The Unsealed Dirt Track for Women in Computing in New Zealand

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Abstract

Women are under-represented in New Zealand’s computing industry, and those who do take up computing careers experience conditions of discrimination and marginalisation. More women joining the industry would help alleviate the ongoing skills shortage which impedes growth in the sector. This paper reports on a multi-sited ethnographic study of computing work in New Zealand in which data were collected using semi-structured interviews with twenty-nine computing professionals. A wide gap between men’s understanding of reasons for the low number of women in the industry and women’s lived experiences of computing work was revealed. Women reported experiences of marginalisation which, as this paper argues, place women in an outsider-within location in the industry. Men were mainly unaware of the practices which marginalise women, and although they often expressed views that more women would be ‘nice’, the data raised doubts that the industry really does want more women.

Keywords: Women, computing, marginalisation, outsider-within, New Zealand

Introduction

Computing work in New Zealand is characterised by male domination and female marginalisation. Men occupy 72% of professional computing roles overall (Statistics New Zealand 2008), whereas women are clustered in lower-status occupations such as business analysis, database administration, and training and are notably under-represented in the most populous and esteemed roles of programming and systems analysis (Hunter 2011-2012). A glass ceiling and apparent pay discrimination experienced by women across and within computing occupations provide further evidence of women’s marginalisation (Hunter 2011-2012). Similar marginalisation of women in computing occurs in Australia (Byrne and Staehr 2005), the UK (Griffiths, et al. 2007), and the USA (Hill, et al. 2010).

Another feature of computing work in New Zealand is a continuing skills shortage which seriously inhibits progress in the industry (Department of Labour 2002; Department of Labour 2006; Immigration New Zealand 2012). More women entering the profession would clearly help address this problem. New Zealand’s computing industry needs more women, but the work remains unappealing to many women. The minimal efforts by industry to attract more women lead us to ask, does the computing industry really want more women?

The plight of a group of women who were needed but not really wanted was explored by Collins (2009: 13) who used the phrase “outsider-within” to describe the contradictory location black women traditionally experienced as domestic workers for wealthy white
families in the USA. These women typically developed strong insider relationships with the families they cared for, but could never truly become part of the family and remained permanently exploited outsiders within the family. Collins’ (2009) representation of women positioned as outsiders-within is in many respects pitiable. The women are frequently undervalued; their skills are mostly unrecognised, and although seen, they are not heard. Usually working alone and with no representative group, they have no voice and no prospects for advancement. But, as Collins (2009: 42) notes, the picture is not all bleak. These women are survivors who navigate their position creatively and with dignity. As unobtrusive observers of the inside, they are in a powerful position to cultivate connections with other similarly-located women and seek liberation.

Based on results of a study of computing work in New Zealand, this paper argues that women are located as outsiders-within in this work. Although their level of exploitation plainly does not match that of Collins’ women, women in computing are also undervalued and unheard. But they too have the potential for united action against their marginalisation. This paper makes two useful contributions to the research literature on women in computing by: (1) offering a new interpretation of women’s experience in computing work, and (2) reporting data gathered from men in computing, an aspect usually omitted from such studies.

Research Method

The research method used for this investigation was a multi-sited ethnography (Marcus 1995) involving 29 face-to-face semi-structured interviews with computing professionals of both genders. Data were collected during a larger study of computing work in New Zealand for which ethical approval had been obtained from the University of Auckland – see Hunter (2012).

Participants were recruited in Auckland and Wellington over the period 2007 to 2010 using convenience, snowball, and opportunistic sampling methods, as judged necessary to capture data sufficiently representative of the industry. Many different ages, qualifications, roles, levels of responsibility, and work settings were represented amongst the participants. Interview transcriptions were examined repeatedly as relevant themes were gradually identified and eventually refined.

Findings – Men’s Views

The interview question which prompted the most revealing and expansive narratives regarding gender in computing work was: “Is it easier being a man or a woman in computing?” This section reports findings from male participants.

Does Gender Make a Difference?
Approximately half the men believed gender made no difference in computing work:

Women were treated very well, … I don’t think it made any difference (James)
I really don’t think it makes a damn bit of difference (David)

Some men felt that gender made no difference because conditions for women had recently improved:
I don’t think there’s so much of a problem for women now. Employers will view them just equally (Leyton)

It’s easier now than it was, to be a woman (Luke)

I’m not aware of any differences; it’s possibly easier for women in these days of PC correctness (Ralph)

In contrast, approximately half of the men observed that computing work was easier for men, and some offered reasons for this:

It’s still a whole lot easier being a man. It still can be very much a boys’ club (Tim)

I think there’s quite a tendency for IT guys to be quite sexist and that can be quite scary for women (Sam)

The profession had a lot of benefits for women … but in terms of promotion most of them didn’t do very well (Bob)

More Women would be Nice; Why Aren’t There?
The men interviewed were often regretful of, and perplexed by, the low number of women in computing. David could not understand the lack of women:

It would be nice to have more women; I don’t know why … you probably have to ask them.

Maurice was equally mystified:

I don’t actually understand it. I would have thought it was an industry where they could easily match or even better [men]. I mean there are some industries which require strength and bulk, if you’re in the building trade, you know guys on a building site have to lift huge chunks of stuff or shovel cement, but actually in the ICT industry it’s got nothing to do with your gender.

Men often commented that there are no barriers for women:

There are certainly no obstacles for women coming into computing (Mark)

I don’t think it’s any sort of bias (John)

When asked why women are underrepresented in computing work, men often attributed the low number to women’s preferences rather than any inherent problems in the industry:

I don’t think it’s an issue of the industry. It’s an issue of women don’t seem to want to be in this industry. … I don’t believe the industry is shutting out women. I think women are just not really that interested (Andy)

For example, indifference toward technology was a common explanation for the lack of women:

I suppose there’s that gender thing that things that are particularly technical and totally inhuman and non-responding to anything but a number … doesn’t appeal to women (Mark)

Guys have been interested in the technology sort of thing more than the women (John)

Findings - Women’s Reality

This section reports findings which contrast the reality for women with men’s lack of recognition of barriers for women.

Experiencing Resentment from Male Colleagues
Successful women in computing are often closely scrutinised and vigorously resented by male colleagues (Griffiths, et al. 2007; Glastonbury, Murray cited in Wilson 2003). Keri described an occasion when she corrected a simple programming problem, vastly reducing processing
time. Keri was subsequently resented by her male superiors who had been unable to rectify the problem:

They had two systems programmers sitting in their own special office who, you know, played the lord over everybody else, but this most basic thing they didn’t know. And of course they didn’t like me after that.

**Needing to be Twice as Good as Men**

Women in computing are typically expected to meet higher standards than men in order to be considered adequate (Trauth 2002). Hilary has experienced this inequity:

Women have to be twice as good as men to be considered equal… An analogy would be the guys were always on the nice tar sealed road and I and the other women were on the unsealed dirt track, and it was just a little bit harder for us to get along, to look as good, to move as quickly.

Hilary further explained the challenges for women aiming for career advancement; they must constantly outperform men and must never make a mistake:

If they're going up the career ladder that eats up such a lot of your time and energy because you're just having to do more, quite often, just to be treated the same as men. All the women I know who are high achievers are constantly working really hard to do that because they get no favours. They're never allowed to have a bad day at the office. Guys can have a bad day at the office. A woman has a bad day at the office; everybody's talking about it for ever afterwards. So there's still an expectation on our performance that isn’t the same as on a man’s performance.

Other women also explained how hard women must work to prove themselves:

It's extremely hard to be a woman in technology, extremely hard. There's discrimination for the women who are hard core geeks, the real programmers… The women are just going to have to work harder to prove themselves (Julia)

I think just proving that you are just as good as the guys, and once you’ve done that they will treat you as an equal (Anna)

**Judged either Emotional, or Technical and Boring**

Women who work in male dominated professions are often caught in an impossible conflict between social expectations of appropriate feminine behaviour and appropriate professional behaviour (Fletcher 1999; Tannen 1990; Trauth 2002). If the women behave in accordance with stereotypical expectations of femininity, for example emotionally, this is seen as inappropriate professional behaviour; but if they behave according to professional custom, for example rationally, they are regarded as unfeminine. Either way, the woman is considered deficient; she is judged as a woman rather than a professional (Fletcher 1999; Tannen 1990).

This dilemma for women is seen in Tim’s description of technically capable women as boring and introverted, i.e. unfeminine:

Some of the women have been really technically competent but they’ve had almost no personality. Whether women who go into the more technical side of the business are the ones who are more introverted…

Tim has noticed women reacting emotionally to problems, which he and other men condemn for its lack of rationality:

A couple [of women] that I’ve worked closely with suffer from being more emotionally attached to a problem than being factual and detached about it… They will react emotionally to something and the guys will just switch off and you’ll lose their respect.

Some of the women described having a tendency toward emotional reactions and regarded this as a failing:

If someone critiques my business requirements, I take it a little personally even though I
Another dimension to the role conflict for women was identified by Sam (male). Women in
general are not regarded as credible, but this applies even more so to women who are
physically attractive:

A girl, particularly a good looking girl, is not believed to start with.

Being Overlooked
Within male dominated professions, women often struggle to have their ideas heard and their
contributions recognised (Hemenway 1995; Tannen 1990). Hilary found that men often
disregard women’s suggestions:

It was not superbly obvious but there were subtle things of a recommendation being made, a
comment being made, if one of the guys made it, it was taken more seriously than if a woman
made it. You actually had to fight for equal recognition.

Luke was one of the few men who noticed women being overlooked. In his workplace people
tend to ignore the female manager, deferring to him instead:

There are three managers here in Auckland and one of them is a woman. I’ve noticed that people
might talk to her but they don’t really take any notice until they talk to me.

Being discounted is also demeaning for women in lower level positions. Marion, a data-entry
operator, described a typical meeting in her workplace:

They [men] just looked down on you as if you didn’t know what you were talking about. They
made you feel as though you were stupid. Because you were a woman they didn’t hear you speak
or anything.

Marion also noticed men receiving credit for women’s work:

Two people can be exactly the same but preference is made to the male, even if the female is the
one who’s trained the male. The female might be the one who ends up doing the job but the male
gets the accolades for it.

Measuring up to Male Expectations
Another dilemma for women who aspire to management roles in computing is that they are
judged according to male expectations of leadership. David was one of the few men who had
experienced a female leader. He respected this woman because she met his criteria for
leadership - technical expertise, courage, vision, and business insight.

She was leading the programme at [XYZ] to replace our mainframe and that was not a project for
the faint of heart, I can assure you. There’s a lot of function points hiding in that baby I can tell
you. And she had the total respect of the IT management team and the business. From a
competency perspective she was right up there; she had the business acumen; she had a really
good grasp of the technical subject matter and the vision of what it was we were trying to do. So,
you know, she was off like a robber’s dog.

Any woman not meeting male expectations of leadership will have problems. Julia’s boss
was a woman whose effective people-management skills did not compensate for her lack of
technical knowledge in the eyes of the men, and she was not respected:

I had a very cookie female boss, and she was probably the epitome of what male geeks don't like
in a woman, she was so non-technological. She was very good at the people stuff and I guess
that's what managers are for really. She was good at making sure everybody was happy, and
trained up and working along nicely. But didn't have a clue about technology ....
Discussion

Women’s underrepresentation and marginalisation in computing is partially revealed in statistical records of the industry, but additional aspects of marginalisation are revealed by this study. Women reported being resented by men for their successes, having to work harder and meet higher standards than their male colleagues, being judged as women rather than professionals according to male expectations, and having their contributions overlooked.

Few of the men interviewed for this study, even those who believe computing work is easier for men, recognised any of these barriers for women. While three men detected circumstances likely to be off-putting to women (a boy’s club, sexist attitudes, a glass ceiling) most men thought that if women choose not to join the industry, this is because they are disinterested in technology. They do not recognise phenomena within the industry which marginalise women, nor do they recognise their own part in these phenomena.

Many men claim to want more women in computing, but do they really want them? Women’s accounts of their experiences in the industry suggest that their contributions typically go unnoticed and if noticed, are usually undervalued. Judged as women, rather than computing professionals, they are not considered legitimate members of the profession. Women may perhaps be tolerated in lower-level, lower-status, roles, but they are not welcomed as leaders. These factors place women in an outsider-within location in computing work.

So far women have not effectively united and demanded proper recognition for their work. The organisation Women in Technology (WIT) was formed in 1996 to provide support and training opportunities for women in computing but disbanded in 2009. If women are to break free of their outsider-within location in the manner Collins (2009) suggested, men need to change, but women need to demand this change.

Conclusion

This paper has reported results from a study of gendered employment practices in computing work in New Zealand. A wide gap between men’s understanding of reasons for the low number of women in the industry and women’s lived experiences of the industry is revealed. Most men failed to recognise that women participate in computing work as undervalued and barely-accepted members of the industry. Women are located as outsiders-within in the industry; the liberation proposed by Collins (2009) is long overdue.

References


