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Intersections of age and masculinities in the information technology industry

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ABSTRACT
This paper explores the intersections of age and masculinities in small information technology (IT) firms in Canada. The IT workforce, although demographically young, does not entirely comprise younger workers but is dominated by men and is ageing. Despite the infamous 'nerd' stereotype of IT workers and its associations with immature age and masculinity, perceptions of age and ageing in the industry have not been considered in the context of masculinities. To what extent are conceptualisations of IT work shaped by notions of age and masculinities? How do perceptions of age and masculinities correspond to occupational trajectories and responsibilities in IT work settings? To address these questions, this paper reports an analysis of qualitative semi-structured interviews with 76 employees of small IT firms in Canada. The findings indicate that the dominant frameworks for describing the nature of IT work are metaphors and analogies with sports, the military, entrepreneurial drive and craftsmanship. This paper focuses on the allusions to sport, war and 'being driven', and argues that the discursive ties to these masculine arenas normalise, or make 'natural', the affiliation of youthfulness and technical ability. The corresponding intersections between age and masculinity suggest that older workers are marginalised in small IT firms.

KEY WORDS – workforce ageing, older workers, masculinity, information technology work, age-identity.

Introduction

In his autobiography, *Netscape Time*, the Chief Executive Officer of *Netscape*®, Jim Clark (1999), used a military analogy to describe his ideal computer programmer: 'Marine Corps drill instructors will tell you that the ideal combat marine is 19 years old, too young to know that there's anything they can't do. I'd say that the ideal programmer is about 22 and getting younger all the time' (1999: 51). Clark explicitly linked combat marines, computer programmers, age, and task orientation. While the

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presence of military and sporting analogies in corporate and technical worlds is no secret, the articulation of age and masculinity in high-skill computing work and their intersections with occupational structures have been little explored. Scholars have theorised the masculinity of these metaphors in technology work (Acker 2004; Connell 1995, 2000; Fitzsimons 2002; Hacker 1990), though metaphors are often drawn in as corollaries rather than forming the crux of analyses (Cooper 2000; Faulkner 2000; Wright 1996). Discursive references to the institutions of sport, the military and other male-dominant arenas in IT work have been taken as indicators of the maleness of the field, and reflective of male sexuality, aggression and competition (Edwards 1990; Kendall 2000; Turkle 1984). While the youthfulness of the computing-industry workforce has been widely acknowledged, the articulation of age and masculinity in information technology (IT) discourse has not been fleshed out.

This paper examines the nature of these intersections through the discourse of male IT workers. We ask how conceptualisations of IT work are shaped by notions of age and masculinity, and explore the ways in which these perceptions articulate occupational trajectories and tasks in IT work-settings. The argument and demonstration begins with a review of previous research on age, masculinities and IT. We then profile IT workers and describe the design and analysis of semi-structured qualitative interviews with Canadian IT workers. The paper then explores the metaphors and analogies drawn upon by the IT staff in relation to their occupational trajectories, and the ways in which these discursive patterns associate age with technical ability. Finally, we examine the implications of these constructions for older IT workers.

Age, masculinities and IT work

Being 'a man' carries meanings of age in and of itself, for as Hearn (1995: 99) has pointed out, being a man 'implies older'. Even so, the intersection of age and gender relations among men remains under-explored (Calasanti 2004). According to Connell (2002: 44), masculinity can be understood as a 'configuration of social practices linked to the position of men in the gender order, and socially distinguished from practices linked to the position of women'. Many forms of masculinity are enacted and ensconced through social actors' identities and social structures across age, time, locale, region and culture. Among the diverse masculinities, there are hierarchies, and the concept of 'hegemony' has been used to understand relations among them (Connell 2002). 'Hegemonic masculinity' can be understood as 'the currently dominant form of masculinity

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as constructed in relation to (and therefore dependent on) both femininities and subordinated, marginalized, and colonized masculinities' (Cheng 1996: xii)[1]. As Calasanti (2004: 311) noted, hegemonic masculinity is 'based upon the lives and bodies of younger men'. Performance, activity, aggression, endurance and strength are its key facets. Changes in these abilities over time may mean that growing older is experienced by some men as entering 'marginalised manhood', even though ageing brings power for others (Calasanti 2004). Whether increasing age is an asset or a liability is dependent upon one's place on a broad map of social inequalities, contextual factors and one's self-perception. Indeed, 'being older' is a slippery slope: at what age is one a man, an 'older man' or an 'old man'? In one's understanding, age or age-identity and chronological age do not necessarily correspond with each other (Bytheway 2005). In fact, subjective age has been shown to be a more potent indicator of wellbeing than chronological age (Bowling *et al.* 2005). Hearn (1995: 100), in particular, pointed to the paradoxical nature of ageing for men; especially in the world of work where being older may theoretically enhance the value of men's labour. He posited that the shift in focus from manual to 'mind/technology' labour may indeed have bolstered the status of some older working men. Computing or IT work is one arena in which 'mind labour' is paramount.

In the realm of computing work, scholars have encountered a particular form of masculinity that involves the mastery of technological skills and the demonstration of this expertise (Wright 1996). Cooper's (2000) study of Silicon Valley IT firms found a form of masculinity that was competitive and team-based, and that valued 'technical skills and brilliance' more than 'looks and athletic ability'. She noted, 'men compete in cubicles to see who can work more hours, who can cut the best code, and who can be most creative and innovative … out-machoing someone means being more of a nerd than the other person' (2000: 382). The control of the labour process was rooted in this configuration of masculinity, and experienced as internal and identity-based: 'being a man' in IT required an all-encompassing commitment to technical work. This 'newly constituted masculinity' seems to transcend occupation, in that managerial discourses mesh and merge seamlessly with technical, work-based identities.

A seamless relationship between managerial and technical discourse in IT organisations has not always prevailed. Not long ago, the relationship between computer workers and managers was characterised as strained (Saxenian 1994). According to Ensmenger (2003: 170–2), corporate managers typically described programmers as 'computer boys', who were deemed to 'behave as if the computer were a toy', and seen to be 'anti-social', 'immature', 'myopic' and 'self-serving'. These opinions have not

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been fully dissipated. The contentious, paternalistic and hierarchical relationship between managers and IT workers in traditional firms was one stimulus for the 'flat' management style of Silicon Valley. Computing entrepreneurs shared a disdain towards the non-technological, hierarchical managers who, in the traditional, American East Coast corporation, rose to positions on the basis of seniority (Kaplan 1999).

Management masculinities are diverse and draw heavily from hegemonic symbols of what it means to be a man (Connell 2000). For example, entrepreneurial masculinity is epitomised in the 'self-made man and the macho, virile, swashbuckling and flamboyant entrepreneur' (McDowell 2001: 184). In contemporary, technology-driven firms, the long-standing 'paternalistic' management masculinity is generally thought to have given way to models of 'entrepreneurial' and 'informalist' masculinities (Acker 2004). As a result, managerial work has been portrayed as fundamentally different from computer-programming and software-development. In her study of software developers, Faulkner (2000: 770) identified an intrinsic dichotomy between technical work and management, for proficiency in technology development 'specifically excludes the social'. The management of people is not conceptualised as a progression from technical work, but as a fundamentally different activity: 'those developers who become managers are seen as moving away from the tribe because they have chosen to abandon the very activity that defines the technical core of "being a developer"'. While Faulkner (2000) noted the dichotomous understandings of these two forms of work, and suggested ambivalence in negotiations between them, she did not mention age in these transitions. Still, these patterns suggest that the transition from technical to managerial work may hold challenges for those workers steeped in technical masculinities.

Few analyses of masculinities in IT explicitly integrate age relations, although age is implied in representations of 'nerd masculinity', a stereotype that has been commonly associated with technical expertise in computing (Kendall 1999, 2000). Nerds are considered to be 'asocial and *incompletely adult* [with] sartorial disregard, bad hygiene, and a lack of social skills' (Kendall 1999: 264). This is a white masculinity, in that 'aspects of nerdiness come to signal whiteness' (1999: 265). It is also a white-collar masculinity, and while 'nerds' are marginalised, they also gain a form of power through their technical mastery. The valued element of this type of masculinity is technical proficiency itself. As Connell (1995) noted, masculinity is inherently about 'doing' and skill-based performances. For older men in particular, the perception or reality of declining skill-based capabilities may be problematic (Calasanti and Slevin 2001). Ageist cultural stereotypes suggesting that older workers are less technically inclined

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and less able to adapt to new technologies mean that ageing in the IT-work context might prove especially difficult for those men who have heavily invested in the technological work of computing (Gringart, Helmes and Speelman 2005; Taylor and Walker 1998).

Profiles of IT workers

Contemporary international data show that IT staff are on average younger than the general labour force (McMullin 2004), and that IT workers are seen as 'boyish' in comparison to other corporate workers (Ensmenger 2003). In Canada, the average age of an IT worker is 36 years, compared to 39 years for the general labour force. Nonetheless, one-fifth of the IT workforce is aged 45 or more years, and there are clusters of older workers in the sector. IT managers and analysts are generally older than web designers and software programmers (Wolfson 2004). Highly-skilled IT work in Canada is also dominated by men, with Canadian Labour Force Survey data showing that they hold 78 per cent of all IT jobs (Wolfson 2004: 10). It is also a white domain, for only 11 per cent of IT workers are from visible minorities. Although little is known about the class origins of IT workers, their posts are well paid and they are highly educated, with 87 per cent having received post-secondary education. They are a privileged group, poised at the forefront of technological knowledge-based work. This makes the inter-relationships between social and political ideologies and the profile of the IT workforce particularly interesting; the sector's age structure and male dominance make it ideal for a case study of the intersections between age and masculinity.

Methods

The data for this article were drawn from a larger, international study of IT work, *Workforce Ageing in the New Economy*, which involved web-based surveys and intensive ethnographic studies of selected small, medium and large IT firms in Australia, Canada, The Netherlands, the United Kingdom and the United States. The analysis reported in this paper examines the interview responses from male IT workers in two urban areas in Ontario, Canada. The decision to study only men was pragmatic and reflected the nature of the industry: the staff of the small IT firms in the study were predominantly male, and their dominance in the 'high-skill' computing work was even greater (to be clear, the research team does

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not believe that masculinity is only performed by men). The majority of the women employed in IT companies are not in the 'high skill' grades but work in administrative or sales positions and do not define themselves as IT workers. Given the predominance of men, and to understand the barriers that marginalised groups face in the sector and how men draw upon ideologies of age and gender in their conceptualisations of work, the paper concentrates on men's talk about their work.

The reported analysis is of 76 semi-structured qualitative interviews with IT workers in small firms that employed between five and 21 workers. The interviews generally took place at the respondent's place of work, lasted on average 50 minutes, and were conducted by several investigators including both authors. The open-ended questions focused on experiences of IT work, work-family balance, and personal ageing in the IT industry context. The analysis features descriptions of IT work and the respondents' reflections on older workers and their personal experience of ageing. The sample reflects the profile of male IT workers as revealed by Canadian national surveys. The average age of the respondents was 36 years (median 34.5 years, mode 28 years). The sample was racially and ethnically very homogeneous, with only six per cent from visible minorities. The sample was well educated, with three-quarters having a postgraduate degree. Approximately one-half (56%) of the respondents were married and had children (50.6%).

Men's discourse on ageing in the IT industry

The words that people use to describe their world, the nature of their work, and to characterise themselves are not happenchance. Gubrium and Holstein (1997: 114) suggested that, 'cultural conventions and institutional settings specify possible complexes of meanings and definitions which serve as interpretive resources, promoting some interpretations, impinging on others'. Moreover, as Whitehead (2002: 103) put it, 'discourses carry knowledge and truth effects through their capacity to signal what it is possible to speak of and do at a particular moment and in particular cultural settings … the centrality of discourses to understanding and interpretation means that they are the very fabric of the social web'. In other words, examining how individuals talk about their experiences and what they find meaningful yields important insights into social relations and organisation.

Making sense of something new through something already known is one way in which to understand the effects of metaphors. Metaphors are powerful linguistic tools that not only describe but also create realities

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TABLE 1. *The prevalence of metaphors in the participants' discourse*

Topic	Documents	Passages
Sport	61	255
Military	51	124
Craft	57	118
Nerd	23	38
Investment	11	18
Nurturing	23	48
Animalistic	20	29
Profane	7	12
Other	12	16
All	75	617
Sample size	76	

Notes: With one exception, all respondents used metaphors in their discussions of IT work. Of the 75 who used metaphors, nearly 80 per cent drew on sporting and 'drive-based' analogies.

through their facility as guides (Lakoff and Johnson 1980: 156). Given the powerful nature of metaphors, they 'operate as a discursive resource that perform[s] important social actions' (Smith and Sparkes 2004: 613). With this in mind, both authors separately read 10 transcripts, paying particular attention to patterns and themes related to age, masculinity and the definition of IT work, and to their intersections. Observations were recorded and then compared. We noted similarities and differences and developed mutually agreed categories. The 10 transcripts were then re-read, coded and compared until agreement on the definition and content of each code was reached. From this point, coding was undertaken separately. The qualitative computer programme *N-Vivo* was used to help store, manage and code the data throughout; it facilitated identification of the prevalence of patterns and codes in each transcript and across the entire data.[2]

The initial coding categories included: workplace culture; task; body management; age stereotypes; and age and task. The use of metaphors was so prevalent in the participants' discussions of all of these categories that a separate code for metaphors was created with the following sub-categories: military; sports; craft/construction; nerd; nurturing or family-like; investment; animalistic; and profane. Entrepreneurial drive and references to 'being driven' were coded with the sports metaphor code. As can be seen in Table 1, some of these metaphors were used infrequently, while others dominated participants' representations of IT work and of ageing in the industry.

Based on this analysis, the respondents' descriptions of IT work and the nature of ageing in the IT industry tended to draw upon familiar masculine realms and activities: sport, building and battlefields. Sports and war

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analogies, entrepreneurial drive and technical craftsmanship were key components of men's discourse on IT and age. This can be attributed partly to the engineering and technical lineage of IT work, as in military operations research and technology. Analysts have found that sport and war metaphors are especially important in facilitating and disseminating hegemonic forms of masculinity. According to Jansen and Sabo (1994), 'sport/war tropes are crucial rhetorical resources for mobilizing the patriarchal values that construct, mediate, maintain and, when necessary, reform or repair hegemonic forms of masculinity and femininity'. In this way, the social arenas of sport and war act as paradigmatic signifiers for masculine behaviour characterised by optimal, age-appropriate performance-based heroics. The metaphors of war, sport and 'being driven', perhaps more than any other, intensify the youthful masculine pulse that characterises this field of work and potentially legitimates an age-graded view of technical skill.

Findings: metaphors and analogies

Military metaphors

War is an extreme state; a realm of life and death that mobilises technology and combat strategies to dominate and kill the enemy. Age is by no means irrelevant in armed conflicts. Positions on the battlefield and of command are age-related. Serving one's time and surviving combat in battlefield trenches in youth mean promotion for some, but discharge, desertion or death for others. Men's discourse in IT brought in military references in various ways. The following quotations illustrate the use of war analogies to describe IT work:

> I'm the most kind of shock troop. I'll jump into a project like small projects here and there. … I'm jumping projects a lot (IT Programmer, aged mid-twenties).

> Well I'm not a long-hours guy. But you know, you don't actually ever leave the business, you know when you're at home, you're *conquering* and sending emails and thinking of whatever (IT Manager, late 40s).

The association of a programmer as a 'shock troop' implies that the worker is agile and fit, adaptable and ready at a moment's notice for tough assignments. In contrast, the IT manager has moved from the battle line *per se* to the home front – 'conquering' with his computer terminal. Conquering implies successful domination and a shift to leadership. Indeed, this shift in IT from programming work to a decision-making or managerial role is often described using military language. For example, one IT president when recounting his career drew on war and military

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phrases such as 'three-year tour of duty' and 'earning my stripes' (aged late 20s).[3] Another IT manager (aged early thirties) described his transition from 'being in the trenches and stuff like that to evolving to overseeing how things get done'. The need early in a career to be capable of being a 'shock troop' and 'to earn your stripes' suggests that IT work is physically taxing, and requires a high level of performance and effort before the person can transfer to managerial authority. In practice, the transition from 'grunt' to 'conqueror', that is from programmer to manager, very often happens at a 'young' age (the late twenties or early thirties).

Sport and competition metaphors

Sport was another predominant reference framework for the respondents' talk about IT work, ageing, age-relations and the characteristics of successful IT workers. One IT president (aged late thirties) argued that his company's short deadlines accounted for its success: 'faster and better is what makes us successful with the big guys that we play with'. Allusions to physical play are used to construct IT as active, even though the work of computing is more mental than physical – it is construed as physical through these references to sport and athleticism. Being competitive and able to keep up and contribute to the team was associated with youth. Competitive people in this industry are young. As a President in his early forties said: 'it is such a competitive industry, that you need to be nimble. And to be nimble right now, is to be younger'. A manager in his early forties remarked, 'You've got to be on the ball all the time, I mean you can't just be resting on your laurels; if you're not learning something you're done'. Here, being 'on the ball' means learning and keeping one's skills current. This process of continual upgrading is a feature of the IT industry, in which technology changes so quickly that falling behind means becoming less useful. To emphasise, the ability to learn and be up-to-date was linked to the nimbleness of youth. Age or growing older was understood as the antithesis, that is becoming slow, awkward and ill-suited to the field of play.

The ability to be a 'team player' and to 'fit' with the company is paramount in the field of IT. Indeed, references to teams were pervasive. In describing his company's organisational structure, one IT worker referred to his colleagues as 'captains, or go-to-guys in their specific teams'. Being a team player means working flexibly to meet deadlines. Employees are ultimately 'expected to pull their weight on the team' (IT manager, early thirties). They must be flexible enough to 'step up' when called upon: 'there are specific instances where we need guys to step up and do something on the weekend or an evening' (IT manager, late

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twenties). Being a competitive team player meant accepting team priorities and taking on additional work and hours, whatever the opportunity costs. The 'team' comes first, and this ethos demands sacrifices. As one IT manager in his early forties reflected, 'if I'm not willing to do it then I, need to, you know … step up to the plate. … God it's so … I don't even like baseball metaphors'.

Aged masculinity

The use of sport and military metaphors does much more than express masculinity and is full of allusions to age and ageing. Sport and military language is instilled with connotations of age and implies pathways for growing older. For example, retirement or loss comes suddenly, perhaps un-expectedly; promotions may remove people from the 'line of fire' and be unwanted, or they may be strategically planned. Messner (1992) pointed out that in the sporting world, men aged in the thirties are referred to as 'old-timers' – so it is in the field of IT. Typically, sports teams are organised not only by ability but also by age, and the analogy with IT work is apt. In most competitive sports teams, the players are 'old' at 30-years-of-age, and there is room for only a few 'veterans'. Older players must move to coaching, commentating or out of the realm altogether. This age patterning or 'logic' is drawn upon in IT discourse to explain both the industry's career tracks and the cohesion of like-age teams. In the following quotation, the ability to 'fit' into a team is seen partly as a function of age:

> The fact is that the people that have come in here that are 'that old' have been working in IT for pretty much their whole life, or at least the last 20 years, and have those set ways of doing things. … (They say) this is the way we do things, this is how it's done, and they're more individualistic in their approach rather than fitting in as a team (IT president, late twenties).

Fitting into a team means trying one's best at all times, epitomised as 'being driven' and working to one's utmost capacity. The concept recurred in our informants' responses. One IT president in his mid-thirties noted that he looked for staff who can show that:

> They have leadership, they have drive, they have ambition and they're willing to work hard to get there. … Somebody who tells me that they want to go up two pay raises in five years and still be a developer, you know, you look at that and you really wonder what kind of leadership are we going to be able to give these people.

The desire to 'stay' a developer itself suggests a lack of drive, and 'being driven' means moving beyond the programming role. In Fitzsimons's (2002) study of gender segregation in IT work, she noted references to

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'drive' by men who wanted to 'get on' in the company, but interpreted them as allusions to sexuality, not explicitly to age. While 'drive' evokes sexual associations, it also has age connotations and is tied to youth. One respondent reflected that he was 'driven' and worked long hours, but that 'you get to a certain age and you just let a younger guy do that'. In his eyes, 'birthdays change everything … and it's not so much fun to work that hard anymore … you lose a step' (IT manager, aged early sixties). In fact, stepping away from technology is a fundamental part of the normal IT career trajectory.

The 'natural' career path in IT

The 'natural path' as one grows older in IT is to move out of programming and into a managerial role. Ageing one's way out of programming is viewed as maturing or 'growing up'. The following quotations illustrate the trajectory's normative nature:

> I was in the programming world [but] quickly grew out of that role and got more into client services. I was still writing some code but that, that was just, it was just a very, very natural progression for me to get away from code (IT manager, late twenties).

> … but you know eventually that's where I want to go to is kind of be a project manager and just seems the nat., to be the natural, path (Programmer, late twenties).

These quotations represent the views of several workers who spoke of the taken-for-granted nature, as one gets older, of the transition from technical work into management, but in the IT industry the transfer is instilled with an accelerated notion of personal ageing. Of the 'older IT crowd', one respondent said, 'they're more of either administrative or managerial or less hands-on, and that's kind of the shift I see myself taking; leave the programming and stuff to the young guys' (IT manager, early thirties). This manager had just reached his thirties and described himself as an 'older guy'. Similarly, a programmer in his mid-twenties noted, 'I'm almost at the state [*sic*] where, you know, I'm getting old, I'd almost rather find a nice project. … I'll put my back to the wall and I'm going to learn everything I need to know about *this*'. These quotations reveal the construction of being 'old' as entering one's thirties, as in competitive sports. When asked if any 'older' workers were at the forefront of technology and engaged in programming and software development, some respondents recalled the odd specialist who had managed to adapt with the technology, but this was clearly not the norm. The few who immersed themselves in cutting-edge technology were therefore *exceptional* 'older' IT workers, and almost all were no older than in their forties. Indeed, workers

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aged in the mid-thirties were described as 'seasoned' and 'veterans', depending on how long they had worked in the field, not their chronological age. If a 'young' man started work at 20 years-of-age, then he might be considered a 'veteran' at age 27 years.

In IT work, many workers 'feel old' in their twenties or thirties. This may spur them to change tasks, to learn something new or to shift into managerial work. This sense of 'oldness' appears to derive from the body's decreasing ability to perform the tasks of programming; one consequence is that technical coding is seen as work for the young. We argue that the conceptualisation of IT in sporting and military terms is one way in which this trajectory and the industry's accelerated notion of ageing is made to seem 'natural'. In other words, the discourse serves two functions: legitimating the removal of older workers from positions of technical skill, and making acceptable or 'naturalising' the choice that many make to give less time to work and more to other spheres of life.

The push and pull from programming to management

In the discourse about 'pushing' older workers away from programming, the physicality of mental labour was emphasised. A contract programmer who was approaching his late thirties said that the programming career was, 'an athlete's life … like sports … so you're young, you have to have that kind of speed'. The taxing nature of mental labour was seen by many to have a physical component that was portrayed as incompatible with increasing age:

> I find that older people don't have the attention span or the constitution to code for 16 or 20 hours at a go like a young person does … your brain shuts down (IT manager, late forties).

> … will my brain keep being able to sponge up all the information or am I going to be able to compete with young people in 20 years? … I'd like to say 'yes', but hopefully in more of a managerial role and less in a technical role, where I have to learn all the new technologies (IT programmer, mid thirties).

In IT work, the ability of the brain 'to keep up' is questioned. Mental facilities and the capacity to learn are not viewed as ageless. The brain is imagined to 'shut down', and 'older' people are seen as lacking the ability to concentrate for long intervals. In fact, older workers may be given less leeway in learning new skills. The taken-for-granted association between being young and the ability to develop computing technology suggests that younger workers may be given the benefit of the doubt in proving their technical abilities. A quotation from a IT programmer in his early thirties indicates the nexus of ideas behind the taken-for-granted association: 'I didn't know the program but I'd heard of it and technically, in the

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IT world, if you're a *young* person and you've heard of it, that means you do know it cause you can learn it'. The notion that older workers are less able to learn (keeping in mind that 'older' means aged in the thirties) may legitimise the removal of older workers from programming work. The evidence from occupational and cognitive psychology does not support a simple 'cognitive decline' explanation. Is it the 'constitution' or neurology of the brain that explains the age grading of the industry, or a matter of choice? The following quotation suggests that other demands on IT workers as they grow older make it increasingly difficult to work long hours:

> I mean hockey players are young because, yeah, when you get slammed into the boards when you're 45, you're not getting up. … You're working 65-hour weeks when you're 25, you can take that. When you're 45, you know you've got two kids in school … that's pretty tough (IT programmer, late thirties).

Being a father or parenting may become more important than sacrifice for the team. Consequently, the transition from programming to managerial work may be welcome for some IT workers. In some cases, the movement into managerial roles is attributed to active resistance by older IT workers and their reluctance to adapt to changing computing technology (as opposed to their inability). An IT manager in his early forties said, 'Do you think COBOL is still around?[4] Well there's a lot of guys comfortable writing in COBOL. You know how it is, they probably shouldn't but … as they get older it's like, ah man, what do I get to learn now?' Indeed, for those workers who were wearied by technical coding and the pace of technological change, the path from programming to management provided a legitimate escape. Men's priorities may change over time in such a way that the 'needs of the team' no longer takes precedence over any other facet of life. By conceptualising the transition away from intensive programming through military and sports analogies, men can preserve their sense of masculinity by following a tried and tested path, conceived as 'leaving the field' and taking up the role of 'coach' or 'commander'.

Still, for many workers the loss of technical skill is traumatic, imposed and not chosen. One IT president in his late thirties traced his career as follows: 'I progressed very quickly up through the hierarchy and was, you know, [successively] programmer, programmer-analyst, project manager, senior technology kind-of-job and then, [pause] manager; it's at that break that one starts to suffer the degradation of skill'. In this way, moving away from technology is degrading and managerial positions are experienced as skill-less. There is much ambivalence about this loss, even

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while taking a position of organisational authority. Ultimately, the move from technical positions to managerial roles is generally perceived more as push than pull:

> People over 50 or so … how many people actually, last? You know, you go to a certain place and then there's, there is no where to go and if, when technology changes under … changes underneath you, and you can't actually change because you're busy doing something else … and I think, I think maybe a lot of older people get, kind of, get pushed out (IT analyst, late forties).

These perceptions mean that developers and programmers who cannot successfully transfer to management roles may find themselves marginalised by the industry. We argue that the age-differentiation of roles in the IT industry may disadvantage older workers, and perpetuate ageist ideologies at the organisational level. For those workers who would like to remain in technological work, either full-time or in a reduced or adjusted capacity, the industry provides few options.

Conclusion

According to Whitehead and Barrett (2001: 21), 'the concept of discourse … highlights not only the power of language but also how language and practice interact, and how this interaction is taken up by the (discursive subject) as a means of identity validation'. In this paper, we have examined the intersection of age with technical masculinities and explored the ways in which IT workers' discourse informs and reflects occupational trajectories and tasks. We have suggested that the metaphors and analogies drawn upon by IT workers naturalise their age-based occupational trajectories. At the same time, the prevalent masculine metaphors in their discourse form templates of how men's working lives in IT could or should unfold. For the men ageing beyond their twenties, the masculine metaphors may be both a comfort and a barrier. The importation of youthful masculine metaphors normalises the sense of being 'old' at young adult ages. 'Being old' is understood as finding oneself weary of technical work. As Jackson (1990) pointed out, men's investment in their work identity often comes at the cost of compromised physical health and wellbeing. The costs of performing according to the dictates of hegemonic masculinity may enact a toll on men's bodies as they age (Calasanti 2004). By exiting from the performance-driven role of programming, some men redefine their priorities in a liberating way.

Being defined as 'old' by others may happen by virtue of being older than programmers are supposed to be. In the same way that a veteran

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sports figure in his forties is an anomaly and goaded into retirement, so too the 'older programmer' may be perceived to be past his prime. As Phoenix and Sparkes (2006: 634–5) noted, 'by their late twenties or early thirties, many athletes find that sustaining their former physical condition – muscle tone, strength, agility, speed and power – becomes increasingly difficult. For this reason, involvement in competitive sports provides many experiences of ageing in early adulthood'. This may also be the case for IT workers, for proficiency in technical coding does require speed, agility and unwavering concentration. Indeed, the discursive ties to sports and the military may bolster the affiliation of age and technical ability, and thereby confirm ageist stereotypes about the technical abilities of older workers. Further, these links between youth and computing skill may be the rationale for recruiting young people for technical positions – they are also paid less and have worked more in an environment of competitive global capitalism.

To remain in the IT industry, older workers are implicitly guided to set aside technical roles and to follow the 'natural' work trajectory. This trajectory carries implications for older workers, for there are fewer managerial positions. In IT in Canada, there are three programmers for every manager (Wolfson 2004). Furthermore, not everyone is able to transfer into management – a position of authority 'off the field'. In sports, the military and IT, these 'age-appropriate' roles are associated with different kinds of prestige. Managerial masculinities are power-based and dependent on entirely different skills, which are both difficult to acquire and less fulfilling for men steeped in 'technical masculinities'. The corresponding intersections between age and masculinity suggest that older male IT workers may be marginalised and winnowed out of the technical 'play'.

From a broad societal perspective, defining young-adult workers as 'old' in technical occupations is worrisome at a time of widespread workforce ageing. The short and intense nature of the IT career trajectory may discourage young staff from remaining in the sector, even as older workers are steered into management. For those with no desire to manage, the long-term prospects of the IT field may prompt skilled workers to leave the industry. Contrary to Hearn's (1995: 100) suggestion that greater age can be valuable in those occupations where 'mind/technology' prevails, our findings imply that ageist stereotypes are as likely to hinder the longevity and value of older workers in these fields. The retreat of the experienced workers, the IT 'veterans' who have lived through the industry's downturn and recovery, is a considerable loss of human resources to the industry and for the future development of computing technology.

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NOTES

1 For example, 'gay masculinity' is perhaps the most well-known marginalised masculinity. 'This form of masculinity is rendered subordinate in part through the feminisation of gay men and abusive terminology, such as wimp, milksop, nerd, turkey, and sissy' (Connell 2001: 40).
2 For details of *N-Vivo*, visit http://www.qsrinternational.com/
3 President is synonymous with Chief Executive. In all but one of our case-study firms, the President was also the sole owner or an owner/partner.
4 COBOL (Common Business Oriented Language) is one of the oldest programming languages still in use.

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