; the interests that women have in common may be determined as much by their social position or their ethnic identity as by the fact they are women
- Māori women's life experiences, needs, issues and priorities are different from those of non-Māori women
- the life experiences, needs, issues, and priorities vary for Pacific women and other groups of women (dependent on age, ethnicity, disability, income levels, employment status, marital status, sexual orientation and whether they have dependants)
- different strategies may be necessary to achieve equitable outcomes for women and men and different groups of women

Can this type of tool also be used in analysing male disadvantage? In some parts of the MWA framework the term 'men' could simply replace 'women'. But overall, this is not a gender-neutral analytical tool. While there is recognition of differences within women as a group, including by age and ethnicity, overall the framework comes from a view that women are the disadvantaged group and men are the advantaged group.^{20 21}

In this type of analysis, targets are generally not explicitly set. When they are, there is generally the view that women should form half of any target group. For example the Human Rights Commission (2007: 1) note in relation to representation on boards:

In the public sector women are making good progress. Women's representation is still below the 50% target of women on statutory boards by 2000 promised by former Prime Minister Jenny Shipley to the Beijing Women's Conference in 1995. But it is in line with the Ministry of Women's Affairs Action Plan for New Zealand Women (2004, March) that pushed out the 50/50 promise to 2010.

Many other forms of gender analysis take as a starting point female disadvantage. Against a backdrop of increasing numbers of women relative to men in tertiary

²⁰ It should be noted that within each of the categories age and ethnicity there is also much diversity. For example, there is considerable diversity within ethnic groups.

²¹ This MWA type of framework has been criticised by Birks (1998, 1999).

education, but looking specifically at ‘male power’ within tertiary education, Cotterill *et al* (2006: 404-405) suggest that we need to look behind the raw numbers.

...simply being a woman, acting in the masculine spatiality of higher education, can be deemed a challenge. Certainly, there would be those who would cite the over-50% of students in higher education who are female, and the increasing number of women employed as researchers, lecturers, professors and academic administrators, to argue that this cannot be the case. However, mere presence hardly constitutes an adequate criterion for judgement. Rather, we need to consider how being female continues to represent a challenge to the prevailing, and continuing, sense of ownership of the various spatialities of higher education, and how this space is invested with masculinity, neoliberalism, Whiteness and middle-class values.

Again initially focusing on tertiary education enrolments, but then widening the measure out far wider, Hayes continues the theme that a single gender measure is not enough:

Until women gain a greater share of higher degrees, labour force participation and earnings from income, their levels of participation in higher education should be maintained in order to preserve the gain that women have made and to ensure that they continue to improve their position relative to men (Hayes, 1999: 97).

The idea that complex measures are needed is sometimes captured in indexes that are created through combining a range of measures. The Global Gender Gap Index (GGGI) is one. But care is needed when considering indexes. For instance, Birks (2007) notes that only female disadvantage is considered in the actual GGGI. If women are performing better than men in this index this difference is ignored, a fact the authors acknowledge (Hausmann *et al*, 2007: 5)^{22 23}

In some debates, sometimes simple measures are used and at other times in the same broad discussion more complex measures are demanded. An example is the debate as to whether it matters that males, as in most other industrialised countries, are highly under-represented in school teaching in New Zealand.

When imbalances amongst school principals, a position of power, are noted it has long been considered a useful goal in itself to have roughly equal numbers of men and women (for example, Brooking, 2004). Yet, when some commentators consider the wider teaching profession they more carefully scrutinise the reasons put forward as to why it might be useful to increase the number of male teachers (for example in New Zealand, Livingston, 2003; Middleton, 2008). In Australia, the Education Union

²² Another problem in indexes is the weightings given to each component of the index. For example, it may be that as much weighting is given to the proportion of women in top jobs (which may represent only 2% of the population) as to the proportion of women in education (which might affect 20% of the population). Weightings can highlight or disguise differences. This point is also covered in Birks (2007) among the general criteria to consider when using indices.

²³ This index is not the only example of gender analysis where specific female advantage is ignored. A 2008 comparison of hourly incomes for men and women in New Zealand ignores those situations where groups of women earn more than groups of men (McGregor 2008). Table 16 of the New Zealand Census of Women’s Participation have blanks for ratios of Pakeha women to Māori men and for Pakeha women to Pacific men. In both these ratios, the Pakeha women earn more than the men.

has also called for clear evidence, within an overall message suggesting that many of the concerns about schooling for boys are ‘alarmist’:²⁴

The AEU believes that recent debate on boys' literacy, male role models and teacher scholarships is based on anecdotal evidence supported by a backlash against the "feminised" education workforce. At the heart of these issues, whether they be figures on the underperformance of some boys; the fact that teaching is undervalued because it's seen as women's work; or that gender programs in education departments do not specifically address the needs of boys; is misinformation and misogynistic/reactionary measures. The AEU wants to provide members with quality research and sensible solutions to the challenges in this area, and to do so without the current alarmist, ignorance that goes with the Federal Government's handling of this inflated crisis in schools.

Certainly a number of theories have been put forward as to why it might be useful to have more males in teaching. These include creating positive role models or having a style of teaching that enthuses boys. But if clear evidence is not available to justify why more men are needed in teaching perhaps the gender imbalances cannot be portrayed as a problem. Certainly, at times the New Zealand government has indicated that gender equity in teaching is a not priority. For instance:

13390 (2006). Judy Turner to the **Minister responsible for the Education Review Office** (26 Sep 2006): Is the Education Review Office concerned with the gender disparity in teaching staff in primary schools; if so, what priority has been given to addressing this disparity?²⁵

Hon Steve Maharey (Minister responsible for the Education Review Office) replied: ERO's focus is on the quality of the teaching provided in the school. ERO does not collect information about teacher gender and is not in a position to comment on any teacher gender disparity in the primary sector

As demonstrated in this quote, ‘quality of teaching’ is often seen as the over-riding goal. While some authors consider ‘representation of a group to be important (Livingstone, 2003), equality of numbers in its own right is generally not seen to be a sufficient reason to seek a better gender balance in teachers.²⁶ Yet, some commentators would suggest that there must be some problems in ‘quality of teaching’ if girls are, on average, performing better than boys (Baker: 2006). This example leads into a wider question of whether gender differences in education participation and outcomes actually matter.

Do gender differences in education participation and outcomes actually matter?

The skills an individual needs to get a steady job, understand a tax form, or put together a “partially assembled” item from a mail-order catalogue are not fixed for all time. Nor do they depend on some impersonal technological imperative. They depend on the skills that other members of the society have. When most people are illiterate, society organizes itself on that assumption. Work is arranged so that very few workers have to read instructions, taxes are levied on the assumption that ordinary citizens cannot be expected to fill out forms, and Sears

²⁴Gender equity – Boys’ education and male teachers, <http://www.aeufederal.org.au/Debates/GendEquity.html>

²⁵ See Hansard <http://www.parliament.nz/en-NZ/PB/Debates/QOA/>

²⁶ A similar argument based on ‘quality’ being considered rather than gender could be put forward in relation women’s under-representation in areas such as private sector boards.

does not sell items that only a Swiss watchmaker can put together. When most people can read relatively complicated material, society reorganizes itself to take advantage of this fact, and those who cannot read such material are left behind.

It follows that if most citizens improve their reading and math skills a lot, while the least adept improve only a little, the least adept may become more of an underclass, even if they are more skilful than their counterparts were a generation earlier.

(Jencks 1993: 180)

In all OECD countries there is broad agreement that education and, more importantly the skills that education can develop, are critical factors in determining a person's opportunities in the labour market as well as many other areas of life. A number of reviews around broad issues of upskilling versus deskilling suggest that having a basic, but potentially always rising, level of literacy, numeracy and social skills is a key in determining whether a person can participate in the labour market and in many other areas of life, including the length of life itself (Callister, 2000; OECD 2007, Ajwani *et al* 2003). The least adept therefore need even more assistance to reach these levels if they are not to become an 'underclass', isolated, perhaps through being in prison or being unemployed, from wider society.

At the economy-wide level, there is much evidence to suggest that labour demand in advanced industrialised economies has for a long time been shifting towards occupations that require higher levels of cognitive skill. In particular, there has been strong growth in skilled managerial and professional occupations across most industries, as well as in some areas of trades. At the same time, there has been a major loss of manual skilled and unskilled routine-production type jobs in industrial economies. In addition, in industrialised economies there has been significant growth in "in-person service" occupations. These service sector jobs can be highly skilled, such as nurses or teachers, through to being relatively low-skilled occupations that are found predominantly in the retailing, hospitality, business and financial services, and in community and personal services.

There is now a group of people in industrialised countries who have insufficient skills, either through lack of natural ability and/or poor education, to even enter the labour market or to function adequately in many areas of an increasingly complex world. Reducing the size of this group would seem to be important. In doing so there is a gender component, as men tend to be over-represented in this group (in relation to New Zealand, Dixon 1999; in relation to Australia, Lattimore 2007). For example, in Zealand in 2006 in all five-year age groups from 20-49 there were significantly more men than women with no formal qualifications. This is despite there being more women than men overall in most of these age groups (Callister and Newell, 2008).

Is there also a gender issue at the higher end of the skill set? Before even looking at the numbers, a range of questions need to be asked:

- What area of skills is to be considered? For example, are all tertiary qualifications to be considered together or should the different levels, that is, certificates then other levels through to doctorates, be considered separately?
- Should individual subject areas be considered? For example, does it matter if women dominate nursing, or come to form a high proportion of doctors, but men dominate engineering and computing?

- Should one's focus be the demand for particular qualifications? For example, women may be concentrated in subjects for which there is declining demand while men focus on qualifications that are in short supply and thus can lead to high incomes.
- Should one consider alternative routes to high skill, high-income jobs? For example, Gilbert (2001) has suggested that young men may be avoiding traditional university and instead moving via other paths into high-income information and technology or finance jobs.²⁷

As a starting point, research by Nair *et al* (2007: 196) shows that:

- Attainment of tertiary qualifications is associated with a higher likelihood of employment – especially during times of economic recession.²⁸
- Those with tertiary qualifications earn more than those without.
- The successful completion of a tertiary qualification results in a premium on earnings over those who do not complete.
- There are better health and lifestyle outcomes for those who attain tertiary qualifications.

However, Nair *et al* also demonstrate that the level of the qualification studied and the field of study are the two most important factors impacting on the economic gains from tertiary education. Looking at income five years on from the time of qualification completion, the researchers found that the estimated earnings premium for an individual who completed a bachelor's level qualification is around 30 percent more than someone who studied towards levels 1–3 certificates. Those who studied at the postgraduate level earned about 20 percent higher than someone who studied at the bachelor's level. Both women and men gain by having higher qualifications, but the premium for men five years on is higher than for women. Overall, these data suggest that analysing level of education is important.

The Nair *et al* study also confirms that when considering earnings it is important to look at subject and course choice, but then also to look at occupation and industry. : Other research suggests that when comparing women's and men's earnings a number of other variables need to be considered. One in particular is whether women have had children and whether this has meant time out of paid work and if so, how much. Issues of paid and unpaid work should also be considered (for example Joshi, Paci, and Waldfogel, 1999).

However, Gilbert (2001) suggests that over time some types of qualifications, and associated occupations, become devalued, while others increase in value. This relates to the idea that 'feminisation' of areas of society devalues these areas. Gilbert particularly notes the rapid increase in the proportion of women in legal and medical education and states:

Ten or twenty years ago, law and medicine were high-status professions which required their practitioners to possess a huge knowledge base (that is, 'knowledge' conceived of in traditional ways - of which more later) and an ability to follow and use highly complex procedures, the acquisition of which requires a great deal of hard work. However, the members of these professions are gradually being re-defined as the 'providers' of health or

²⁷ This appears to be based primarily on conjecture rather than evidence of such occupational shifts.

²⁸ In this context the word attainment is the same as completion of a tertiary qualification.

legal 'services', and their status and earning power relative to other occupations is diminishing. Middle-class young women are moving into these professions at a time in which middle class young men are not entering them, but are instead moving into sectors such as information technology, finance and investment. These sectors, in contrast to law and medicine, are distinguished by their valuing of risk-taking, creative, innovative, 'breaking set' behaviour, by their valuing of the ability to develop 'just-in-time' knowledge (as opposed to 'possessing' large amounts of knowledge - in its more traditional forms), and by their dismissal of inflexible procedures and rule-following. Looked at in this light, the recent increase in girls' apparent success in the school system is meaningless - in terms of the way this debate is usually framed. It is clear that this success is, to all intents and purposes, illusory, and that it will not confer on them the competitive advantage in the workplace that it was widely assumed it would (Gilbert, 2001: 7).

This view would suggest that instead of focusing on areas of education where females dominate, the areas to watch may be those that are growing rapidly and where employment is high-income and possibly male dominated. Alloway and Gilbert (2004: 109) suggest a need to look carefully within any enrolment data to see whether women are still concentrated in 'feminized 'mass' professional areas' such as teaching and nursing. These are the types of area of qualification that Alloway and Gilbert see as having little social and financial recognition.

When considering 'gaps' in education, some of the recent United States research suggests that too much attention has been given to the gender gap when the really important gap is based around ethnicity and family economic circumstances. For example Corbett, Hill and St. Rose (2008: 4) suggest that many girls as well as boys in the United States are not acquiring the educational skills needed to succeed in the 21st-century economy and go on to state '... the crisis is not specific to boys; rather, it is a crisis for African American, Hispanic, and low-income children'. Similarly, under the heading 'Generalisations about gender won't help boys achieve', a press release by the PPTA in relation to the 2008 Ministry of Education's 'boys report' suggested that 'gender inequities in educational achievement are due more to socio-economic circumstances rather than gender itself.' Determining whether it is actually true that ethnicity and/or socio-economic status matter rather than gender, requires care in developing analytical frameworks, care in how the data is collected and analysed, and care in how the data are then reported. Some of these issues are explored later in the paper. The socio-economic gradient always raises questions about the ability of people to make choices or whether choices are limited, for example through discrimination.

Choices (or lack of them)?

When considering the broad topic of boys' underachievement in education, Jha and Kelleher (2006) argue that historically in most societies girls and young women were discriminated against in terms of access to both schooling and higher education. They suggest that women were also often discriminated against in areas of employment and that affected their educational choices. In contrast, Jha and Kelleher suggest that boys' current disadvantage does not come from discrimination, but instead through 'choices' being made. But the authors recognise choices, aspirations or preferences

can be limited by social norms, including possibly narrow conceptualisations of masculinity. Choices may also be limited by biology.²⁹

It is very clear that in many parts of the world girls and women face considerable barriers in many areas of life. However, there is an on-going debate as to whether in the industrialised world girls and women are still discriminated against in education and employment.³⁰ It is also possible that in some situations boys and men may be discriminated against, for example in terms of employment as early childhood teachers (Farquhar *et al* 2006). For both genders, this may not be overt discrimination that is easily identified but may be covert and possibly unintentional. If differences in outcomes are found, but in favour of men, it is still often assumed that this is due to discrimination. As an example, when focusing on the lack of women on corporate boards in New Zealand, the Human Rights Commission (2008) headlined this as a 'lockout' of women from company boardrooms. But what if men and women are, freely making different choices?

In her 2000 book, *Work-Lifestyle Choices in the 21st century: Preference Theory*, Hakim argues that with many options open to them, women are now deliberately choosing three very different, diverging work-lifestyles:

- Home-centred women give priority to children and family life and prefer not to be in paid work
- Work-centred women give priority to paid employment or other competitive activities in the public arena
- Adaptive women prefer to combine paid jobs and family life, to have 'the best of both worlds'.

Hakim argues that men can fit into these categories but that most are 'work-centred' whereas this applies to only a minority of women. She suggests that men will retain their dominance in the labour market and in politics because only a minority of women are prepared to be 'work-centred'. Within this theory, Hakim (1996: 133) gives one idea why women might still be strongly attracted to tertiary education, noting that '[h]igher education qualifications may be acquired to ensure a girl marries a partner of at least equal status rather than with a view to acquiring marketable skills for long-term employment.'

While labour participation has increased markedly for women in most industrialised countries, with the highest participation by those women with higher education, in the United States, Vere (2007) notes that a significant number of younger well-educated women are realising they 'can't have it all' and so are 'choosing' not to commit to the labour market in a way that might be expected.³¹ Continuing the

²⁹ There is a strongly expanding sociobiology literature. Sociobiology is based on the idea that some behaviours are at least partly inherited and have been affected by natural selection over a long period of time. The theory predicts that humans will act in ways that have proven to be evolutionarily successful over time, which can among other things result in the formation of complex social processes and behaviours for women and men that have proven to be conducive to evolutionary fitness. For example, men have evolved with a comparative advantage in tasks that require physical strength, while women may have developed superior nurturing skills. However, while potentially important in relation to choices being made by women and men, this literature is not directly considered in this paper.

³⁰ In part, this is because measuring discrimination is very difficult.

³¹ Vere also notes that fertility rates have been lifting amongst these well-educated women.

contentious debate fired up by Harvard president Larry Summers in 2005³², research by Rosenbloom (forthcoming) suggests that choices by women are an important factor in relation to their under-representation in the information technology industry.

However, the ideas of Hakim and others have been strongly contested with the view that, even in modern times, women have strongly constrained choices.³³ Many factors are seen as still working against female success, including discrimination and, as discussed by Vere, that workplaces are still not set up to allow women (or men) to combine paid work and raising children.

Certainly there is much evidence that historically women have had a narrower set of educational, then occupational, choices than men. In the past, for many women, higher educational choices and the related occupations were focused around teaching and nursing (Goldin *et al*, 2006). Certainly in New Zealand, it is easy to find examples of occupations, such as firefighters, where until relatively recently women were actively discriminated against (Coney, 1993: 236). Some researchers suggest that women still have far fewer paid work options available to them and this then affects their educational choices. As an example, Alloway and Gilbert (2004) focus on a small rural university in Australia where there are fewer male than female students. Their research suggests that men have more job choices locally, for example through apprenticeships, whereas women think more about leaving the area to go to university. They also note that in these rural settings women are less likely to inherit the family farm or the family business. In contrast, discussing boys and schooling in Australia, West (2005) notes how some of the young men at most risk are indigenous males, rural and isolated males. In New Zealand, Aitkin (1999), also in relation to schooling, indicated that underachievement of rural boys relative to rural girls was greater than for urban based youth. Also in New Zealand, although a gender breakdown was not provided in the study, overall young people are less likely to transition into tertiary education and training if their schools are in locations without easy access to tertiary education providers. These are generally rural locations (Ussher, 2007). These examples indicate that describing who has choice, and what limits this choice, is complex.

In New Zealand much attention has been given to gender imbalances in apprenticeships. These overall imbalances are strongly in favour of men. For example, the Human Rights Commission, the Ministry of Women's Affairs and academics have pointed out that men dominate modern apprenticeships, with, in 2005, women holding only 8 percent of the more than eight thousand apprenticeships (McGregor and Gray: 2003).³⁴ This focus on increasing training options for women

³² For information on the debate see <http://wiseli.engr.wisc.edu/news/Summers.htm>

³³ For an example of the types of criticism see Arnt, B (2003) <http://www.theage.com.au/articles/2003/02/06/1044498913134.html>

³⁴ Coney (1993: 236) notes that the New Zealand apprenticeship system excluded women from most areas until the passing of the Apprenticeship Amendment Act in 1972. However, while overall men dominate apprenticeships, the gender balance in specific areas of training can move from male dominated to being female dominated. When enrolments by gender for Industry Training Organisations for 2001 to 2006 are considered, the data show females were more likely than males to be enrolled in programmes covering the following industries: hairdressing; community support services; pharmacy; social services; ambulance education; hospitality; building services contracting; aviation, tourism and travel; retail; public sector; and sports fitness. Males outnumbered females in all other industries, some to a larger (building and construction) or lesser (equine) extent.

can be seen elsewhere. For example, a 2008 report by Business NZ, New Zealand Council of Trade Unions and the Industry Training Federation (2008: 16) notes that pilot projects as part of the Māori Development Projects include developing 'career information, advice and guidance for Māori women'.

For a variety of reasons, including the lack of official agencies focusing on male outcomes, the same official attention is not given to traditionally female-dominated areas such as nursing and early childhood education. In relation to early childhood education, Farquhar (2007: 17) asserts:

Today over 99% of the early childhood teacher workforce is female. That a gender imbalance of this size has gone unchallenged when it would not be tolerated if it were the other around (1% women to 99% men) can only point to sexism.

But does it matter if most builders, mechanics or plumbers are male, or that most nurses, and increasingly doctors, are female? As already discussed, it might matter for a variety of reasons, including simply that such a strong imbalance could be indicating some level of discrimination taking place. Or it may be that relatively high-income tradesperson jobs are not able to be accessed by women. This could impact on individual women and overall earnings for women. But does it matter to anyone else if most tradespeople are men? For example, does it matter to clients if most builders are male? Perhaps there are some women who feel unsafe around men and only want female tradespeople. But it is unlikely that most people care who tunes their car or fixes their toilet.

But might it matter in some occupations if there is a shortage of females or males? An historical shortage of women enrolled in law might have meant in the past not enough women had the skills needed to move onto private sector boards. In turn this would have limited women's ability to access high incomes and thus reinforced the pay gap. But does it matter if there are few men in teaching or nursing? In teaching it might matter if the gender of the teacher has some effect on outcomes for boys and girls. And perhaps there are some men who would prefer male nurses.

The medical profession provides a useful case study. Currently around 60 percent of graduates from New Zealand medical schools are female (Callister *et al*, 2008). There can be positive gains in the shift from a male-dominated occupation to a more balanced mix of workers, but inevitably a change in the size of the gender transition in tertiary education in New Zealand will have other impacts on society, including the labour market. Doctors' personal choices about hours of work, location and speciality have significant social impacts and gender may be influencing these choices.

New Zealand census data and other research show that in many circumstances female doctors work shorter hours than males. Overall, in 2006, six percent of male doctors worked under 30 hours per week (part time), while 28 percent worked 60 or more hours. In contrast, 21 percent of female doctors worked part time, while 17 percent worked 60 or more hours per week. In terms of rural GPs, Goodyear-Smith and Janes (2006) found far more male GPs (76 percent) than female GPs (37 percent) worked full time. If female doctors keep following patterns of, on average, working shorter

hours than their male colleagues, then this means that New Zealand requires more trained doctors to fill any given level of need.³⁵

Both New Zealand and Australian research suggests, for a variety of reasons, female doctors are less willing to work in rural areas (Janes *et al*, 2004; Health Workforce Queensland & Australian Rural and Remote Workforce Agencies Group, 2006; Tolhurst, 2003).

Women are also making some different choices about medical speciality and this is likely to have long-term impacts on the medical labour market. For example, the New Zealand Medical Council (2008) shows all New Zealand vocational trainees in breast medicine, family planning and reproductive health, and sexual health medicine were women. At the other extreme, less than a quarter (23 percent) of trainees in surgical areas were women.

The history of a particular occupation, and with that the history of associated education and training, may be important when considering not only whether women or men are under-represented but also whether there might be barriers to a group studying in that area. As an example, while medical training has switched from male to female dominated, engineering training has always been male dominated with the participation of women growing only very slowly over recent decades. Does this mean that girls at school are not taking the necessary prerequisite courses, or are there barriers to women training in tertiary training, or does it mean that the occupation itself has barriers to women working in it (such as lack of 'family friendly' supports), or is it, as some recent United States research suggests, simply that women are far less likely to be attracted to this sort of work? Equally, as noted, men have an even lower representation in early childhood education training, and their representation has declined since the early 1990s. Again, what is this due to? Are men discriminated against in early childhood education jobs or even warned about the possibility of discrimination due to them being potential paedophiles, or simply, are they not attracted to such occupations? However, there are some occupations, and training, which have switched from male dominated to female dominated. Examples include legal training and psychology. Why has this switch taken place? Is it due to the idea that Gilbert (2001) has put forward, that medicine is a lower status, lower paid occupation than it used to be so no longer attracts as many men? Or are other factors driving this change? And again, does it matter if certain occupations do not have an equal number of men and women?

In thinking about choices, sometimes the idea is put forward that males tend to make good decisions such as weighing up carefully the costs and benefits of obtaining a degree.. For example in its 2007 equity report Victoria University (Willis, 2007) note:

Gender distribution has remained virtually unchanged since 2004 with a noticeable dominance of females over males at the postgraduate level. The reason for this is unclear but may in part be attributed to the ready availability of employment over the period being more attractive to males graduating with bachelor's degrees.

³⁵ As an example, if on average female doctors' work 35 hours per week and male doctors work 50 hours, then to get the same level of output as 100 male doctors then there would need to be 143 female doctors.

This raises a number of questions:

- What are these ‘sensible’ decisions being based on? Is it differing levels of debt, wanting immediate income, or that there are some ‘male’ jobs that are relatively unskilled but pay well?
- Are these ‘sensible’ alternative employment opportunities open to women as well and, if not, why not?
- Are women thinking longer term and thus making overall better choices by gaining higher qualifications?
- Are women encouraged to continue with further study because they have better grades than men?³⁶
- Are there more scholarships to support women than men in higher education? For example, while in number overall there are far more scholarships that are gender neutral, those that are based on gender are almost all targeted at women.^{37 38}

Another important question is:

- When are choices in education being made and, as importantly, when are choices being restricted? Universities recognise that the gender patterns of enrolments are partly set in place in secondary school.³⁹ For example, Victoria University (2007) notes:

[the] pattern of female students outnumbering male students is established at secondary school, where female students have better attainment across all ethnic groups. In each ethnic group there is a greater proportion of females with UE or NCEA Level 3 qualification or higher, and the percentage of female leavers with little or no formal attainment is lower than for male students.

And other questions:

- Are fewer boys than girls actively making the choice not to gain University Entrance (UE) or level 3 qualifications?
- If fewer boys obtain UE, then is it logical they will then be over-represented in training that does not require UE (such as industry based training)?
- If more young women continue to gain UE, but also have equal access to industry-based training, will this give young women overall more choice than young men?

While some researchers are now looking at areas of male under-representation in tertiary education, many still focus on female representation. For instance, looking at

³⁶ Grades do matter. For instance, focusing on minority ethnic groups in New Zealand, Juhong and Maloney (2006) found that grade point averages in study was the single most important determinant of dropping out of university.

³⁷ For example see <http://www.nzfgw.org.nz/awards1.htm>

³⁸ In July 2008, the issue of women-only scholarships was debated via the media, see Mussen, D (2008) <http://www.stuff.co.nz/4624653a11.html>, and New Zealand Union of Students’ Associations (2008) <http://www.students.org.nz/files/campaign/July%2021%20-%20Women%20only%20scholarships%20still%20justified.pdf>

³⁹ As part of our project on ‘missing men’ we are considering at what age the differences in outcomes for boys and girls start to be set in place.

specific courses in relation to the overall trends of there being more women than men in tertiary education in Australia, Hayes (1999: 97) suggests that attention needs to continue to be placed on areas where women are under-achieving.

Far from removing women's equity status, their equity status should be reconfirmed and efforts to break down sex-differentiated participation in education and the work force should be renewed.

But, if the overall focus on women and their areas of under-representation was to remain at the forefront of equity analysis and this was to lead to further success in moving women into traditional male areas of education, while at the same time there was little gain made in moving men into either the traditionally or recently female dominated areas, this may create an even stronger imbalance in tertiary enrolments.

Some of material discussed in this section draws heavily on feminist theorising. A strand of this literature is based on a suggestion that disadvantages created by male behaviours are due primarily to their personal choices (like lack of study, bad behaviour). Equally, some of the ideas put forward suggest that many boys or young men are still making very clever individual choices (like no longer being doctors but instead working in high-income information technology industries). Yet, there also is a strand of this literature that suggests that disadvantages for females are primarily due to societal factors (such as discrimination), and when women do make seemingly good choices (like being doctors) then society will then devalue these choices. In an era when many barriers to choice for women have been drastically reduced or even eliminated, some of these theories seem to be more ideological than evidence based. This type of thinking has prompted the controversial sociologist, Catherine Hakim, to ask (first in 1995 and again recently):

...will feminist debate remain purely ideological, with increasing detachment from social science scholarship, or will it re-enter the scientific field? Is it concerned exclusively with arguing what should be the case, or with establishing what actually is the case?

Analytical methods of considering differences or disparities between women and men

As already discussed, the ways of considering differences depends very much on questions of whether differences actually matter. However, in this section we will assume that we are aiming for broad equality of outcomes in tertiary education.

Jha and Kelleher (2006) make the suggestion that in fact boys should not be measured against girls. Instead, there should be some objective measure that individuals are measured against, for example some level of numeracy or literacy. This could be adjusted for boys and girls so, if for example, girls on average mature faster than boys, they could have a different measure and so the comparison would be boys with boys and girls with girls. Share and Silva (2003) found that comparing within gender did make a difference. Following an analysis primarily based on results from children in the Dunedin Multidisciplinary Study⁴⁰ at the ages of five, seven, 9, 11 and 13, they

⁴⁰ The Dunedin Multidisciplinary Health and Development longitudinal study has followed 1037 people, born in Dunedin in the year 1 April 1972 to 31 March 1973, since infancy. For more information, see <http://dunedinstudy.otago.ac.nz/whatwedo.html>

concluded that assessment of reading disability based on a combined gender pool was 'likely to result in the over identification of boys with reading disability and under identification of girls with reading disability' (Abstract, p4). However, they noted that whether this meant that boys and girls should be tested separately was a complex social policy issue 'beyond the scope of the present study' (p11).

In reality, while in theory separate comparisons may seem attractive, and there may be times when this is appropriate, it is highly likely that even under this system, at some stage boys would still be compared with girls.

So how would one assess whether the outcomes were similar enough to be considered equal for women and men? One seemingly simple way of analysing differences is to count the number of women and men who have qualifications and see how different they are. However, an example drawn from the 2006 census shows some of the difficulties involved in this approach. In the 40-44 age group, a group where most people have completed their tertiary education, there were 28,947 men with no formal qualification and 1,539 men with doctorates. In comparison, there were 25,974 women with no qualifications and 900 with doctorates. On these raw numbers men are over-represented at both ends of the educational spectrum, with more doctorates but also a greater number have no formal qualifications. But in this age group, the census data record more woman than men, with 162,798 women and 150,900 men. So if the raw numbers are converted into percentages, then over-representation of males at both ends of the spectrum becomes stronger. For example, 19 percent of men aged 40-44 but only 16 percent of women had no formal qualifications in 2006. But there are further issues to confront in this analysis. We know that the undercount in the census is higher for men than for women (Callister, Bedford and Didham, 2006). So determining the correct denominator is important and emphasises a need to undertake accurate population estimates.

This example illustrates that there can be significant sex differences at both extremes of an outcome spectrum. This issue has been debated in a number of forums that have considered differences between women and men, particularly in science (for example *The Science of Gender and Science* 2005, Barres, 2006; Baumeister, 2007). Some of these debates consider issues of overlapping distributions with the same spread but with different means (Figure 1) as well as overlapping distributions with the same means but differences in spread (Figure 2). Another possibility is over-lapping distributions with different means and also some differences in extremes.⁴¹

⁴¹ In a controversial speech, Baumeister (2007) argues that men go to extremes more than women and that much of this behaviour is due to socio-biological factors.

Figure 1

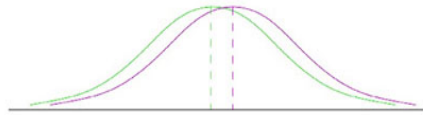
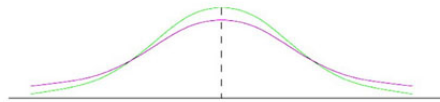


Figure 2



As illustrative examples, suppose that in both diagrams purple is for men and green for women, that Figure 1 represents the heights of men and women in the population, and Figure 2 represents life outcomes for men and women. Then Figure 1 would show that the mean height for men is higher than the mean height for women. Figure 2 would show that men could be seen as being over-represented at the ‘high positive end’ (such as having high incomes or high representation on private sector boards), but also at the low negative end (where there are more men in areas such as suicides, the prison population or the homeless, all very low income groups). Outcomes strongly influenced by extremes can sometimes be used to downplay concerns about male disadvantage. For example because one small group of men dominate a key outcome area, like positions on company boards, it does not mean we need not be concerned that they also dominate those who are homeless (Smith, Robinson and AtkinRead, 2006). The two outcomes do not cancel each other out; they are separate issues. The following provides an example of comparing an outcome in one area, income, with an outcome in education.

Perhaps the most compelling argument against a boys’ crisis [in education] is that men continue to outearn women in the workplace (Corbett, Hill and St. Rose, 2008)

A similar potentially spurious argument could be made saying ‘the most compelling argument against female disadvantage is that women continue to outlive men’. But does the fact that a group of men are over-represented in higher income jobs, or that women on average live longer than men, reduce the need to look at another group of

men/boys over-represented in poor outcomes in education (and what often follows on from such outcomes in education) or that women are over-represented amongst low income parents?

The downplaying (or some would argue balancing) of overall gains in educational outcomes by women by comparing these gains with gender pay gaps (and occupational segregation) can occur in a New Zealand context. The argument goes that while outcomes are unequal (in favour of men) in some important areas of society we should not be so concerned about unequal outcomes in education (in favour of women) (NZUSA, 2008).

While the participation of women in higher education has experienced much growth and is cause for celebration, there's no guarantee this recent phenomenon will continue, and there are many areas that women are still under-represented, particularly in the sciences. Women also don't have equality of outcome in the workforce, with a prevailing gender pay gap and many issues with horizontal and vertical occupational segregation.

But what about analysis that considers just one outcome? Should we focus on the extremes or should we try find analytical ways of considering the whole distribution? A press release by the New Zealand Post Primary Teachers' Association (2008) in relation to the 2008 Ministry of Education's 'boys report' suggests that we do need to move beyond simple group averages:

I find it particularly concerning that the reference group has based its entire investigation on the assumption that boys and girls constitute two homogenous and mutually exclusive groups when this is clearly not the case.

This assumption disguises the more significant variations within each group, such as socio-economic background and sexual orientation, which are closer to the heart of inequities of achievement.

However, this more complex approach seems to come more to the fore when considering possible male disadvantage than it does when considering female disadvantage.⁴² For example, possible complex explanations of gender pay gaps often do not go with reportage of average differences in pay between men and women.

Another issue is that in real life most distributions are not perfect bell curves. One implication of this is that means and medians may be quite different. As an example, Nair *et al* (2007:211) note that, in part, the gender differences in incomes relative to qualifications are distorted by the fact that it is a small group of men who tend to earn the highest incomes. This had a disproportionate effect on the mean, whereas women's incomes tend to cluster more around the mean and median. So those men who earn low incomes tend can get over-looked when just means are looked at.

The reality is that most gender analysis does just rely on simple comparisons, such as total numbers or averages. Simple ratios are often used, one being the ratio of males to females for participation and outcomes, which Jha and Kelleher (2006) refer to as the Gender Parity Index (GPI).

⁴² Equally such a complex approach is often lacking when considering Māori or Pacific disadvantage in education.

Below is an example drawn from a United States bestseller *Boy's adrift: The five factors driving the growing epidemic of unmotivated boys and underachieving young men* (Sax 2007: 8-9).

Over the past fifty years, college campuses have undergone a sex change: they've changed from majority male to majority female. Here are the numbers for the male proportion of students enrolled in four-year colleges and universities in the United States, 1949-2006:

1949: 70 percent of undergraduate students were male
1959: 64 percent were male
1969: 59 percent were male
1979: 49 percent were male
1989: 46 percent were male
1999: 44 percent were male
2006: 42 percent were male

These data show that the relative position for enrolments of men and women has changed. However, the example says nothing about the absolute position of women and men. When long term United States census data are considered (completed qualifications rather than participation in education) one sees major gains for both men and women over this broad period. In 1950, 7.3 percent of males aged 25 or older held a bachelors or higher degree but by 2000 this had risen to 24.4 percent. For women the rise was from 5.2 percent to 22.9 percent.⁴³ On these degree level changes we do not have a 'growing epidemic of underachievement' of young men, but instead a change in relative positions of women and of men. The advocacy writing on behalf of boys and young men prompts the following type of response from the girls and women's advocacy groups:

Educational achievement is not a zero-sum game, in which a gain for one group results in a corresponding loss for the other. If girls' success comes at the expense of boys, one would expect to see boys' scores decline as girls' scores rise, but this has not been the case (Corbett, Hill and St. Rose 2008: 2).

But is the size of relative differences now important? This is explored with a New Zealand example comparing the 'education gap' with the 'pay gap'.

Table 1 shows a number of possible measures based on total enrolments and completions of a formal qualification in tertiary education in New Zealand in 2006.⁴⁴

⁴³ The United States 'gender transition' in degree or higher attainments shows up clearly in the younger age groups. For example, in the age group 25-29 in 2000, 24.7 percent of men held these qualifications against 29.7 percent of women.

⁴⁴ There still remain some questions as to who to include. For example, in this type of analysis should we include foreign students?

Table 1: Enrolments and completions in tertiary education, New Zealand domestic students only, 2006

	Enrolments	Completions
Males	203,638	42,505
Females	244,728	67,768
Total	448,366	110,273
Females as % of total	54.6	61.5
Males as % of total	45.4	38.5
Percentage point difference	9.2	22.9
Ratio of females to males	1.20	1.59
Ratio of male to females	0.83	0.63
% more women than men ⁴⁵	20.2	59.4
% fewer men than women ⁴⁶	16.8	37.3

Source: Ministry of Education

How significant are the differences in numbers? First, again as background, it needs to be kept in mind that, like the United States, both women and men in New Zealand have made major gains in education. Keeping this in mind, the table shows there is a difference when either enrolments or completions are considered, but with the ‘gap’, in women’s favour, higher for completions. But just taking enrolments as the example, at first sight women being 54.6 percent of enrolments does not seem much difference when compared with a theoretical target of half being female. But when compared with the male percentage there is a 9-percentage point difference. If the number of women is directly compared with the number of men, there are 20.2 percent more women enrolled.

In a comprehensive study of ‘gaps’ between boys and girls in schooling, Baker (2007) focuses primarily on the percentage point difference. But he notes a problem in that this relative measure can disguise some absolute differences. In noting that the European gender gap for school-based National Certificate of Educational Achievement (NCEA) level 3 or higher qualifications is higher than for Māori and Pacific students he goes on to note that ‘The Māori gender gap is small simply because Māori girls under-achieve nearly at the level of Māori boys’ (p 17).

A key point is that these measures are all showing the same thing, even if they seem to be different. It is the perception that can change depending on how information is presented.

⁴⁵ The denominator is the number of men. So the measure gives as a percentage the difference between the numbers of females and males relative to the number of males

⁴⁶ The denominator for this is the number of women. So the measure gives as a percentage the difference between the numbers of males and females relative to the number of females.

These sorts of ratios, and changing perceptions, can be explored in relation to a statement on *Human Rights issues for men and boys* put out by the Human Rights Commission (HRC) in mid 2008.⁴⁷ They note:

At tertiary level, women are slightly more likely than men to participate in tertiary education (14.6 percent compared with 12.8 percent of men in 2006).⁴⁸ Men and women had the same rate of participation in sub-degree courses (10 percent), but women are slightly more likely than men to be enrolled in degree and post-graduate courses (six percent and four percent, respectively).

First, participation rates in tertiary education can be directly compared (the 14.6 percent compared with 12.8 percent of men in 2006). Comparing the female participation rate to the male participation rate, the difference is 14.1 percent in favour of women.⁴⁹ When the same comparison is made of data noted in the above quote for degree and post-graduate courses (the six percent and four percent, respectively) then there were 50% more women than men enrolled in these courses (see Appendix 2). Whether this is an appropriate measure is open to debate, but in other situations such as the pay gap, this is the type of measure used.

These data can be seen in light of the HRC statement of women being ‘slightly’ more likely to be enrolled in degree and postgraduate courses. The enrolment rate shows that relatively few men or women in the overall population are enrolled in these courses. But when those who are enrolled are compared, then the enrolment rate for women is 50 percent higher than for men. This is more than ‘slightly’ higher.

These types of differences can then be seen relative to the pay gap (with men earning more) (Table 2).

Table 2: Hourly earnings for women and men, June 2006

	Median hourly earnings ⁵⁰
	⁵¹
Males	\$18.13
Females	\$15.88
Ratio of female earnings to male earnings	0.88
% higher male earnings (female earnings as the denominator)	14.2

Source: Household Labour Force Survey, Statistics New Zealand

⁴⁷ [http://www.hrc.co.nz/hrc_new/hrc/cms/files/documents/02-May-2008_15-45-](http://www.hrc.co.nz/hrc_new/hrc/cms/files/documents/02-May-2008_15-45-38_Human_Rights_Issues_for_Men_and_Boys_Apr_08.doc)

[38_Human_Rights_Issues_for_Men_and_Boys_Apr_08.doc](http://www.hrc.co.nz/hrc_new/hrc/cms/files/documents/02-May-2008_15-45-38_Human_Rights_Issues_for_Men_and_Boys_Apr_08.doc)

⁴⁸ The original source of these data is the 2007 Social Report (Ministry of Social Development, 2007).

⁴⁹ The denominator for this is men’s participation rates. So the measure gives as a percentage the difference between the participation rates of females and males relative to the participation rate of males.

⁵⁰ The ratio of female to male median hourly earnings rose from 83 percent in June 1997 to 88 percent in June 2006. Note also the pay gap is very small in the younger age groups (in favour of men), but the education gap is relatively large in these groups (in favour of women). In addition, when gender and ethnicity are considered, the gaps become more complex. For example, European women earn, on average, more than Māori or Pacific men (see Appendix 1).

⁵¹ Social Report 2007, <http://www.socialreport.msd.govt.nz/paid-work/median-hourly-earnings.html>

Like the education gap, the pay gap also needs to be seen in a wider context of increases over a long period in both men's and women's earnings. But cross sectionally, as shown in Table 2, the ratio of female earnings to male earnings is 0.88 or more commonly stated, women earn 88 percent of what men earn (or men earn 14 percent more than women). In comparison (see Table 1), using the same type of ratio but with women being the larger comparison group, men can be seen as having a rate of enrolment of only 83 percent of the female enrolment rate in tertiary education (that is for every 100 females enrolled there are 83 men). Men represent 63 percent of completions when compared with the completion rate of women (that is for every 100 women completing there are only 63 men completing a tertiary qualification).

In relation to the differences in earning, the HRC notes '[t]he wide pay gap between the sexes means that pay equity must be a priority for women's progress.'⁵² A 14 percent difference in pay, in favour of men, is seen as a 'wide' gap by the HRC, but the same 14 percent gap in tertiary participation, in favour of women (Table 1), is seen by the HRC as a 'slight' gap. This suggests that the perceptions of the observer rather than the actual data are often important. These examples suggest there should be an aim for more objective analysis rather than subjective type of response to differences.

The above measures are all cross sectional measures, that is, taken at one point in time. The following example illustrates how another cross sectional measure shows one pattern, but an age-related decomposition shows some significant change. In their reply to an August 8, 2008 question (Mussen, 2008) as to whether women-only scholarships were discriminatory, the Human Rights Commission drew on research by the National Advisory Council on the Employment of Women (2008: 6-7) to state:

Even though, on average, young women's educational achievements now exceed those of young men, there is still a [slightly] higher proportion of women (27.3%) than men (24.9%) of working age without qualifications (HLFS, December 2006). Women are not necessarily getting the best job value for their educational effort due to their narrow range of study fields.^{53 54 55 56}

These cited data are drawn from the Household Labour Force Survey. This survey covers only private dwellings so excludes living arrangements such as boarding houses or prisons. Given that low-skilled men are over-represented in such locations,

⁵² <http://www.hrc.co.nz/home/hrc/newsandissues/widepaygapwomensbiggestconcernonsuffrageday.php>

⁵³ The word 'slightly' was in the original NACEW quote.

⁵⁴ There is no evidence in the NACEW report that women have any narrower range of study fields than do men. Both have areas they are over-represented in (Callister and Newell, 2008)

⁵⁵ In another part of the NACEW report, the gains by women in education are more clearly recognised with the statement (pg 9) 'women's investment in education has been increasing and, since the late 1980s, has exceeded that of men, with the gap in achievement having widened over that time. Right now, young women are doing particularly well. In 2005, 21,000 women completed degrees, compared with 13,000 men.' In fact the 2006 census data show that across the whole population 15 and older there were 173,784 women with a bachelor's degree as against 142,065 men. As a percentage of those who stated their qualifications, 11.8% of women held a bachelors degree as against 10.4% of men in 2006

⁵⁶ There is some uncertainty amongst researchers as to who is included in the group with no formal qualifications. For example, a person with just one NCEA level 1 qualification may or may not fit this group depending on how that person views this achievement.

the five yearly census of Population and Dwellings potentially gives a better coverage of those with low skills.

Table 3: Number of men and women with no formal qualifications and women and men with no formal qualifications as a % of those who stated their qualifications, 2006

			%	
	Men	Women	Men	Women
15-19 years	45,735	37,176	33.7	27.9
20-24 years	20,898	14,391	17.3	11.6
25-29 years	17,556	13,698	16.6	11.9
30-34 years	18,762	16,041	15.7	11.8
35-39 years	25,743	23,055	19.7	15.7
40-44 years	28,947	25,974	20.9	17.2
45-49 years	29,193	27,819	22.2	20.0
50-54 years	27,261	28,893	24.0	24.6
55-59 years	31,560	36,939	30.2	34.6
60-64 years	27,825	32,781	35.2	40.7
65 years +	73,068	105,114	39.2	48.4
Total	346,545	361,884	25.4	24.7
15-49	186,834	158,154	21.2	16.7
50+	159,714	203,727	33.0	39.0

Source: Education Counts website, based on Census of Population and Dwellings, Statistics New Zealand.

In contrast to the HLFS, the census data (Table 3) show a slightly higher proportion of men with no formal qualification across the population who recorded whether they had a qualification with 25.4% having no qualifications versus 24.7% for women.⁵⁷ But more important is the age breakdown. As the table shows, it is only in the 50 or older age groups that there are more women than men with no qualifications. For example, in the 20-24 age group, 17.3% of men had no formal qualification as against just 11.6% of women. One reason for older women being less qualified than men is the historical patterns of education. However, another is that men without formal qualifications have the highest standardised mortality rates when gender and education are considered (see Table D, Appendix). This higher mortality reduces the relative size of the men without qualifications in older age groups. The age specific data, along with current trends within schools, suggest that as time goes on it is highly likely to be men that form a significant majority of those without formal qualifications.

Also responding to the debate about female only scholarships, the New Zealand Union of Student's Association, suggest that we need to have a long period of females having higher rates of achievement before we can be sure that there has been change:

⁵⁷ The table also shows the gains to both men and women over time with a decreasing proportion of the younger age groups with no formal qualifications. Note the 15-19 age group includes those who have not completed their schooling.

How do you determine that equality has been achieved? Women have only made up half the tertiary population for around a decade, so not even one generation of women has experienced this level of participation.

Again, there is no easy answer to this question. But a decade of being more than half the tertiary population seems a reasonable test that this is not some short term shift about to reverse. Waiting for a whole generation to pass before agreeing that equality, at least on one measure, has been reached seems to be too harsh a measure.

Unit of analysis

Relative numbers of women and men enrolled in or completing tertiary education can be analysed at a variety of different levels. These include:

- Subject
- Level of study
- Faculty
- Institution
- The whole tertiary sector

Once qualifications are completed again there are a number of levels that educational outcomes can be examined, including the stock of qualifications in particular subjects, levels of qualifications or overall qualifications in relation to men and women.

When analysing changing patterns of advantage or disadvantage in higher education in Australia, Dobson (1996) notes that unit of analysis matters. Dobson argues that if outcomes were to be measured across the whole of higher education, then women could no longer be seen to be disadvantaged. But if there is a continuous shifting to narrower targets, such as considering only women's representation in engineering training but not the overall sciences, then women can continue to be classified as disadvantaged. This can, as an example, then be used to justify special measures, such as gender-specific scholarships, in increasingly narrow areas of under-representation, even if women (or men) are over-represented in a particular field if a wider view is taken.

As a practical New Zealand example of a unit of analysis in relation to equity goals, the University of Auckland (2008) has in its *Undergraduate Admissions and Equity Taskforce Report 31 March 2008* decided on an institution-wide statement on the principles of 'equity and excellence' which is to be put into practice by a faculty policy based on the newly established principles. The faculty then requires each department to develop admission policy and practices.

Yet, in very small courses, determining if an imbalance exists and whether an admission policy is needed to overcome it may only be possible when long-term historical patterns are considered as there may be considerable short-term volatility in enrolments. In addition, in very small courses it may not be possible to obtain the full diversity of representation that may be an overall system goal. Yet, in many institutions it is the overall discipline level that is considered, for example women in mathematics. Perhaps the focus should be mainly on the subjects where a particular

group has been historically and currently strongly under-represented. But as already discussed, determining if a group is strongly under-represented can be difficult.

An alternative would be for each institution to aim for equal numbers of men and women (as well as the diversity reflecting other dimensions of society such as age, ethnicity, disability etc) but worrying less about the mix within particular courses.

But again, it is possible for some institutions to be offering courses that attract women more than men, for example Auckland University of Technology, while others, such as Lincoln University, attract more men.⁵⁸ A further alternative could be for New Zealand to aim to achieve an overall balance across all institutions.

Emerging challenges

The analysis of differences or disparities between women and men has taken place within a context of rapidly increasing enrolments and completions for both groups. When New Zealand tertiary education providers were funded through Equivalent Full Time (EFTs) students, it was a case of getting “bums on seats” to increase funding. While there has been some concern about increasing the proportion of Māori and Pacific students, overall there was little financial incentive for providers to look at the composition of its student body. But with funding caps on many institutions, particularly as the 1991 ‘baby blip’ heads towards tertiary education there may be a greater need to actively manage the mix of students. For example, some institutions may want to focus primarily on highest academic achievers’ in order to build up their profile as a ‘top’ academic institution. Given current outcome data from school, this strategy could tend to favour young women. Alternatively some institutions may focus on ‘diversity’. This would mean using some criteria other than narrow scholastic outcomes as a way of screening potential students. If there is concern about diversity, given changing demographics institutions will increasingly have to focus on non-traditional groups and this will include Māori and Pacific students. However, if Pacific and Māori girls continue to perform better at school than Pacific and Māori boys, then institutions focusing on the highest achievers within these groups could well continue to have an imbalance in favour of women. Those that focus on diversity may need to consider both boys and girls in the target groups, and to achieve the full diversity may have to think of ways of increasing the proportion of young men in their institutions, especially young Māori and Pacific men.

Conclusions

There is much evidence that education matters. Especially within industrialised economies, having a low level of educational attainment, and the lack of skills that are generally associated with a low level of formal education, is strongly linked to negative outcomes in a range of areas for both men and women. It is recognised that education matters for both individuals and for whole societies and in recent decades there has been a major increase in the number of people participating in tertiary education across the OECD. On one level this has been a major success story. But

⁵⁸ Ministry of Education qualification completions data show that between 2000 and 2006, women as a percentage of completions at AUT have fluctuated between 60 and 70 percent, while for Lincoln they have been at just over 40 percent.

given a range of factors, including globalisation and advances in technology, it seems the level of skills needed to fully participate in society has also been lifting and it is still not clear that in New Zealand we have reached the optimal level of education across our population.

A significant part of the lift in tertiary education participation and completions has been through gains made by women in all age groups. A result has been a 'gender transition', in which overall women are completing qualifications at a higher rate than men. This is particularly evident among the Māori and Pacific communities (Callister and Newell, 2008). This then flows through to the stock of formal qualifications in New Zealand with, in younger age groups, women being overall better qualified than men.

Does this transition matter? In particular, does it signal growing male disadvantage? As this paper shows there cannot be a simple answer. However, in the past higher participation and achievement by men prompted concern about the need for women to improve their relative outcomes. Long-standing barriers against women in higher education and the labour market in the past are not in question. These historic disadvantages prompted the existence of organisations such as Ministry of Women's Affairs, and the National Advisory Council for the Employment of Women whose role has been is to analyse women's position in education, the workplace and in the home, as well as the now disestablished Women's Advisory Committee on Education and the Girls' and Women's section of the Ministry of Education.⁵⁹ Much of this analysis was and continues to be informed by feminist theory and scholarship, and resulting frameworks now often start from an assumption of female disadvantage. Our analysis suggests that this type of analytical framework may have limitations in the particular area of gender inequality in the education sector.

As yet there is not a significant level of disquiet being expressed about the relative underperformance of men in tertiary education. In this sector, concerns focus on overall Māori and Pacific under-representation, an issue which of course is important. In addition, there is still attention given to female under-representation in areas such as engineering or building. In the paper we have asked two inter-related questions. Is there a lack of official focus on male disadvantage or under-representation and, if so, is this because the gaps that favour women are only minor differences? We find there is no objective measure that can tell us when gender gaps are important. A number of examples presented suggest that gaps of the same size can be seen in different ways depending on what the analyst is aiming to show. A 14 percent education gap in favour of women can be seen by policy analysts as 'slight', whereas a 14 percent pay gap in favour of men can be seen by the same analysts as 'wide'. We suggest that historically gaps of the size currently found in tertiary education, but in favour of men, did cause concern and we need to consider very carefully whether the overall gap, now in favour of women, should now be examined more closely.

It could however be argued that we should no longer be concerned about gender differences in outcomes. Perhaps we have reached a stage in society where there are few remaining barriers to women in education and paid work, and that there never have been barriers for men. We have raised a question of whether what we could now

⁵⁹ These were disestablished in 1991 and 1992 respectively.

be seeing, for both men and women, is that individual choice is just that. But is it individual choice that has produced a progressively segregated workforce in teaching and, for a long time period, in nursing? Perhaps the outcomes of individual choice are the best for society as a whole. Perhaps we could say that the preponderance of female teachers and nurses is the result of women choosing occupations which offer the flexibility likely to be more enabling to have a family as well as a career. Do we want a teaching force that is so highly female? Why are we still concerned about the lack of women becoming engineers if this is just choice? And equally, should we be concerned that while women form the majority of medical graduates that few are choosing to enter some medical specialities such as surgery? This concept of choice, perhaps reflecting some highly successful female graduates choosing mainly areas of work that support work life balance, or in the case of some young Māori and Pacific men perhaps choosing to opt out of further education in preference for short-term goals, has widespread social effects. In the case of the young men the choice is connected among other matters to the education they have had. Have they, for example, felt sidelined by an education system they have felt to be discriminatory for the whole of their lives? Research needs to acknowledge that choices can be both individual and socially constructed and needs to delve into how decisions about education are being made and what barriers there are to making choices for both men and women. Making this investigation even more complicated, and highly contentious, are the on-going questions of whether particular groups are more endowed with specific abilities. Do men's and women's brains work differently and does this affect their choices? It will only be careful on-going scientific research that can tell us the answers.

At the level of the tertiary institutions, there is recognition that some groups, particularly Māori and Pacific, are under-represented. As a result, some institutions have thorough outreach programmes directed at future students especially in Pacific Island and Māori communities. However these institutions when discussing equity tend to focus on ethnicity or on gender, not on the combination of these factors. In the United States in particular, there is a discourse that the gender gap is of relatively little importance, the important gap is via ethnicity (or race in that context) and socio-economic status. We suggest it is not a situation of either one explanation or another. Gender, ethnicity, socio-economic status and, ideally, a raft of other factors all need to be examined. However, while in the longer term a more complex analytical approach is ideal, until better data are available gender has to remain one of the key variables in policy analysis.

While increases in educational participation and attainment overall are important for Māori and Pacific communities, there are much data that show it is the young men who are more at risk of educational failure than young women. In a New Zealand context, it is time to look at the large body of evidence and in light of this literature to decide whether to move toward implementing equity policies that better support men.

Overall, our paper finds that gender analysis undertaken within the tertiary education sector, as well as within much of the wider policy world, remains based on a premise of female disadvantage or, alternatively, focuses on very specific areas of female disadvantage while downplaying parallel male disadvantage. As Dobson stated in Australia back in 1996, focusing on one part of a binary population, without looking at the other part, has the potential to create new inequalities. We suggest that this

paradigm needs to change allowing a more sophisticated analysis of gender gaps, ethnic gaps and the interaction between gender, ethnicity and a range of other factors when considering differences in outcomes and/or opportunities. This includes a requirement to consider the growing heterogeneity of choices and outcomes for women and men, as well as identifying the remaining constraints on choice for both men and women. Thinking about issues of equality needs to reflect a more inclusive and open-minded attitude of who might be disadvantaged in education both at the level of schooling and tertiary study.

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Appendix

Table A: Participation in tertiary education, 2006

Ratio of female participation rate to male rate	1.14
Ratio of male participation rate to female rate	0.88
% higher participation rate of women ⁶⁰	14.1

Table B: Enrolments in degree and post-graduate courses, 2006

Ratio of female to male	1.50
Ratio of male to female	0.67
% higher enrolment rate of women ⁶¹	50.0

Table C: Average hourly earnings (\$) from wages/salary jobs⁶²

Women		
	European	20.15
	Māori	17.15
	Pacific people	17.34
	Other	18.14
Men		
	European	24.60
	Māori	17.99
	Pacific people	17.37
	Other	21.46

Table D: Mortality rates for men and women in each highest educational group: Age standardised rates per 100,000 25-74 age group, 2001-2004 (error range in brackets)

<i>Gender and qualification</i>	<i>Mortality rate</i>
Males no formal qualifications	690 (669-711)
Males school qualifications	542 (520-565)
Females no qualification	439 (423-455)
Males post school qualifications	436 (409-462)
Females school qualifications	331 (315-348)
Females post school qualifications	255 (234-276)

Source: Atkinson and Bastiampillai (2008)

⁶⁰ The denominator for this is men's participation rates. So the measure gives as a percentage the difference between the participation rates of females and males relative to the participation rate of males.

⁶¹ As above

⁶² The original table also has median earnings