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THE EFFECTS OF GENERATIONAL DEMOGRAPHICS ON INFORMATION MANAGEMENT

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JCSP 38

Master of Defence Studies

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PCEMI 38

Maîtrise en études de la défense

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CANADIAN FORCES COLLEGE - COLLÈGE DES FORCES CANADIENNES
JCSP 38 - PCEMI 38

MASTER OF DEFENCE STUDIES RESEARCH PROJECT

The Effects of Generational Demographics on Information Management

By Major A.K. MacPherson

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Word Count: 16,135

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Compte de mots: 16,135

ABSTRACT

When looking at a modern-day military force, it is a fact that there will be representatives from a wide variety of age groups within the organization. Although there are societal perspectives when looking at the alignment of age groups, some studies state that there are environmental influences that gave rise to unique individualities of each age cohort. With the blending of this multigenerational workforce, tensions and misunderstanding often arise. If differences between these groups are ignored, unawareness can become the foundation of conflict and decreased efficiency.

Although some parallels can be drawn from the study of commercial industry, there still will be unique aspects when looking at the *military workplace* that need to be considered. As the Canadian Forces is primarily a bottom-entry organization, not only could these effects be more pronounced, but generational influences may possibly impact recruiting and retention within the organization. Intuitively, one might think that the younger cohorts have a significant advantage in the information technology domains, but generational differences appear to be a central cause of mismanagement of information within western militaries.

The intent of this paper is to demonstrate the *impacts of generational demographics on information management* within the Canadian Forces. This paper will show that innovation within this domain is significantly stunted as a result of institutional socialization. Recommendations will be made for the institution to recognize this pattern of stagnation, and leverage both the operational experience of the older cohorts and the fresh perspective of the highly networked younger cohorts.

Table of Contents

Introduction.....	1
• Background.....	1
• Information Technologies and Generational Exposure	2
• Network-Based C2 Constructs.....	4
• Domains of Analysis.....	6
• Outcomes and Expectations.....	8
Chapter 1 - Aging and Generational Demographics.....	11
• Introduction.....	11
• Effects of Aging.....	13
• Baby Boomers.....	15
• Generation X.....	17
• Generation Y.....	20
• Other Generations.....	23
• Non-Specific Age and Generational Characteristics	25
• Chapter 1 - Conclusion	27
Chapter 2 - Generational Impacts in the Commercial and Military Workplace.....	30
• Introduction.....	30
• The Evolving Workforce	31
• The Network Society	34
• The Canadian Forces.....	37
• Recruitment and Retention	39
• Chapter 2 - Conclusion	43
Chapter 3 - Generational Impacts on Information Management.....	46
• Introduction.....	46
• Sharing.....	47
• Cooperation.....	49
• Collective Action	53
• Chapter 3 - Conclusion	57
Chapter 4 - Transforming the Institutional Perspective.....	60
• Introduction.....	60
• Recognizing Path Dependence within the Institution.....	61
• Changing the Way the Institution Learns	65
• Changing the Way the Institution Manages Change.....	69
• Chapter 4 - Conclusion	71
Conclusion	73
Bibliography	79

INTRODUCTION

Every society, industry, and business is just one generation away from extinction. By observing the new generations, we can instil new techniques and structures to better engage with, and lead them. This is the surest way to remain relevant, and impact the future.

Mark McCrindle¹

BACKGROUND

A key characteristic of modern militaries is that they are expected to operate in a dynamic and complex environment. The collection, organization, distribution and use of information have become key enablers in the modern battle space. Significant resources are expended to develop concepts and doctrine to enable armed forces to operate in this data-rich environment. This significant undertaking anticipates the reward of lifting the veil of uncertainty in operations by way of information superiority over an adversary.

Organizational structures and information technologies have the potential to enable those in positions of responsibility (and their staff) to share, amass and assess information, providing the capability to make informed and timely decisions. While considerable attention is paid to the procurement of systems and platforms to facilitate a *network-enabled* force, there is a significant human dimension fundamental to the underlying organizational construct. The principles of psychology and sociology are playing increasingly important roles in this domain and are used to leverage any possible advantage to strive towards information supremacy.

¹ Mark McCrindle, *The ABC of XZY: Generational Diversity at Work* (Bella Vista, Australia: McCrindle Research Pty Ltd, 2005), 8.

There is a growing recognition that differences can exist across subgroups within the military based on culture, language, educational background or a variety of other demographic metrics. It has been suggested that the underlying friction caused as a result of these differences can lead to a significant decline in organizational effectiveness. More specifically, researchers are pointing to generational or age cohort differences as a prime cause of workplace tension. This paper will demonstrate that there are significant impacts on information management within the Canadian Forces caused by the current generational demographics.

Prior to analysing the characteristics of the generational cohorts in the Canadian Forces, it is necessary to frame the current capability within the military based on the state of information technology and the generational exposure to this technology. A projected network-enabled organizational structure that uses information as a fundamental dimension will be presented as a basis for discussion. Overarching domains of analysis will be presented along with outcomes and expectations of this study.

INFORMATION TECHNOLOGIES AND GENERATIONAL EXPOSURE

Advances in information technology often form the basis for the promises of efficiencies sought in command and control (C2) networks in a military environment. As the military once was ahead of corporations in technological advances, it is now common for a country's armed forces to turn to commercial industry to procure the underlying hardware of C2 information systems (C2IS). Commercial-off-the-Shelf (COTS) software is now

becoming commonplace removing the long research and development cycles that are common for internally produced applications.

Thus, in a recent inversion of capability, it is not uncommon for households to have more powerful computer platforms and greater connectivity than the typical military workplace. Generally, young people at the entry level of the Canadian Forces are already familiar with various forms of information sharing and networked communications prior to service. They have experienced well-developed social networks and various forms of media-on-demand have become their norm. Clay Shirky, a sociologist from New York University, states that “for the first time in the history of television, some cohorts of younger people are watching less TV than their elders.”² Generally, these highly-connected and computer-savvy members of the Canadian Forces are ready to work in a network-centric environment. In comparison, some of the older members of the Canadian Forces may be hesitant to make that transition, and others even are boastful as to be considered as the modern-day *Luddites*.³

As Brigadier Richard Simpkin stated, “an army is at root a social organisation rather than a functional one.”⁴ Communication gaps and misinterpretation of information between

² Clay Shirky, *Cognitive Surplus – Creativity and Generosity in a Connected Age* (New York: Penguin Books Ltd, 2010), 11.

³ The Luddites were a movement in 19th-century England objecting to the technical advances of the Industrial Revolution, which they presumed would fundamentally change their way of life in a negative way.

⁴ Richard E. Simpkin, *Race to the Swift: Thoughts on Twenty-First Century Warfare* (London: Brassey’s Defence Publishers, 1985), 4.

individuals of different age groups may be the underlying cause of workplace friction. Before undertaking the larger societal issues, a fundamental question from an information management perspective may be *how do the various generations each take in, assimilate, and distribute information?* Particular attention must be drawn towards the interfaces between these age groups, as well as the willingness for each of these demographics to adopt new technologies and assemble information collectively.

NETWORK-BASED C2 CONSTRUCTS

Mission command is currently defined by the Canadian Forces as the mindset that “promotes unit of effort, the duty and authority to act and initiative to subordinate commanders.”⁵ The three tenets of this philosophy include timely decision making, the importance of understanding a higher commander’s intent, and the clear responsibility to fulfil that intent. Alberts and Hayes have considered constructs for the idealization of traditional *mission command* such as empowering a network through “expanding access to information and the elimination of unnecessary constraints.”⁶ As a result, they have developed the concept of the *C2 Approach Space* (see Figure 1).⁷ The approach space is to be used as a metric to gauge an organization from between a tightly-constrained centralized hierarchy to a decentralized information-rich *edge organization*.

⁵ DND, B-GL-300-003/FP-001 *Command in Land Operations* (Kingston, ON: Director of Army Doctrine, 2007), 2-4.

⁶ David S. Alberts and Richard E. Hayes, *Power to the Edge* (Washington, DC: CCRP Publication Series, 2003), 5.

⁷ David S. Alberts and Richard E. Hayes, *Understanding Command and Control* (Washington, DC: CCRP Publication Series, 2006), 75.

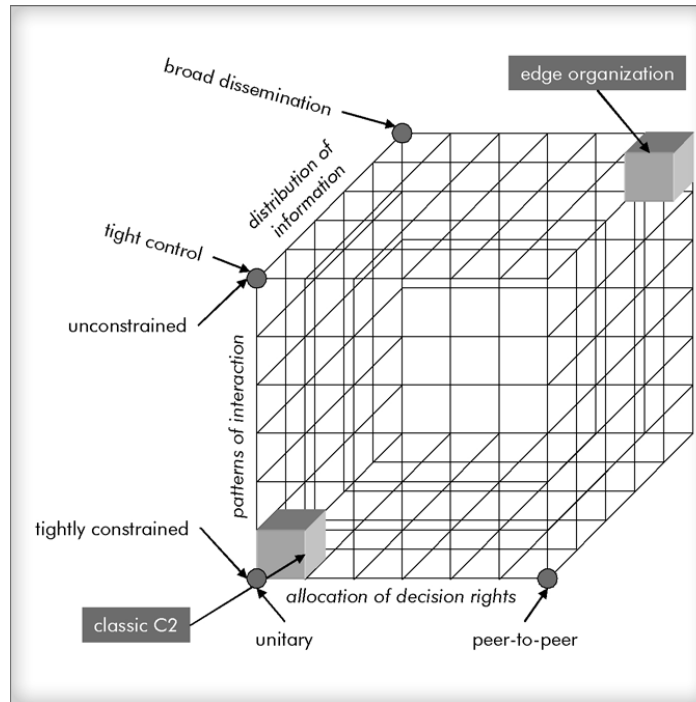


Figure 1: The C2 Approach Space (NATO SAS-050)
 Source: Alberts and Hayes, *Understanding Command and Control*, 75.

According to them, the most fundamental dimension within the approach space is the *allocation of decision rights*.⁸ In a linear representation of the distribution of possibilities, the spectrum would span from total centralization, as in a classical C2 organization, to total decentralization, as would exist in the proposed edge organization. Alberts and Hayes acknowledged that the formal allocation of decision rights may not correspond to the actual distribution “because of a variety of factors, including traditions, culture, or level of training.”⁹

⁸ Alberts and Hayes, *Understanding Command and Control* ..., 81.

⁹ *Ibid*, 76.

The possibilities of *the distribution of information* range from tightly-controlled to broadly-disseminated systems. Although most would currently tag this current dimension to technology and the corresponding connectivity, that factor is secondary to the underlying information itself. It is acknowledged that regardless of the actual distribution of information, it will never fully wipe away the uncertainty and chaos of battle. In human form, there will need to be a judgment in the assessment and validation of the information available in order to formulate an understanding of the situation.¹⁰

From Alberts and Hayes' perspective, *patterns of interaction* range from 'tightly restrained' to 'unconstrained'. Fundamentally, the networks that are generated by these patterns are enabled by human interaction and are independent of the means.¹¹ The *social* networks are seen to depend on cooperation, or moreover the willingness to work together and collaborate in a highly dynamic fashion. As was shown for all three dimensions, the underlying criteria for the construct of an *edge organization* can be delinked from the technology itself. It will be from the lens of sociology that C2 will be enabled.

DOMAINS OF ANALYSIS

When looking at a modern-day military force, it is a reality that there will be representatives from various age groups residing within the organization. Although there are societal perspectives when looking at the alignment of age groups, some studies

¹⁰ DND, *Command in Land Operations ...*, 1-21.

¹¹ Alberts and Hayes, *Understanding Command and Control ...*, 100.

will state that there are environmental influences that gave rise to unique individualities corresponding to each age cohort. The over-arching cognitive and physical effects of the aging process are largely independent of generational alignments, but still may have an impact on the C2 Approach Space. What are such characteristics of *aging* and are there indicators of each individual *generational demographic* still within the workforce?

As the characteristics of the generational groupings are defined, there may be some misalignment that appears within the allocation of decision rights. Several factors can be discretely articulated when discussing age demographics, but what *generational impacts* are there in the current *commercial workplace*? The excerpt from the USA Today news article below demonstrates that the current setting of the heterogeneous commercial work environment is a topic of interest in popular media.

Sixty-year-olds are working beside 20-year-olds. Freshly minted college graduates are overseeing employees old enough to be their parents. And new job entrants are changing careers faster than college students change their majors, creating frustration for employers struggling to retain and recruit talented high-performers.¹²

Although some parallels can be drawn from the studies of commercial industry, there still will be unique aspects of the *military workplace* that need to be considered. As the Canadian Forces is primarily a bottom-entry organization, not only could these effects be more pronounced, but generational influences may already impact recruiting and retention within the organization.

¹² Stephanie Armour, "Generation Y: They've Arrived at Work with a New Attitude," *USA Today*, 11 June 2005, http://www.usatoday.com/money/workplace/2005-11-06-gen-y_x.htm; Internet; accessed 26 January 2012.

Under command-support constructs, it is the subject of *information management* that deals with group interactions and collaboration. As this domain deals with information sharing, communicating, and collaborative production, nuances on how each generation performs these tasks may impact the effectiveness of any organization. Are there any such *generational impacts on information management* within the Canadian Forces?

Intuitively, one might think that the younger cohorts have a significant advantage in these areas, but as it is a bottom-entry hierarchical construct, is this competency being fully leveraged?

Although the Canadian Forces is navigating through a period of significant organizational transformation, some institutional pressures may be inhibiting the institution from fully embracing digitization of operational processes. There are several questions that can be posed. Is the current mix of generational demographics in the Canadian Forces assisting or impairing initiatives within the realm of information management? Are there any considerations from a generational standpoint when considering integration or training? What steps can be taken to *transform the institutional perspective* and leverage the advantages each generation can offer?

OUTCOMES AND EXPECTATIONS

As military forces look to commercial industry for techniques to optimize business processes, both of these domains may be inhibited by the same fundamental issue. Generational differences could be a central cause of mismanagement of information

within both commercial and military organizations. The tried and tested procedures of older generations may run diametrically opposed to the collaborative techniques leveraged by the younger age groups.

The reason for Alberts and Hayes to define the C2 Approach Space was to “explore alternative paradigms for command and control.”¹³ The Canadian Forces are considering options such as the edge organization construct, as is foreshadowed in the following extract keystone document *Leadership in the Canadian Forces: Conceptual Foundations*.

According to one view of the future military organization, the new operating environment will oblige leaders to rely less on the exercise of formal authority within an inflexible hierarchy, and more and more on informal networked communications and decentralized decision-making.¹⁴

Mark McCrindle, renowned Australian social researcher and demographer, has focused on the distinctions between the characteristics of generational groups. Although he provided some sweeping generalizations, his insights into inter-generational relationships provide awareness into the current workplace dynamic. He gives a caution regarding the pressures that are intensifying in the commercial workplace as a result of these dissimilarities.

The new reality is one where teams of diverse ages work on a project, where older leaders manage across several generations, or increasingly where young graduates manage older workers. Without an effective understanding of the different values and perspectives that each generation

¹³ Guy H. Walker *et al*, *Command and Control: The Sociotechnical Perspective* (Wey Court East, UK: Ashgate Publishing Limited, 2009), 13.

¹⁴ DND, A-PA-005-000/AP-004 *Leadership in the Canadian Forces: Conceptual Foundations*. (Ottawa: Dept. of National Defence, 2005), xii.

brings this is a breeding ground for conflict. Indeed of all of the diversity in the modern workplace it is the generation gaps that are causing most of the angst.¹⁵

A current challenge across communication realms is that of the interoperability of systems. There is a significant effort to maintain a minimal level of communications between coalition partners and joint services, but it appears that military organizations may not be able to interoperate internally between the various age groups. If there is such a problem with integrating the generations together, will the reward of resolving this concern be worth the effort?

This paper will discuss that innovation within the domain of information management is significantly stunted as a result of institutional socialization. Recommendations will be made for the institution to recognize this pattern of stagnation and leverage both the operational experience of the older cohorts and the fresh perspective of the highly networked younger generations. The ones currently able to influence the change could have the most to lose, while the ones who would be impacted by any potential change would possibly have the most to gain.

¹⁵ Mark McCrindle, *New Generations at Work: Attracting, Recruiting, Retraining & Training Generation Y* (Bella Vista, Australia: McCrindle Research Pty Ltd, 2006), 8.

CHAPTER 1 - AGING AND GENERATIONAL DEMOGRAPHICS

INTRODUCTION

Age has always been considered an “ambiguous identity marker in our society.”¹⁶ There generally are two current societal perspectives when looking at the alignment of age groups. The one viewpoint of collection is that of *age cohorts* and another is that of *age stratum*. *Age cohorts* are generational groupings of people born within the same period. People born into that cohort remain in that group as they move through life. The second perspective is that of *age stratum*. This grouping is the collection of people around a certain age. Some commonly known descriptors of age strata include adolescence and middle-aged. As a person ages, they pass through successive age strata along with their respective cohort.

Cohorts have been sometimes grouped into decade blocks, but generational monikers are becoming more distinct. The exact start and end date for inclusion into each generational cohort varies dependent upon the reference cited. It is found that experiences occurring during the developmental childhood and teenage period create and define dissimilarities between the generations.¹⁷ The generations currently within the Canadian Forces include the *Baby Boomers*, *Generation X*, and *Generation Y*. Terms like *early boomers* or *late boomers* have tried to further break down these groups to show the characteristics and the further influence of each subgroup. The clear delineation of criteria that separate these

¹⁶ Robert Hagedorn, *Sociology – Third Edition* (Toronto, Ontario: Holt, Rinehart, and Wilson of Canada Limited, 1986), 148.

¹⁷ McCrindle, *New Generations at Work ...*, 15.

clusters vary from source to source, with some references making such boundaries unclear. Has the shifting of the age demographic in western society, along with the blending of multiple generations, given rise to significant misunderstanding and tension in today's workforce?

In the commercial workforce there are currently four 'generations' available to be employed with a fifth waiting patiently to enter. There has been a trend of employees extending careers and working well past retirement norms of a few decades ago. The older generations have remained in the workforce longer than expected due to financial stability concerns or because of the expectation of an increased life span. Still, corporations endeavor to get optimal performance from all in the workplace.

Age demographic trends in western society have brought us to a curious juncture. With the blending of this multigenerational workforce, tensions and misunderstanding often arise. If differences between these groups are ignored, unawareness can become the foundation of conflict and decreased efficiency. However, if managers are appropriately educated, they can "create opportunities for collaboration and synergy among the different generations of workers, giving the organization a competitive edge."¹⁸ Before each cohort is to be examined, the over-arching cognitive and physical effects within the aging process must be reviewed.

¹⁸ Adecco, "Managing Today's Multigenerational Workforce," <http://www.adecco.ca/EN/knowledge-centre/employers/Documents/whitepapers/managing-multigenerational-workforce.pdf>; Internet; accessed 14 February 2012, 3.

EFFECTS OF AGING

What impacts does this age shift have on the capabilities within the workforce? Fiscally concerned about their extended future, older employees are more reluctant to leave the stability given to them within the workforce. The younger employment-aged workforce is impacted by this trend, specifically prolonging the wait times for advancement opportunities. The generation of emerging adults on the verge of entry are “no longer adolescents, but have not yet taken on adult-level responsibilities.”¹⁹ With an increase in life span in western societies, a shift in the perception of aging is occurring.

Up until recently, psychologists “viewed the center-of-life years between adolescence and old age as one long plateau.”²⁰ Under closer examination, this perspective is no longer valid. With cognitive capability, further studies have shown two distinct trends. With *crystallized intelligence*, or one’s accumulated knowledge, there is a generalized increase up to old age, with a subsequent decline upon reaching that point. *Fluid intelligence*, indicated as one’s capability to reason rapidly and conceptually as when answering innovative logic problems, decreases slowly up to the age of 75.²¹ The adage of ‘you can’t teach an old dog a new trick’ may have some relevance, but those dogs are still likely to have several old tricks at their disposal.

¹⁹ David G. Myers, *Psychology*. Eight Edition (New York: Worth Publishers, 2007), 174.

²⁰ *Ibid*, 175.

²¹ *Ibid*, 184.

Similarly, from a physical standpoint, “decline begins in early adulthood, but we are not acutely aware of it until later in life.”²² As one ages, there tends to be a gradual but steady loss of muscle tone, elasticity and strength. There generally is gradual decrease in the overall sensual acuteness of the body. Correspondingly, there is a decrease reaction time as the neurological system takes longer to receive and send messages. As we age, we generally need more light to read, or a person talking to us needs to speak louder.

Among middle-aged men, there are some medical and psychological myths with respect to the aging process. Some recent studies have focused the collection of commonly found symptoms in middle-aged males such as fatigue (mental and physical), loss of energy, and depression. The term *andropause*, or male menopause, is increasingly used as the cause to this grouping of symptoms. This nomenclature is incorrect as “[m]en experience no equivalent to menopause – no cessation of fertility, no sharp drop in sex hormones.”²³ Nicholas Burns-Cox from the Bristol Urological Institute indicated that the symptoms of so-called andropause “can readily be explained by stress.”²⁴ Another similar myth to be dispelled is that of *midlife crisis*. For males entering their 40s, there is no typical increase in emotional instability that can be designated as such.²⁵ Although these two explanations for physical decline and psychological instability are commonly acknowledged as the fact, there is yet no scientific basis for them.

²² *Ibid*, 184.

²³ *Ibid*, 177.

²⁴ Nicholas Burns-Cox and Clive Gingell, “The Andropause – Fact or Fiction,” *Postgrad Medical Journal*, no.73 (1997): 556.

²⁵ Myers, *Psychology...*, 178.

Notwithstanding the disparity between the various generational cohorts currently in the workforce, the overarching effect of an aging population still has an impact on workforce dynamics. Given the gradual decrease in physical capability and cogitative flexibility, we must accept the limitations in the general case of an aging person. These decreases in fluid intelligence and reaction time may limit capacities of some older people to perform in highly-adaptive environments. Although the terms andropause and midlife crisis have been embraced by popular culture, there is no underlying scientific fact to these conditions. Although the effects of aging are applied in a linear fashion, the traits distributed among the generational cohorts are not.

BABY BOOMERS

The Baby Boomers include the age cohort born roughly within the 1946 to 1964 timeframe. Raised post-World War II, this group was nurtured in a progressively optimistic and financially stable world. Given many monikers including the *Me Generation*, *hippies* (early boomers), and *yuppies* (late boomers). This age group has witnessed several significant societal events including the Women's Movement, the Civil Rights Movement, the Vietnam Peace Movement, and the Quiet Revolution (*La révolution tranquille* in Québec). It is after being reared in this environment that they are thought to be characteristically selfish, but optimistic and idealistic believing that "the world can be changed."²⁶

²⁶ Adecco, "Managing Today's . . .", 6.

Although the Baby Boomers grew up in a more leisurely time, they have been characterized as idealistic and competitive. Baby Boomers see personal growth as a key goal. At work, they were the first to embrace the Information Age and in time became Internet savvy. Although they are technically competent, they are more accustomed to interacting face-to-face or via telephone. They are independent and will put in the long work hours when it is required to do so.²⁷

The Baby Boomer is often seen as the ‘over achiever’ from the other generations’ perspective. Built for self-sufficiency, these multi-tasking individuals can take on demanding responsibilities autonomously. However, from these traits, the baby boomer often struggles with work-life balance. Boomers aren’t inflexible, authoritarian, or distantly aloof as their other generation workers think them to be, but are planned, focussed, decisive, independent and self-reliant.²⁸

Boomers have persisted through significant societal transformation and have either adapted or are specifically responsible for that change. The Baby Boomers are expected to remain in corporate leadership positions longer than any preceding generation and their experience combined with their capability to transform will keep them relevant.²⁹ They are a very flexible generation, as was seen with their progressive adoption of technology.

²⁷ *Ibid*, 6.

²⁸ McCrindle, *The ABC of XZY ...*, 2.

²⁹ McCrindle, *New Generations at Work ...*, 11.

Fearing a significant trough in the available workforce, corporations are looking for lessening the impact by attempting “to keep [the Baby Boomers] (and their institutional knowledge) on board for as long as they can.”³⁰ Although research on the effects of aging continues, the expected departure of the Baby Boomers, and the resulting workforce shortage that would occur, has made our society rethink pushing them out just yet.

GENERATION X

The term *Generation X* (Gen X) is used to encapsulate the birth cohort between the years 1965 to 1977. The expression was first penned by Canadian author Douglas Coupland in his book *Generation X: Tales for an Accelerated Culture*, published in 1991. Also known as *Latchkey Kids*, *Baby Busters*, *Post Boomers*, or the *Slackers Generation*, they were raised by the early Baby Boomers and witnessed a strong societal trend toward divorce and significant economic uncertainty.³¹ With such senior role models, Gen X grew up in a time of “accelerated schedules, multitasking, and information.”³² Unlike some of their early boomer *hippie* parents, Gen X often rejects the idealism of the 1960s.

This generation was shaped by world events such as the collapse of the Berlin Wall, the conclusion of the Cold War, the space shuttle disaster, and significant swings in the economy. With such factors influencing them, one can extrapolate that they continue to

³⁰ Adecco, “Managing Today’s ...”, 9.

³¹ McCrindle, *New Generations at Work ...*, 11.

³² Adecco, “Managing Today’s ...”, 3.

be nervous about financial and emotional security. Money is an important motivator to this materialistic generation. Notwithstanding monetary compensation, Gen X has a need to be “valued immediately for their skills.”³³ The age group has largely adopted the philosophy that there are ‘no guarantees’ in life.

Although Gen X is generally tolerant of, if not at ease with, change in the workforce, Gen X is “unwilling to conform to organizational demands that do not suit them, and leave jobs that bore them and are not ‘fun’.”³⁴ Some of their late boomer *yuppie* bosses will often criticize Gen X as ‘loafers’ but these labels misread their work ethic. The perception of an unreliable and lazy generation has been debunked by many researchers. Currently, Gen X is the best educated generation with 40% of them obtaining a university degree or higher.³⁵ Studies have implied that “they just work differently.”³⁶

Clay Shirky has proposed a different perspective on the apparent work ethic of Gen X. His studies detailed that the early observations of Gen X were unfair because they were simply reacting to their environment of the late 1980s. They were excluded from workforce in their early employable years as a result of the downward turn in the economy and the larger cohort ahead of securing any employment opportunities.

Once the recession was over, the landscape of opportunity changed dramatically: it became easier to find a well-paying job, to start a

³³ *Ibid*, 7.

³⁴ *Ibid*, 7.

³⁵ *Ibid*, 7.

³⁶ McCrindle, *The ABC of XZY ...*, 4.

company, or to join a start-up, all activities that the former slackers dove into with gusto.³⁷

Gen X has been called the *perfect bridge generation*.³⁸ As the leading edge of this generation entered the workforce during the early-1990s economic downturn, they understood and typically accept the work ethic and focus of the Boomers. As they are not so culturally separated from Generation Y, Gen X can connect with their views and values.³⁹ Gen X is a very media-savvy generation. This age group is “[m]ore global, technologically-orientated, and culturally diverse than the generations before them.”⁴⁰

Unlike their Boomer parents, Gen X employees “don’t respond well to many rules, ‘because I said so’ management, insincere (or absent) thank-you’s and feedback, or sterile, lifeless offices.”⁴¹ Embracing risk for potential gains, this generation prefers free agency to constraints of loyal corporatism.⁴² With the expected departure the Baby Boomers, responsibility will soon shift to the lesser quantities of Gen X employees. In time, such imbalance may provide “a shrinking pool of prime-age workers.”⁴³ Although this capability trough has been prophesied for some time, the longevity of the Baby Boomers may be trying Gen X’s patience.

³⁷ Shirky, *Cognitive Surplus* ..., 122.

³⁸ McCrindle, *New Generations at Work* ..., 11.

³⁹ *Ibid*, 11.

⁴⁰ Adecco, “Managing Today’s ...”, 7.

⁴¹ McCrindle, *The ABC of XZY* ..., 4.

⁴² *Ibid*, 7.

⁴³ *Ibid*, 2.

GENERATION Y

Generation Y (Gen Y) is the alias of the group born around the timeframe of 1979 to 1989, or roughly bracketing the 1980s. This age cluster, in the wake of Gen X, has several designations including the *Millennials*, *Generation Next*, the *Net Generation*, and the *Echo Boomers*. This age cohort is characterized as being optimistic, tech-comfortable, style-conscious, and brand-loyal. Gen Y is now the largest consumer group in history.⁴⁴ World events that influenced this group include the September 11th attacks and the Columbine High School massacre. They were born into a world marked by growing inter-regional and inter-community struggles. Key to this generation is family, religion, and generosity.

Gen Y has an altruism that embraces environmental issues, poverty concerns, and community problems. This age group volunteers in the community more than any other previous generation.⁴⁵ With a high degree of tolerance, this generation celebrates diversity like no other. Workers from this cohort are described as inventive, individualistic, pragmatic, and hard-working. However, Gen Y prefers work that suits them specifically. For an employee from Gen Y, they “want to work, but they don't want work to be their life.”⁴⁶

⁴⁴ *Ibid*, 8.

⁴⁵ *Ibid*, 8.

⁴⁶ Armour, “Generation Y ...

Gen Y is “attracted to organizations whose missions speak to a purpose greater than a bottom line.”⁴⁷ They want to join a company because they want to make a difference, and not just for a salary. Gen Y is willing to exchange high pay for fewer working hours, flexible workdays and a more amicable work-life balance. Having experienced comfortable circumstances in early life puts them in a position to negotiate such demands.⁴⁸ Gen Y has cheekily been called ‘*Gen Why?*’ This generation has shown a tendency to question “policies and ground rules and ensure that there are good reasons that underpin them.”⁴⁹

Indicative of Gen Y is a perceived reputation of diminished corporate loyalty and an apparent sub-standard work commitment. This transient attitude is often misinterpreted as disloyalty but is driven by the “desire for variety, challenge, and change.”⁵⁰ This generation came into the workforce when “there is little job security, a competitive environment, and no employment guarantees.”⁵¹ As the rules had changed from their parent’s time, Gen Y characteristically has embraced this reality.

For Generation Y change is like the air they breathe. They keep up with the changing technologies, move houses more frequently than the average and they have just come out of an education system that has offered

⁴⁷ D. Bentley, “Are You Ready for the Next Generation, and Are They Ready For You?” <http://www.bcjobs.net/re/hr-centre/human-resource-advice/archives/avoid-generational-clashes>; Internet; accessed 26 January 2012.

⁴⁸ Adecco, “Managing Today’s ...”, 8.

⁴⁹ McCrindle, *The ABC of XZY* ..., 6.

⁵⁰ McCrindle, *New Generations at Work* ..., 19.

⁵¹ *Ibid*, 9.

greater subject choice than ever before. So at this stage of their life variety is all they've known.⁵²

To counter this perception of Gen Y's migratory habits, Jeff Tasserone comments that although Gen Y has "a 'been there, done that' attitude, they are in fact comparatively sheltered and remarkably risk averse."⁵³ He further extrapolates that because of this aversion to risk that eventually they may revert to long-term employment schemes familiar to the previous generations.

If risk-averse self-absorption is indeed a characteristic Gen Y value, a plausible argument might be made that this should lead to more stability-seeking behavior and a reduced propensity to leave stable situations of employment.⁵⁴

Just inside the front door of the workforce, this group has a command of technology. They have observed evolving digital technologies such as instantaneous communications via email and text messaging. Raised in comfort on the internet, this generation regards online collaboration and social networking as commonplace. Although their Baby Boomer and Gen X counterparts adjusted to a digital workplace, Gen Y is a native. However, characteristic of their yuppie parents, this cohort was "nurtured and programmed with a slew of activities since they were toddlers, meaning they are both high-performance and high-maintenance."⁵⁵ While this generation is considered indecisive and self-important, the truth is that they have adapted to the current situation.

⁵² *Ibid*, 22.

⁵³ Jeff Tasserone, "Military Manning and the Revolution in Social Affairs," *Canadian Military Journal*, vol. 2, no. 3 (Autumn 2001), 57.

⁵⁴ *Ibid*, 58.

⁵⁵ Armour, "Generation Y ...

On the downside, as they have become “[a]ccustomed to a time-compressed, fast-forward environment, Gen Y is increasingly jaded and in need of continual stimulus.”⁵⁶

The existence of a generation gap becomes more pronounced when we attempt to supervise Gen Y with time-proven corporate practices. Members of Gen Y are usually noted to be “collaborative learners, enjoy working in teams, and thrive in a relaxed consensus-driven group.”⁵⁷ Although older business strategies emphasized control, structure and framework, Gen Y will emphasize relationships, style and freedom. If other generations take the time to build the relationship with those in Gen Y then “we are well on the way to being able to engage, train, and lead this emerging generation.”⁵⁸ A member of Gen Y generally demonstrates a resilient relationship ethic. When business leaders resist issuing the demand for corporate allegiance and build meaningful connections to these individuals then “loyalty and commitment from Gen Y can indeed be garnered.”⁵⁹

OTHER GENERATIONS

The oldest generation still enduring in the civilian workforce is the *Silent Generation*. Born prior to 1945, the majority from this age demographic have retired. This group had been brought up as children with the mentality ‘to be seen and not heard’. The effects of World War II are still in the memories of this generation. Generally, this group has

⁵⁶ Tasseron, "Military Manning . . . , 57.

⁵⁷ McCrindle, *New Generations at Work . . . , 19.*

⁵⁸ *Ibid*, 23.

⁵⁹ *Ibid*, 12.

shown the tendency to be slow in embracing anything new. They distrust change and would prefer to work within the status quo. Such resistance has made the Silent Generation the least technologically-savvy generation.⁶⁰ Although this generation has departed from the Canadian Forces, some from this group can still be found in the Public Service or other domains within the Government of Canada.

Looking towards the younger generations, on the heels of Gen Y is the grouping of true 'digital natives'. This cohort has been given the sequential designation of *Generation Z* (Gen Z), with the nickname of *Bubble Wrap Kids*. Born after the mid-1990s but before 2010, they were raised by Gen X in an information-rich environment. They became aware of global issues such as terrorism and environmental concerns at a very young age. Compared to the previous cohorts, a member of Gen Z is typically more socially responsible and embraces cultural diversity.⁶¹

A member of Gen Z was characteristically born to parents that are a decade older on average than the Baby Boomers were when they started having families. As there are half as many siblings per household compared to five decades ago, "they are being even more scheduled, protected, and materially endowed than the Y's."⁶² We should see the

⁶⁰ Adecco, "Managing Today's ...", 5.

⁶¹ Grail Research, "Consumers of Tomorrow - Insights and Observations About Generation Z," (November 2011) http://grailresearch.com/pdf/ContentPodsPdf/Consumers_of_Tomorrow_Insights_and_Observations_About_Generation_Z.pdf; Internet; accessed 14 February 2012, 3.

⁶² McCrindle, *New Generations at Work ...*, 24.

early members of Gen Z entering the Canadian Forces and corporate workforce in a few short years.

Generation Z is expected to be trailed by the digitally-gifted and highly-knowledgeable Generation Alpha (Gen A). Although no other informal alias has been adopted, the title of *Google Kids* is becoming popular. Sociologists have begun to extrapolate what this cohort born after 2010 will face and what they will bring to society. As they are expected to begin school earlier and study longer, it is projected that they will be the most formally educated generation. As this generation should be familiar with accessible global communications and widespread economic turmoil, sociologists extrapolate that will be “more tech-savvy, educated, and materialistic than previous generations.”⁶³

NON-SPECIFIC AGE AND GENERATIONAL CHARACTERISTICS

Generations, as much as we try to define them, evolve in reaction to “new technologies, changing career and study options, and shifting societal values.”⁶⁴ However, generational trends do not always wax and wane in a cyclical manner. A short-term focus, flexibility, flat structures, social environment, fun-loving cultures, and access to information appear to be fairly consistent priorities across all generations.⁶⁵ As well, younger generations throughout modern history have consistently demonstrated some similar characteristics

⁶³ Grail Research, “Consumers of Tomorrow ...”, 3.

⁶⁴ McCrindle, *New Generations at Work* ..., 10.

⁶⁵ McCrindle, *The ABC of XZY* ..., 1.

such as an experimental lifestyle, questioning the status quo, and the exploring society's 'acceptable' boundaries.⁶⁶

Significant influences on a cohort's features directly relate to the economic and social characteristics that impacted their parents. Fiscally-constrained and war-ridden cohorts tend to give birth to fewer children than others would in an economically prosperous and peaceful time. This consequence, studied by Malcolm Gladwell, was designated as a *demographic trough*.⁶⁷ These smaller cohorts are given substantial advantages for education and employment than larger ones. Such outcomes are referred to as an '*Options generation*,' as these generations are brought up with numerous choices. Yet while freedom and choice is significant, it is not always enriched by a superfluous collection of opportunities.

Malcolm Gladwell has presented other such age-centric phenomena on the micro scale. In his book *Outliers*, he postulates that birthdate in many cases is one of the prime indicators of success. As an example, his studies have shown that a very high percentage of the technology leaders of today were born in or around the year 1955. In 1975, when micro-computing became affordable to an individual, these individuals were old enough to join the revolution but young enough not yet to be moulded by industry.⁶⁸

⁶⁶ *Ibid*, 1.

⁶⁷ Malcolm Gladwell, *Outliers – The Story of Success* (New York: Little, Brown and Company, 2008), 5.

⁶⁸ *Ibid*, 65.

Notwithstanding the advantage gained by the date of their birth for the resultant opportunity, there is no denying the talent component of their success.

A cyclic example Gladwell presented was that of professional hockey players disproportionately born in January of each year. The cut-off age for eligibility for North American junior leagues is January 1 each year. At the entry level, this can mean almost a twelve-month gap in physical maturity between players, which is a significant difference at the younger ages. These *outliers* are given more ice time, selected for representative teams, and thus better coaching. This outcome was first dubbed the *Matthew Effect* by sociologist Robert Merton, and also called *accumulative advantage*.⁶⁹ These skewed age distributions exist whenever there is such a selection, streaming, and differentiated experience.⁷⁰ Notwithstanding the advantages gained circumstantially by these outliers, the societal norms to aging have changed significantly.

CHAPTER 1 - CONCLUSION

Although there were previously accepted thresholds to retire, there is a general acceptance that age is ‘just a number’ and not a limitation.⁷¹ Because progressing through the age strata typically implies greater authority and influence, there appears to be a trend where older cohorts will try to hold on to their power longer, while the younger

⁶⁹ Robert K. Merton, "The Matthew Effect in Science." *Science*, vol. 159 (5 January 1968): 56. Reference taken from Matthew 25:29 – “For to all those who have, more will be given, and they will have an abundance; but from those who have nothing, even what they have will be taken away.”

⁷⁰ Gladwell, *Outliers...*, 25.

⁷¹ McCrindle, *New Generations at Work ...*, 8.

cohorts will grow aggravated for their opportunity. In modernization thesis, this effect “blocks upward career mobility of younger generations, leading to increased intergenerational conflict.”⁷² For managers there are four significant shifts that have fundamentally redefined the workforce and their selection and developmental strategies. These factors include the age shift in population, the transitioning generations, the increased career options for workers, and changing status of tenure.⁷³

Although there have been significant studies comparing the different age cohorts, sociologist Clay Shirky states that “[o]ne of the weakest notions in the entire pop culture canon is that of innate generational difference.”⁷⁴ Comparing age groups without considering the underlying explanations for their cohort’s traits may lead to significant misunderstanding or misrepresentation of that group.

Theories of generational differences make sense if they are expressed as theories of environmental differences rather than of psychological difference. People, especially young people, will respond to incentives because they have much to gain and little to lose from experimentation.⁷⁵

Baby Boomers are working longer and will manage not just the two younger generations in the workforce, but eventually will oversee the integration of Gen Z. Gen X and Y alone make up 70% of the possible global workforce, of which Gen Y comprises 2.1

⁷² Hagedorn, *Sociology – Third Edition* ..., 141.

⁷³ McCrindle, *New Generations at Work* ..., 7.

⁷⁴ Shirky, *Cognitive Surplus* ..., 121.

⁷⁵ *Ibid*, 123.

billion people.⁷⁶ In some power inversions, we will even see leaders from Gen X and Y supervise teams of Baby Boomers. It will be necessary to equip these junior leaders “with strategies to effectively communicate, motivate, and lead intergenerational teams.”⁷⁷

Although Gen X and Y are generally being implicated as disadvantaged and feeble, it is apparent that they appreciate professional guidance but expect meaningful team participation. Often misrepresented as slackers with short attention spans, these younger generations “value lifestyle and balance.”⁷⁸ The early observers of Gen X “didn’t factor in the environment in which the then-twentysomethings were living” and thus slanted the interpretation of their work ethic.⁷⁹ Although pressured by their Baby Boomer parents and bosses, Gen X and Y are simply looking “to be understood, accepted, respected, and included.”⁸⁰ These generational differences can no longer be ignored, nor should they be considered the basis for bias.

⁷⁶ McCrindle, *The ABC of XZY ...*, 2.

⁷⁷ *Ibid*, 4.

⁷⁸ *Ibid*, 2.

⁷⁹ Shirky, *Cognitive Surplus ...*, 122.

⁸⁰ McCrindle, *The ABC of XZY ...*, 6.

CHAPTER 2 - GENERATIONAL IMPACTS IN THE COMMERCIAL AND MILITARY WORKPLACE

INTRODUCTION

The generations in western society are working closer together than ever before. However, with teams being built across all current working-age demographics, the differences in the individual value sets are predicted to become more pronounced over time.⁸¹ When facing such challenges in the evolving workforce, the architects of the solutions are looking beyond simple demographic awareness and rethinking organizational paradigms. Managers and leaders must now bear in mind what now constitutes *meaningful work* from a generational perspective.

Within Manuel Castells' vision of the *Network Society*, the concept of the permanent workforce may disappear within a few decades. He postulates that employment in the future will be built on a highly connected business project rather than the currently recognized company construct.⁸² Along with a flatter hierarchy, the highly transient workforce is brought together based on requirements of the project with increased worker autonomy.⁸³ As was seen previously, this paradigm aligns well with generational traits for some cohorts and entirely opposes others. With Gen Y's nomadic tendencies and Gen X's resilience, they appear adaptable to this environment. Having been nurtured in a

⁸¹ Adecco, "Managing Today's ...", 3.

⁸² Manuel Castells, *The Rise of the Network Society: The Information Age: Economy, Society and Culture, Volume I*. Second Edition (Malden, MA: Wiley-Blackwell, 2000), 177.

⁸³ *Ibid*, 261.

hierarchical and loyalty-based setting, it may take a significant effort before the Baby Boomers adjust.

Although several commonalities can be found between the commercial workplace and today's modern military, there still exists several factors that need to be discretely articulated when discussing the concerns of generational demographics. Generally, some generations do not appear comfortable in the authoritative hierarchy and typically do not respond well to the corresponding 'because I told you to' leadership. As society is responding to challenges in the evolving workforce, can the concepts of the *Network Society* help shape the military workplace where these younger generations can contribute to the fullest?

THE EVOLVING WORKFORCE

Independent of generational cohorts, Malcolm Gladwell defined *meaningful work* as being composed of an adequate level of complexity, autonomy, and a relationship between effort and reward in doing creative work. His premise is that for a non-trivial task, if an employee is granted sufficient freedom to select the method of task completion and the reward is proportional to the effort to complete that task, then there is an inherent job satisfaction.⁸⁴ Reinforcing this premise, Myers articulated that although base needs are typically met by financial compensation, "happiness is about having work that fits

⁸⁴ Gladwell, *Outliers...*, 150.

your interests and provides you with a sense of competence and accomplishment.”⁸⁵ As was previously stated, to be effective, managers must recognize that each generational cohort may have their own perception of what a ‘reward’ is.

Mark McCrindle, in his study of demographics in the workplace, noted that the self-anointed hard-working Boomers find themselves in a paradox: the younger generations want to push them out, but the workplace is not ready to let them go. McCrindle has noted that boomers respond primarily to one form of compensation, and that is financial. Employers, viewing the two extremes of *boom* or *bust*, favour the dependable Boomers and will retain them as part of the workforce as long as possible.⁸⁶

On the contrary, the youngest generations appear to value personal freedom over monetary gain. Although Gen X and Y actively seek new experiences, their focus is on the maintenance of rich personal relationships. Gen X saw their parents achieve a high standard of living but at the cost of broken relationships and poor health as a result of high stress and long hours. Not wanting the same fate as their Boomer parents, “[m]asses of them are turning down jobs, or overtime that encroaches on their social time, regardless of the pay on offer.”⁸⁷ This younger generation now has apparently demonstrated a commitment phobia that completely opposes the company loyalty their parents typically demonstrated.

⁸⁵ Myers, *Psychology...*, 189.

⁸⁶ Adecco, “Managing Today’s ...”, 9.

⁸⁷ McCrindle, *The ABC of XZY ...*, 3.

This high job mobility, particularly in Gen Y, is not just a factor of being a younger employee, but is also a factor of the new career expectations that were borne out of the market opportunities and solid job market that existed prior to the 2008 global economic downturn.⁸⁸ What could be adopted as the mantra of Gen Y, Gladwell stated that “[h]ard work is a prison sentence if it does not have meaning.”⁸⁹ Shifts away from ‘typical’ career paths and expectations will further become more pronounced in the coming years as the age differences become more distinct between upper management and the working class.⁹⁰

Employees will need to develop faster to respond to the ever changing work environment. The requisite mental agility required to keep up with such a pace may be predominately resident in the younger cohorts, but as the later generations entering the age strata where fluid intelligence diminishes, the employability gap will likely widen further. However, when the Baby Boomers do decide to move on, the competition for stable and experienced decision makers will undoubtedly intensify. The paradox that the Baby Boomers are both society’s encumbrance and crutch will be valid for the foreseeable future.

⁸⁸ McCrindle, *New Generations at Work ...*, 9.

⁸⁹ Gladwell, *Outliers...*, 150.

⁹⁰ Adecco, “Managing Today’s ...”, 2.

THE NETWORK SOCIETY

Western and arguably the global society have significantly changed in the last twenty years. With the affordability of business and personal computer systems, we exist in an information-rich environment, decreasingly restrained by computational power and connectivity. With the prospects of *Moore's Law* and *Metcalf's Law*, the exponential growth of capability in the foreseeable future is difficult to fathom.⁹¹ Although there have been social and commercial networks for centuries, the influence of the exponential increase in the accessibility to information technology has enabled the global network.

Manuel Castells postulated that “the diffusion of a networking logic substantially modifies the operation and outcomes in processes of production, experience, power, and culture.”⁹² His usage of the term *Network Society* encapsulates several of these concepts that pertain to the recent evolution of the social, political, economic and cultural domains in modern civilization. Social networking websites (Facebook and Google+), text messaging and electronic mail are the staples in the current toolbox of the Network Society. These tools allow people to interact for personal or business relationship without necessarily any face-to-face interaction. Although the Baby Boomers and Gen X adapted to this connected environment and Gen Y grew up with this emerging

⁹¹ Moore's Law is a term coined by a co-founder of Intel Corporation, George E. Moore, who stated the number of transistors that can be placed on an integrated circuit will double approximately every two years. Metcalfe's Law, attributed to the co-founder of Ethernet, Robert Metcalfe, states the value of a network is proportional to the square of the number of nodes.

⁹² Castells, *The Rise of the Network Society* ..., 469.

technology, it will be Gen Z who will be the first true *digital natives* who have never been exposed to any other world.

Castells, in his benchmark series titled *The Rise of the Network Society*, detailed that a “network-based social structure is a highly dynamic, open system, susceptible to innovating without threatening its balance.”⁹³ The fundamental structure of a network makes it considerably robust and malleable in a wide variety of circumstances. Castells defines an organization as “a system of means structured around the purpose of achieving specific goals.”⁹⁴ He envisions a movement away from traditional business organizations to the point where “*the actual operating unit becomes the business project, enacted by a network*, rather than the individual companies or formal groupings of companies.”⁹⁵

Castells indicated this conversion of the permanent workforce to one that is assembled to perform a task through increased connectivity as an *evolution of employment status*.⁹⁶ Much like the revolution of the Just-in-Time (JIT) production strategy, where a large on-hand inventory was removed, innovative companies are building teams for specific tasks in lieu of the overhead of maintaining the benefits of a large pool of labourers. Whether this is a response to the demands of the younger generations or driven by economic necessity, this scheme of employment typically does not overlay well with the observed

⁹³ Castells, *The Rise of the Network Society*..., 502.

⁹⁴ *Ibid*, 187.

⁹⁵ *Ibid*, 177.

⁹⁶ *Ibid*, 236.

traits of the much desired Baby Boomer cohort. As their age group is starting to approach retirement options, they generally will look for stability for the final years of employment.

The foremost organizational transformation in Castell's opinion is viewed as "the shift from vertical bureaucracies to the horizontal corporation."⁹⁷ Gen Y and particularly the digital natives of Gen Z, ensconced in the latest social media trends, are very familiar with this flattened mesh construct. Facebook, Pinterest, Twitter and such applications are the primary building blocks for their current social networks. Dissimilar to hierarchies with their regulations and procedures, these meshes aren't strictly organized by a distinct central power. The self-organizing concepts of these systems are diametrically opposed to the antiquated hierarchies currently familiar to the Baby Boomers and Gen X.

In Castells' opinion, 'working time' will no longer be constrained to forty-hour work weeks and the concept of job stability will fundamentally change. In some sectors, work is becoming task orientated with no commitment for future employment. In a highly connected environment, the workplaces are no longer tied to a specific geographic location. The social contract between employer and employee will be mutually recognized as a relationship of convenience with no expectation of loyalty to be reciprocated. Competition-induced employment and "technology driven trends towards

⁹⁷ *Ibid*, 176.

flexibility underlie the current transformation of working arrangements.”⁹⁸ The cohorts that came before Gen Y may have built the constructs for the Network Society, but it appears that the youngest of the generations will be the ones that thrive in this highly connected career-morphing environment.

THE CANADIAN FORCES

Although the commercial workplace and technological developments can be used as a basis of comparison between the generations, there are still significant distinctions of a career offered by a modern armed forces. Unlike other career paths, it is the concept of *unlimited liability* that further sets the soldier apart from their civilian counterpart. The nature of the Canadian Forces work environment and human resource management structure do require additional contemplation when bearing in mind generational demographics.

Built on a philosophy of compliance, the Canadian Forces’ work environment is differentiated from employment in both the public and private sectors. Individuals have openly accepted significant restrictions over their rights and freedoms. The keystone document, *Leadership in the Canadian Forces - Conceptual Foundations* reinforces that discipline “will always be a feature of military service simply because when people join the CF, they lack the understanding, knowledge, and skills to perform immediately on

⁹⁸ *Ibid*, 282.

entry.”⁹⁹ At the very base level, the follower of “because I told you to” leadership is needed in the *current* training system. However, once trained the “complexity of many military operations frequently produces ambiguous and novel challenges that require individuals to act independently and creatively.”¹⁰⁰

Alan Okros, in his study of human resource challenges within the Canadian Forces, stated that due to the diverse nature of tasks that can be assigned, employment in the military requires a significant degree of individual flexibility and exposure to extremes of physical, psychological, and ethical demands. Okros further indicated that emphasis of work within the military currently is on collective effort, not individual effort.¹⁰¹ He correspondingly stated that for individual effort, when recognized, is typically rewarded differently than would be in the private sector.

To a large extent, employment practices in the Federal Government preclude the use of either significant bonuses or rapid dismissal as the primary enablers of workplace motivation or career commitment. As a result, the public sector tends to rely more on intrinsic, internalized motivation (self-satisfaction, personal pride, public recognition/praise, etc.) supported by potential extrinsic rewards through future advancement based on job performance.¹⁰²

Some may argue that the very nature of service in the armed forces may neutralize a significant amount of tension between the generations. Leonard Wong, in his study of

⁹⁹ DND, *Leadership in the Canadian Forces...*, 17.

¹⁰⁰ *Ibid*, 17.

¹⁰¹ Okros, "Becoming the Employer of Choice ...", 144-145, 158.

¹⁰² *Ibid*, 172.

the United States Army, stated that “self-selection into the Army serves to homogenize the population”¹⁰³ The distinctions between the cohorts may be outweighed by the service culture and the institutional socialization that occurs early in a military career. If this is the case, the Canadian Forces may be diluting the desirable traits that are promised with the younger cohorts.

In the standard cliché, the Canadian Forces strives to put the right person, in the right place, at the right time. Thus the role of the corresponding human resource system is to articulate the work that is to be done (the job), select the individual with the requisite ability to do the work (the person), and provide the system supports to complete the assigned tasks (enabling structures).¹⁰⁴ At first glance, the constrained lifestyle offered by the military doesn't appear to mesh well with the career-hopping Gen Ys nor does it bode well with the incoming Gen Z. Being a primarily bottom-entry system, the nature and trends in recruiting for the Canadian Forces will merit additional emphasis.

RECRUITMENT AND RETENTION

Several academics have warned that given the current demographic developments, there soon may be a relative deficiency of able-bodied young men and women available or eager to serve in western military forces.^{105, 106} The most relevant factors for a person to

¹⁰³ Leonard Wong, *Generations Apart: Xers and Boomers in the Officer Corps* (Carlisle, PA: Strategic Studies Institute, October 2000), 8.

¹⁰⁴ Okros, "Becoming the Employer of Choice . . .", 142.

¹⁰⁵ George H. Quester, "Demographic Trends and Military Recruitment: Surprising Possibilities," *Parameters*, vol. 35 (spring 2005), 32.

select the military as a career are the current labour market conditions, the perceptions of the fit between career and life objectives and opportunities provided by the employer, and the general image, reputation, and visibility of the employer.¹⁰⁷ Douglas Bland stated in 2004 that the “portion of Canadian society traditionally expected to be available for military service (those aged between 16 and 30) holds different values than earlier generations.”¹⁰⁸ Incentives that were used to entice previous cohorts may seem unappealing to the current target generations.

Christian Leuprecht warns that “Canada’s tightening labour market and the impending wave of retiring Canadian Forces baby boomers does not bode well for recruitment and retention.”¹⁰⁹ The target cohort for military recruitment is currently Gen Y with Gen Z just coming into service age. In the early days of recruiting Gen Y, concerns were raised that the demographic composition of that cohort rendered “the CF unpalatable as a career choice.”¹¹⁰ From the other end of the age spectrum, “older recruits are more likely to have a working spouse and children, which makes the nomadic lifestyle of a military career more problematic for them.”¹¹¹ What solutions were other countries’ militaries

¹⁰⁶ Matthew J. Morgan, "Army Recruiting and the Civil-Military Gap," *Parameters*, vol. 32 (summer 2001), 101.

¹⁰⁷ Okros, "Becoming the Employer of Choice ...", 162.

¹⁰⁸ Douglas L. Bland, *Canada Without Armed Forces?* (Montreal and Kingston: McGill-Queen’s University Press, 2004), 65.

¹⁰⁹ Christian Leuprecht, "Demographics and Diversity Issues in Canadian Military Participation" Chap. 5 in *Challenge and Change in the Military: Gender and Diversity Issues*, edited by Franklin C. Pinch, Allister T. MacIntyre, Phyllis Browne, and Alan C. Okros (Kingston, ON: Canadian Defence Academy Press, 2006), 124.

¹¹⁰ Tasseron, "Military Manning ...", 58.

¹¹¹ Leuprecht, "Demographics and Diversity ...", 125.

looking at to address the pending human resource shortfall from an age-based perspective?

George Quester, Chairman of the Department of Government and Politics at the University of Maryland, proposed a solution to the relative shortage of ‘military age people’.¹¹² His proposal entailed the slowing of promotion with accompanying lengthening of careers, implying a delay of retirement. He speculates that a “larger portion [of the services] may instead require maturity, experience, and technological expertise.”¹¹³ From his perspective, he assumes that with the advances in technology and automation, only a small portion of the armed services would actually require such youthful energy as is a prerequisite today.

Diametrically opposed to this view is that the military is a ‘young man’s game.’ Brigadier Simpkin, the author of *Race to the Swift*, reinforced this belief with his proposal to “limit all commissions and engagements to 20 years, with a maximum of 16 or so spent as an officer.”¹¹⁴ His study reflected upon the competence of several examples from the two World Wars that supported this proposal. He stated that “days when career

¹¹² The US Army experimented with raising the upper age limit to 42 in 2006, but effective 01 April 2011, the Army has reverted to 35 as the upper limit as was initially set with the All-Volunteer Force in the 1970s.

¹¹³ Quester, "Demographic Trends and Military Recruitment ...", 29.

¹¹⁴ Simpkin, *Race to the Swift ...*, 252.

officers were the exception, and many wartime examples since then, show that young men have great success in high command.”¹¹⁵

Recognizing the significant requirement of fluid intelligence and rapid cognition that comes with youth, Simpkin was still not one to disregard the capability of the older seasoned officers. He believed such successful, but aging, senior officers could contribute in another fashion.

In any event, with second and third careers becoming the norm for able people, it should be possible to knock as much as 10 years off the normal retirement age for officers, now 55 in some armies and 60 in others. This would still leave open the possibility of extended service for those reaching the highest ranks in appointments where they were essentially professional advisers [sic] to government; there the requirement is for breadth of experience and maturity of judgement.¹¹⁶

Douglas Bland stated that in Canada that the “demographic evolution may be a *cause* of the current personnel crisis, it should not be viewed as an *excuse* for poor planning or inactivity.”¹¹⁷ For the Canadian Forces, the youth of the country must still be primarily targeted for the entry level. The resulting question is not ‘How do we get them?’, but it should be ‘Who do we want to get?’ The Canadian Forces currently searches out people with specific skill sets (or the aptitude to learn those skills) to flesh out the ranks. Perhaps they should be seeking out those with the underlying social skills requisite in a highly-connected *edge organization*.

¹¹⁵ *Ibid*, 218.

¹¹⁶ *Ibid*, 218.

¹¹⁷ Bland, *Canada Without Armed Forces? ...*, 66.

CHAPTER 2 - CONCLUSION

As younger cohorts enter the workplace with older employees dwelling, there is a requirement to appreciate the situation and possibly leverage this diversity. Having such a range of age groups in a work environment is not entirely new, but conventionally the cohorts have been separated with senior managerial positions retained by the oldest cohorts and the youngest employees toiling at the entry level. This division is no longer the typical case. The new actuality is that teams of diverse age groups work collectively, leaders manage across a span of several generational cohorts, and increasingly young professionals manage seasoned labourers.¹¹⁸

From a macro view, the commercial work environment will be constantly evolving to keep pace with the global marketplace. In some cases, business leaders have recognized it is necessary to adapt their management and recruitment strategies to engage the younger generations rather than expecting them to conform to old styles.¹¹⁹ However, company recruiters must remain cognizant of Gladwell's *new-boy network* effect where the "first impression becomes a self-fulfilling prophecy."¹²⁰

¹¹⁸ McCrindle, *New Generations...* 8.

¹¹⁹ McCrindle, *The ABC of XZY ...*, 1.

¹²⁰ Malcolm Gladwell, "The New-Boy Network ...", 72. Gladwell states that hiring is now primarily based on first impressions, thus the old-boy network has simply been replaced by a *new-boy network*.

From a generational perspective, the impact of the Information Age and the resulting Network Society cannot be overlooked. Although that technology has significantly expanded our ability to connect, it is the underlying societal evolution that is more significant. Castells' vision of work units that are built around projects than companies echoes the similarities of the highly adaptive *edge organizations*. However, his prophecy indicates that the changes that will happen in society writ large may actually dwarf the changes that we have seen in technology to enable it.

Although some nuances can be articulated between the work environment of the private and public sector, there definitely is a unique aspect of employment within armed forces. The cyclical lifestyle within the Canadian Forces adds several dimensions to the concerns of a generational perspective. In the Canadian Forces, generational-like cohorts can even arise with the waxing and waning of defence budgets. Shirky commented on this effect stating that “abundance can remove the trade-offs we’re used to, [as] it can be disorientating to the people who’ve grown up in scarcity.”¹²¹

Castells has made the observation that the “disappearance of war from the life-cycle of most people has already decisively impacted on culture and behavior.”¹²² Although there are opposing views on the life cycle of a career soldier, it is recognized that the target recruit will typically reside in the younger cohorts. Relevant to both the armed forces and corporate business, consultants have indicated that to reach out to the target youth, it is

¹²¹ Shirky, *Cognitive Surplus ...*, 49.

¹²² Castells, *The Rise of the Network Society ...*, 489.

best to avoid hype, motivational fads, constantly changing incentive programs.¹²³

Although the Boomers generally favour extrinsic compensation, the younger cohorts should be influenced by “intrinsic motivations [that] are strong enough that they gravitate towards experiences that reward them.”¹²⁴ Once given an adequate collection of youthful energy, how this intake coexists and integrates with the older cohorts will make the difference.

¹²³ McCrindle, *The ABC of XZY ...*, 3.

¹²⁴ Shirky, *Cognitive Surplus ...*, 93.

CHAPTER 3 - GENERATIONAL IMPACTS ON INFORMATION MANAGEMENT

INTRODUCTION

Clay Shirky stated that in an organizational context that “[i]ncreasing the number of things you have can be useful, but increasing the amount of knowledge you have can be transformational.”¹²⁵ In intelligence producing organizations, there is a constant struggle in finding the ‘sweet spot’ between the *need to know* and the *need to share*.¹²⁶ Older cohorts who grew up with linear processes and information following the chain of command are now exposed to an environment of information saturation. Headquarters in the recent past that were often at an information deficit, now lacking the proper filters for today’s capabilities, are being overwhelmed with information overload.

Successes borne out of the open source movement or social networking websites can give a new perspective on such developments that oppose antiquated business structures. Younger generations are less likely to respond positively to the traditional authorities systems of their grandparents. Gen Y was brought up in an environment when questioning one’s parents was acceptable, and now they are questioning their employers.¹²⁷ Wong states that in the United States Army, the workplace tension has moved from the traditional hierarchical lines to the generational domain.

¹²⁵ *Ibid*, 140.

¹²⁶ Richard A. Jr. Best, *Intelligence Information: Need-to-Know vs. Need-to-Share* (Washington, DC: Congressional Research Service, 06 June 2011), 1.

¹²⁷ Armour, “Generation Y ...

With all the Boomers in the key decision and policymaking positions in the Army, it is easier for Xers to place the blame for Army problems on generational differences rather than the classic line versus staff tension.¹²⁸

Clay Shirky, a well-established writer and professor at New York University, has published foundational works on the social and economic effects of information technologies. He has partitioned collaborative efforts, such as information management, into three discrete domains of increasing complexity: *sharing*; *cooperation*; and *collective action*.¹²⁹ The younger cohorts may have a significant advantage in these areas, but there is still gainful employment for the experienced older cohorts still dwelling in the workforce.

SHARING

Shirky described sharing as the action that places the fewest demands on the participants in his ranking of collaborative efforts. In his words, information sharing “allows for the maximum freedom of the individual to participate while creating the fewest complications of group life.”¹³⁰ Sharing in the not too distance past was done verbally or manually on a one-to-one or even on a one-to-many basis. In the advent of electronic formats and distribution methods, many-to-many constructs are now possible. *Information push-based systems* (message centres, e-mail) are now replaced by the asynchronous *post-smart-pull systems* (content management systems, wikis).

¹²⁸ Leonard Wong, *Generations Apart: Xers and Boomers in the Officer Corps* (Carlisle, PA: Strategic Studies Institute, October 2000), 9.

¹²⁹ Shirky, *Here Comes Everybody ...*, 49-50.

¹³⁰ *Ibid*, 49.

In command-and-control constructs like the military, the cliché that ‘knowledge is power’ still has weight and information distribution until recently has been done on a *need-to-know* basis. Gen Y and Z have been reared in an environment where sharing is considered something altogether different. From their perspective, information “belongs to everyone and creates a basis for building new relationships and fostering dialogue.”¹³¹ Creators and sharers of information derive an intrinsic pleasure akin to the *Kilroy-was-here* effect: the desire to leave their mark in the digital world.¹³² These younger generations “have grown up seeing the thoughts, reactions, and even indiscretions of their friends and peers posted on a permanent, universally accessible global record.”¹³³ As a resulting deficiency from this uninhibited manner in which they offer up information, their attitude towards operational security (OPSEC) may be somewhat too casual. If this risk can be mitigated, Malcolm Gladwell hints at the possible benefits that may be gained in their highly-networked world.

Our acquaintances—not our friends—are our greatest source of new ideas and information. The Internet lets us exploit the power of these kinds of distant connections with marvellous efficiency.¹³⁴

Alberts and Hayes articulated that the ability to exercise command “is affected or influenced by, among other things, the quality of information available.”¹³⁵ In a

¹³¹ Art Fritzson et al, “A Military of Millennials.” *Strategy+Business*, Issue 49 (Winter 2007), 4.

¹³² Shirky, *Here Comes Everybody* ..., 132.

¹³³ Fritzson et al, “A Military of Millennials ...”, 4.

¹³⁴ Malcolm Gladwell, “Small Change – Why the Revolution Will Not be Tweeted,” *The New Yorker* (04 October 2010), 45.

¹³⁵ Alberts and Hayes, *Understanding Command and Control* ..., 59.

networked environment, the richer the distribution of information is, the more likely it will lead to a successful outcome. Trying their best, Baby Boomers and Gen X have typically learned to use electronic tools to share information with people they already know. However, the younger generations use “blogs, instant-messaging, e-mails, and wikis to share information with those whom they may never meet.”¹³⁶ Unlike previous generations, Gen Y is adept at gathering information and sharing it with peers.¹³⁷ The younger generations typically have the inherent ability to adapt in a network environment where the older generations are essentially overlaying new technology on the current business processes.

COOPERATION

Shirky indicates that cooperation is harder than sharing, as it passes the simple aggregation of the participants and “involves changing your behavior to synchronize with people who are changing their behavior to synchronize with you.”¹³⁸ Cooperation ranges from *conversation* (e-mail, text messaging, responding to YouTube videos) to *collective production* (Wikipedia, development of the operating system *Linux*). Parallels have eked into tactical realm of the Canadian Forces, migrating soldiers away from combat net radio and manual logging towards electronic chat (mIRC, IPWar) and operational wikis (Orion in Task Force Kandahar).

¹³⁶ Fritzson et al, “A Military of Millennials ...”, 4.

¹³⁷ *Ibid*, 4.

¹³⁸ Shirky, *Here Comes Everybody ...*, 50.

Alberts and Hayes stated that the linking of all system members does not imply that a “direct connection exists between all pairs of entities, or that everyone talks with everyone else.”¹³⁹ However, those accustomed to social media sites, significant and valuable linkages between individuals or other groups can be made through several degrees of separation. This fact is not lost on recruiters looking for tech-savvy individuals at the entry level. As most of the younger generations reside on the Internet, organizations such as the U.S. Navy and the Central Intelligence Agency now place recruitment videos on YouTube and have begun advertising on Facebook.¹⁴⁰

Millennials have shown that they are active contributors and “do not use the Internet merely to absorb information passively.”¹⁴¹ In distinction from older TV-watching cohorts, the Millennials prefer communicating through mobile phone texting, Twitter, online videos, and interactive webpages to name a few. From a technology perspective, the younger cohorts benefit from the integration of “the written, oral, and audio-visual modalities of human communication.”¹⁴² As a shortcoming, although these younger cohorts have the ability to master online communications, they may be masking their “inexperience in negotiating disagreements through direct conversation and [have] a deficit in face-to-face social skills.”¹⁴³

¹³⁹ Alberts and Hayes, *Understanding Command and Control* ..., 100.

¹⁴⁰ Fritzson et al, “A Military of Millennials ...”, 3.

¹⁴¹ *Ibid*, 4.

¹⁴² Castells, *The Rise of the Network Society*..., 356.

¹⁴³ Fritzson et al, “A Military of Millennials ...”, 4.

Shirky indicates that *collaborative production* is a more involved form of cooperation, where there is an increased tension between the individual contributor and group goals. The indicator for collaborative production is that “no one person can take credit for what gets created, and the project could not come into being without the participation of the many.”¹⁴⁴ As groups assemble and self-organize to tackle a collaborative goal, each generation will bring with it niche skillsets that can be leveraged to increase an organization’s effectiveness.

Wikipedia is an example where collaborators from across the world have self-organized a large mass of data and continually cross validate each other’s entries. If this penultimate example of a wiki was deleted tomorrow, contributors would again surge to restore the data, because “that’s what happens when a network of thousands spontaneously devote their time to a task.”¹⁴⁵ In this example, the boundless potential of collaboration has been demonstrated when restraints are reduced in such a system.

From the military domain, the highly successful website *companycommander.com* can be used as an example. While collocated at the same post in the late 1990s, two United States Army captains, Nate Allen and Tony Burgess, found great utility in their peer-to-peer conversations. From their collective experience, they wrote an aide-mémoire for company commanders and posted it online. With the some assistance, they launched a website called *companycommander.com* where Army captains could share operational

¹⁴⁴ Shirky, *Here Comes Everybody* ..., 50.

¹⁴⁵ Gladwell, “Small Change ...”, 48.

experiences in a collaborative manner. This casual exchange format website became so popular, and arguably the information so sensitive, that it was adopted onto the official military network.¹⁴⁶

Within a *digitized* military, there is a duality that comes from the aggregation of large amounts of information and the provision of a common operating picture available to all levels of the organization. Positively, it creates the ability for leaders down to the lowest level to decide and act quickly. Negatively, it provides a facility to centralize information and decision making (micro-management).¹⁴⁷ In this case we see both the empowering of the *strategic corporal* from Gen Y and the distracting of the *tactical general* from the Baby Boomers.

As was seen previously, some generations are comfortable in such a loose-rein system of information passage, whereas other are not yet accustomed to this schema.

[T]he paperless office is possible technologically, but psychologically people are tactile and at times still like to hold a report, handle a manual, and open a book. While telecommuting and virtual offices have long been touted as the new way of work, they can never replace the timeless social need to work in groups, meet physically and interact with others.¹⁴⁸

¹⁴⁶ Thomas Rid, "War 2.0." *Hoover Institution*, 21 February 2007, <http://www.hoover.org/publications/policy-review/article/6104>; Internet; accessed 10 April 2012, 11.

¹⁴⁷ DND, *Leadership in the Canadian Forces...*, xii.

¹⁴⁸ McCrindle, *New Generations at Work ...*, 6.

COLLECTIVE ACTION

The highest form of collaborative effort is what Shirky has indicated as *collective action*. Somewhat of a futuristic concept from Shirky's perspective, collective action is meant to "change something out in the world, often in opposition to other groups committed to different outcomes."¹⁴⁹ Some industrial age examples of collective action include union movements or the anti-war protest in the United States during the Vietnam War. Their information age equivalents include the recent Occupy Movement (2011) and the Arab Spring (2011-12). Shirky credits that information technology has enabled such intensification in collective action.

We now have communications tools that are flexible enough to match our social capabilities, and we are witnessing the rise of new ways of coordinating action that take advantage of that change.¹⁵⁰

An interesting perspective Shirky shares concerns the impact that the size of the group has on collective action. He hypothesises that collective action between one hundred users is "harder than a dozen and harder than a thousand."¹⁵¹ A group of one hundred is too small to be a single group and too big to be self-sustaining. Such a group lacks tight interconnection, as with a dozen, and the advantages of urban scale and diversity, as with a thousand. Ironically, this problematic scale is the order of magnitude typically the Canadian Forces uses as the test case to find solutions for within the domain of information management (operational headquarters, JTF headquarters).

¹⁴⁹ Shirky, *Here Comes Everybody* ..., 51.

¹⁵⁰ *Ibid*, 20.

¹⁵¹ Shirky, *Cognitive Surplus* ..., 197.

In the recent past, Okros explains that “complex problem solving was reserved for the small number of senior managers responsible for the adaption of core business practices.”¹⁵² With a significant increase in the level of education and technical competence at the entry level, the paradigm of knowledge-based power may be inverting. While positional power is still the mainstay in the current hierarchical structure of the military, social media tools are creating opportunities for *emergent leadership*.¹⁵³

Unlike the Baby Boomers, or even more than Gen X, the Millennials are built for the flattened-hierarchy organizations. The members of Gen Y have demonstrated that they are collaborative learners, enjoy working in teams, and prosper in a relaxed consensus-driven team environment.¹⁵⁴ Although the members of this cohort value input, feedback and mentoring, they truly despise micro-management.¹⁵⁵ McCrindle describes the aspects of traditional leadership and its effects on the younger cohorts.

They have not waited around for traditional leaders or the government to direct them, Gen X, and even more obviously Gen Y have decided to get on with it. There is no leadership void with this generation, but just an absence of the old-models of authoritarian, out-front leadership.¹⁵⁶

¹⁵² Okros, "Becoming the Employer of Choice ...", 148.

¹⁵³ DND, *Leadership in the Canadian Forces...*, 8. Emergent leadership is defined as a “*distributed* or temporary shared role, which may be assumed according to situational demands and the capabilities and motivation of group members.”

¹⁵⁴ McCrindle, *The ABC of XZY ...*, 8.

¹⁵⁵ *Ibid*, 1.

¹⁵⁶ *Ibid*, 5.

Although the flatten-hierarchy construct appears as the answer to harness the energy of the youngest cohort in the workforce, there are those who give this model darker prophecy. Gladwell argues that because networks don't have a centralized leadership structure and clear lines of authority as would a traditional hierarchy, it often takes a significant effort to reach an agreement or set objectives. He articulates that networks can't think strategically and are persistently susceptible to conflict and error. Gladwell questions whether or not such flatten-hierarchy organizations could actually make "difficult choices about tactics or strategy or philosophical direction when everyone has an equal say?"¹⁵⁷ His perspective includes the belief that such a network-based decision making schema could devolve into a worst-case of *groupthink*.

One of the peculiar features of group dynamics is that clusters of people will come to decisions that are far more extreme than any individual member would have come to on [their] own.¹⁵⁸

Another perspective is that the combined and average intelligence of a group may be underestimated. James Surowieki, a columnist for the New Yorker in the domains of sociology and economics, did a study on systematic methods to aggregate the intelligence available in an organization. He implies that individual decisions are often clouded by emotions and often people will accept a decision that is 'good enough.' However, his

¹⁵⁷ Gladwell, "Small Change ...", 48.

¹⁵⁸ Malcolm Gladwell, "Group Think— What Does 'Saturday Night Live' Have in Common with German Philosophy," *The New Yorker* (02 December 2002), 106.

concept of the ‘Wisdom of the Crowd’ indicates that if these imperfect judgments are combined in the right way, the collective result is often exceptional.¹⁵⁹

Notwithstanding the quality of the collective decision, the organization must be empowered to act on such a decision. Pessimistically, as the institution turns towards the Gen Y to embrace and lead such innovations, cautions again must be made. Fritzon warns that although Gen Y may appear adept at multitasking, their underlying cognitive capabilities may be a reason for concern.

On the other hand, some worry that this uncanny facility for doing several things at one time is accompanied by a superficial approach to analysis and problem solving and an inability to think deeply about complex matters.¹⁶⁰

To allocate decision rights down to the lowest level and provide the greatest freedom of movement to independent tactical entities may be a premature move. Howe and Nader give another dark prophecy of the development of Gen Y.

Given a few decades and a few gray hairs, the Millennials’ attraction to teamwork may come across as collectivism, their consensus as groupthink, their aversion to risk as aversion to spontaneity, and their conventionality as complacency.¹⁶¹

¹⁵⁹ James Surowiecki, *The Wisdom of Crowds – Why the Many Are Smarter than the Few and How Collective Wisdom Shapes Business, Economies, Societies, and Nations* (New York: Double Day, 2004), XIV.

¹⁶⁰ Fritzon et al, “A Military of Millennials ...”, 4.

¹⁶¹ Neil Howe and Reena Nadler, *Yes We Can - The Emergence of Millennials as a Political Generation*, (Washington, DC: New America Foundation, February 2009), 23.

Optimistically, as was seen in their resurgence of interest in community service, Millennials are “developing strong team instincts and tight peer bonds.”¹⁶² One should hope that the overall altruistic nature of this generation can be the basis for positive collective action. As we have seen with the latest iterations of collective action in the information age, movements borne from informal networks became juggernauts to enable swift change. It should be the hope of any modern military to harness such a decisive capability within their own ranks.

CHAPTER 3 - CONCLUSION

With multiple generations trying to find their way in today’s workforce, our society is on the perpetual and voracious quest for the *next big thing*. Although technology comes along with the promise of increased efficiency, the lag time between implementation to the resultant growth in productivity may be too long for those lacking vision and seeking only short-term results. The adage of ‘don’t fix it if it is not broken’ may be the crutch the older generations are leveraging until they leave the workforce. Frustrated at the working end, the younger generations may find their contribution less meaningful in such a stagnant hierarchy.¹⁶³

The members of Gen Y appear to be impeccably suited to be the building blocks of an edge organization. Their acceptance of modern social networking capabilities and an adaptive employment mind set give them the inherent flexibility to experiment with more

¹⁶² *Ibid*, 11.

¹⁶³ Tasseron, "Military Manning ...", 61.

complex and adaptive methods to conduct operations. For them “the use of information technology has become a group activity.”¹⁶⁴ What they appear to be currently lacking are the tools, the policy and the culture. In western militaries, there has been unwillingness among high-ranking officers to adapt civilian social-networking technologies for military purposes.¹⁶⁵ Although some senior leaders would gladly gravitate back towards their comfort zone of the analog methods of their junior service, such a display could further alienate them from the younger generations that are ready to embrace the change.

With information technology being touted as the solution to all problems of command and control, modern western militaries seem to approach solutions in a backward fashion. Before master sharing, conversation, or even collaborative production, some militaries automatically focus on collective action (e.g. targeting applications, command support tools). Technology solutions focused at the enterprise (national) level and are typically built on the decisions of Baby Boomers and late Gen X. These solutions do not *stick* at the lower levels where the systems starve for input.

Collaboration with consensus building may work well on a non-profit software project, but may have difficulty finding residence in the operational domains of today’s conventional military. Although leaders in the military are taught to ‘exploit success’, in the realm of information management, we appear to be reinforcing failure. Militaries

¹⁶⁴ Howe and Nadler, *Yes We Can...*, 11.

¹⁶⁵ Fritzson et al, “A Military of Millennials ...”, 1.

must recognize that overlaying technology on top of an inefficient process will only make that process more inefficient (or simply speed up its ability to be inefficient).

Clay Shirky stated that it is the “sociological and demographical changes that have more profound implications on our future than even the massive technological ones.”¹⁶⁶ As the nuances between the cohorts are a result of the environment each generation was raised in, technology is now driving some demographic traits. With the current construct of military service, the entry-level generation could be falling onto information constructs built typically by two generations before. Their youthful energy could either be diverted to frustration, beaten into compliance, or (hopefully) be the catalyst for change.

¹⁶⁶ McCrindle, *New Generations at Work ...*, 6.

CHAPTER 4 - TRANSFORMING THE INSTITUTIONAL PERSPECTIVE

INTRODUCTION

In the studies of both Castells and Shirky, it has been shown that grafting modern technological solutions onto the current organization will only result in an initial, yet significant, drop in efficiency. Another correlated perspective is that “firms that simply graft new technologies onto old structures (or vice versa) are significantly less productive.”¹⁶⁷ The promises that were made by the early proponents of information technology took almost two decades to bear fruit. Castells gives the example of the corporate adoption of information technologies in the 1970s.

If we date the emergence of the new technical paradigm to the mid-1970s, and its consolidation to the 1990s, it appears that society as a whole, business firms, institutions, organizations, and people, hardly had time to process technological change and decide on its uses. As a result, the new techno-economic system did not yet characterize entire national economies in the 1970s and 1980s, and could not be reflected in such a synthetic, aggregate measure as the productivity growth rate for the whole economy until the 1990s.¹⁶⁸

The projected lag between the acceptance of a technology and its resultant efficiencies may be greater than some generations can bear. The much anticipated *revolution in military affairs* promised from the advances in information technology always seems one bound away. Simpkin articulates that there is a related cycle within modern militaries akin to this productivity lag seen in commercial industry.

¹⁶⁷ Erik Brynjolfsson, *Information Technology and the Reorganization of Work* (Frankfurt: Johann Wolfgang Goethe Universitat, 1997), 97.

¹⁶⁸ Castells, *The Rise of the Network Society...*, 86.

Time and again, where a radical change in equipment, doctrine or force structure is concerned, one finds a gestation period of between 30 and 50 years or more between the technique becoming feasible, or [sic] the need for the change apparent, and full-scale adoption of the innovation.¹⁶⁹

Several questions must be raised from a generational perspective. With the Baby Boomers currently leading the institution, are the Canadian Forces currently under the influence of *path dependence* and what will it take to *change direction*? It appears that the Canadian Forces has not yet come to recognize that each generation learns differently mainly because of the environments in which they were nurtured. Can this institution *change the way they learn* to fully engage the individual cohorts?

When reflecting on recent transformation initiatives, Lieutenant-General (retired) Jeffery stated that “[r]eal change requires a catalyst, either a significant military event, usually a defeat, or the emergence of a leader with a new vision and the courage to implement it.”¹⁷⁰ Who is best to lead the change, or does this change need to be led? Is it best to learn from the younger cohorts and integrate them into the system, or simply enforce that they conform to the current structure?

RECOGNIZING PATH DEPENDENCE WITHIN THE INSTITUTION

Jeffery published a review of the Canadian Forces transformation initiatives of 2006 that were led by the then Chief of Defence Staff, General Rick Hillier. Jeffery indicated such

¹⁶⁹ Simpkin, *Race to the Swift ...*, 5.

¹⁷⁰ Michael K. Jeffery, "Inside Canadian Forces Transformation," *Canadian Military Journal*, vol. 10, no. 2 (2010), 9.

changes were necessary because the Canadian Forces had been applying “classic industrial-age mechanized tactics to operations that were decidedly asymmetrical.”¹⁷¹

The Canadian Forces were struggling to keep relevant when faced with “new threats, the emergence of disruptive technologies, new doctrine or concepts, and changing resource pressures.”¹⁷² In his study, he expressed the idea of *path dependence* where an institution will resist such proposed changes.

This [resistance to change] is particularly true with strong cultures, such as the military, where doctrine and training inculcate members with values of loyalty to their comrades and their unit, and a strong sense of tradition. As a consequence, any attempt to change the organization or the way it operates is perceived as being in direct conflict with the underlying values of the culture. A model, guide, or template can be valuable, but there are many philosophies of how change is achieved within organizations.¹⁷³

Clay Shirky commented on the relative advantage that his younger students have in the ever-changing information-rich environment of today, in that they “don’t have to unlearn thousands of things [he has to], because they never had to learn them in the first place.”¹⁷⁴ Reflecting on his own age group,¹⁷⁵ Shirky stated that those “old enough to remember a time before social tools became widely available are constantly playing catch up.”¹⁷⁶ The highly-adaptive social media applications available today are the “first to fit human social networks well, and because they are easily modifiable, they can be made to fit better over

¹⁷¹ *Ibid*, 11.

¹⁷² *Ibid*, 9.

¹⁷³ *Ibid*, 12.

¹⁷⁴ Shirky, *Here Comes Everybody* ..., 321.

¹⁷⁵ Clay Shirky was born in 1964, on the fringe of being a late-Boomer or a member of Gen X.

¹⁷⁶ Shirky, *Here Comes Everybody* ..., 321.

time.”¹⁷⁷ Older cohorts overlay these applications on their existing social networks, whereas younger cohorts build their social networks with these tools.

As the younger cohorts appear to have a resultant advantage in their usage of information technologies, older cohorts are trying their best to keep up. There appears to be an inversion of capability within the commercial workforce in that the younger cohorts typically enter the workforce with developed *technical* capabilities. The older cohorts may be losing some of the knowledge-based power that would have been granted with their time-established work experience. There should be recognition that each cohort will come with a balance of real-life experience and technical expertise, but emphasis will generally be placed on the weaknesses of the generations and not the strengths.

These interfaces between the generations may create a significant friction that inhibits the implementation of change. Shirky states that the “[p]roponents of the new and defenders of the old can’t merely discuss the transition, because each group has systematic biases that make its overall vision untrustworthy.”¹⁷⁸ The senior leaders that were trained with map boards, dispatch riders, and combat net radio appear hesitant to surrender their positional power to experiment with edge-organization constructs. For the integration of information technologies within the Canadian Forces, we appear to be implementing a

¹⁷⁷ *Ibid*, 158.

¹⁷⁸ Shirky, *Cognitive Surplus ...*, 211.

traditionalist approach, or as Shirky would describe as “leaving it up to the monks to decide how to use the printing press.”¹⁷⁹

It was prophesized that from a military perspective that “full acceptance and integration of computers will have to wait until the computer-literate schoolchildren of today become the power generation of the day after tomorrow.”¹⁸⁰ As Simpkin made this statement in the mid-1980s, that generation that he indicates is here today. Fritzson reflects below on the opportunity that is presented to the military community to harness the potential of Gen Y, by possibly giving them a looser rein.

On the other hand, if the leadership fails to understand and adapt – if it insists on harnessing millennials with outdated mind-sets, rules, and processes – it could squander a historic opportunity to reinvigorate the military and rekindle an idealistic, can-do spirit in a wide variety of institutions.¹⁸¹

In the hierarchical structure of western militaries, it will remain (for the foreseeable future) that key decisions in policy and doctrine will be made at the highest levels. Drawing on their experiences of linear methods and procedures for information management in an analog environment, these senior officers will reflect that ‘it worked well when I was a junior officer’ and thus not seeing the requirement to change the status quo. Gen X came into service when there were no other options and they have conformed. Gen Y is aware of and has experienced the other possibilities. These

¹⁷⁹ *Ibid*, 209.

¹⁸⁰ Simpkin, *Race to the Swift ...*, 6.

¹⁸¹ Fritzson et al, “A Military of Millennials ...”, 3.

Millennials are struggling with the antiquated methods of information sharing, conversing, and collaborative production that are being forced upon them. Gen Z has experienced nothing less than highly-connected social networks, and may get lost in the current information vacuum. Like the monks and the printing press analogy, it will be the Baby Boomers that decide the path that is to be taken.

CHANGING THE WAY THE INSTITUTION LEARNS

Each generation, as a result of the environment in which they were nurtured, respond differently to different forms of learning. The current one-size-fits-all style of training or even the fundamental presentation of information to each generation requires additional consideration. Although the mentoring of the younger cohorts through their early development might seem the answer, there are some pitfalls when blending the workers from different age groups. The interaction between the different generations may offer unique perspectives on complex problems of the future, or make simple solutions of today more difficult.

When providing information across all generations, there are certain elements of presentation style that may impact the message for each cohort. The youngest cohorts in the workplace are being referred to as a *post-literate generation*.¹⁸² McCrindle recommends several techniques that can be used to breach this information gap to the

¹⁸² McCrindle, *The ABC of XZY ...*, 5.

younger generations: the use of real life examples; the injection of metaphors; the use of humour; role-playing; interviews; the integration of music; and various visual aids.¹⁸³

McCrandle states that the key to make a presentation stand out and have the information retained by the younger target audience is *creativity*. The non-verbal components of the communication will carry a greater weight than the actual articulation of the message. In this vein, McCrandle amplifies that the process must be developed with greater concern than the content itself. For the younger cohorts they “really need to see it, and experience it.”¹⁸⁴ Across all generations, when presenting information, there are two underlying effects that can be adopted to enhance the conveying of the message: the *Primacy Effect* (first points are the best retained); and the *Recency Effect* (the last portion of the presentation will be the second-best retained information).¹⁸⁵

One nuance that conflicts with McCrandle’s analysis is the belief that the younger cohorts generally may have shorter attention spans than their seniors, implying the choice of verbal presentation of the information than simply reading.¹⁸⁶ McCrandle retorts that “under 20% [of the population] are Auditory learners rendering monologues quite ineffective today.”¹⁸⁷ Notwithstanding the specific medium the information is presented, across all generations, most people today are kinesthetic learners, meaning that they

¹⁸³ *Ibid*, 5.

¹⁸⁴ McCrandle, *The ABC of XZY ...*, 2.

¹⁸⁵ *Ibid*, 4.

¹⁸⁶ Bentley, “Are You Ready for the Next Generation ...

¹⁸⁷ McCrandle, *The ABC of XZY ...*, 5.

“learn best through doing, experiencing, or being involved.”¹⁸⁸ When looking at Gen Y and the incoming Gen Z, mentoring may provide the best opportunity to integrate them into the system.

It is important that mentors be chosen carefully. For Gen Y or Gen Z at the entry level, McCrindle suggests that it may be optimal to skip over Gen X when looking to fill the mentoring role. He indicates that Gen X is not likely to find mentoring a priority who often who are currently struggling with the work-life balance within their own cohort.¹⁸⁹

The Millennials having been ensconced in an information-rich environment suggests that they will react positively to supervision that “encourage[s] creativity and initiative, and that they will be comfortable working in teams.”¹⁹⁰ That encouragement might have to come from the Baby Boomers, or in some departmental constructs, the Silents. However, when integrating in the oldest of the cohorts, remember that younger people “may find that they are technologically challenged [but] empathy is a better strategy than derision.”¹⁹¹

McCrindle advises that when mentoring Gen Y not to be too abstract. He recommends not to “deal in theory, data, or statistics [but] present likely outcomes [and] sketch out the

¹⁸⁸ *Ibid*, 4.

¹⁸⁹ Bentley, “Are You Ready for the Next Generation ...

¹⁹⁰ Fritzson et al, “A Military of Millennials ...”, 4.

¹⁹¹ Bentley, “Are You Ready for the Next Generation ...

possible pathways.”¹⁹² Gen Y may hold the key to fully embrace Mission Command. Fritzson indicates that “Millennials exhibit characteristics likely to render them facile and effective decision makers, especially in combat situations, where decentralized operations are paramount.”¹⁹³ With the proper initial guidance and then an adequate freedom of movement to demonstrate their capability, the future employment of Gen Y looks very promising.

An interesting perspective comes from LT Benjamin Kohlmann, in his polarizing article “The Military Needs More Disruptive Thinkers” in the *Small Wars Journal*. He implies that mentors for junior officer should actually come from commercial industry. His grassroots movement out of San Diego, *Disruptive Thinkers*, is a virtual and physical meeting place for such mentoring pairs. His perception is that individuals can bring in experience from other domains to ignite truly significant change.

The future lies with those individuals who can see connections across a myriad of professions and intellectual pursuits. The mind that can see that a phone and entertainment device can be intertwined into something like, say, an iPhone. Or, an intellect that recognizes how secondary and tertiary networks are often more valuable than first-order relationships, thus creating something like LinkedIn. Or the strategist who understands that crowdsourced, horizontally structured non-state actors pose a greater threat to our security than Nation states.¹⁹⁴

¹⁹² McCrindle, *The ABC of XZY ...*, 5.

¹⁹³ Fritzson et al, “A Military of Millennials ...”, 4.

¹⁹⁴ Benjamin Kohlmann, “The Military Needs More Disruptive Thinkers,” *Small Wars Journal*, 05 April 2012, <http://smallwarsjournal.com/jrnl/art/the-military-needs-more-disruptive-thinkers>; Internet; accessed 09 April 2012.

As a learning institution, the Canadian Forces must recognize that each cohort will respond to different styles of instruction. Education programs should be highly configurable to accommodate the nuances of the cohorts the instruction is focusing upon. If the training is to be aimed at the widest audience, it is best to adapt to a kinesthetic approach. For the entry-level cohorts, a mentoring system for knowledge transfer from the most senior levels has significant potential. Shirky states that you “can never get complex social interactions right first crack out of the box, but you can get them wrong.”¹⁹⁵ As a learning institution, the Canadian Forces must experiment, learn from failure, exploit success, and experiment again.

CHANGING THE WAY THE INSTITUTION MANAGES CHANGE

As articulated by Jeffery, institutional change within the Canadian Forces tends to be “conservative and to eschew new directions that create turmoil and risk.”¹⁹⁶ From his perspective, to maintain organizational effectiveness and cohesion through a transformation, “the level of ambition must be carefully balanced with the capacity of the institution to implement and coordinate the actions required.”¹⁹⁷ At first glance, this measured approach appears like the steady leadership needed to see the Canadian Forces through a significant transformation.

¹⁹⁵ Shirky, *Cognitive Surplus* ..., 193.

¹⁹⁶ Jeffery, "Inside Canadian Forces Transformation ...", 9.

¹⁹⁷ *Ibid*, 15.

The implementation and integration of information technologies brings with it many generational challenges. Although enterprise-level solutions that come from the top-down are fiscally prudent, they may counter a simple principle that hinders change.

The invention of a tool does not create change; it has to have been around long enough that most of society is using it. It's when a technology becomes normal, then ubiquitous, and finally so pervasive as to be invisible, that the really profound changes happen, and for young people today, our new social tools have passed normal and are heading to ubiquitous, and invisible is coming.¹⁹⁸

From a sociological perspective, Shirky states that the optimal approach to manage innovative transformation is to take on as much chaos as the institution can handle.¹⁹⁹

From his perspective, time spent in over-planning change is counterproductive. It is best to “try something new, and work on problems as they arise, than to figure out a way to do something new without having any problems”²⁰⁰ Although much praise has been given to the Millennials’ innovative potential, they might not thrive in such a failure-based learning environment.

Young Gen Xers, holding fewer illusions about what can go wrong, embraced an ethic of resilient free agency and excelled at bouncing back from disappointing outcomes. Millennials, not possessing these strengths, are far more likely to feel derailed, even permanently damaged, when their high hopes are thwarted — whether by poor educational alignment, a plummeting economy, or a stagnant job market.²⁰¹

¹⁹⁸ Shirky, *Here Comes Everybody ...*, 105.

¹⁹⁹ Shirky, *Cognitive Surplus ...*, 209.

²⁰⁰ *Ibid*, 205.

²⁰¹ Howe and Nadler, *Yes We Can...*, 17.

The innovation of command support applications should primarily be developed in the tactical environment at the lowest level where the younger strata are employed. Allowing for highly-adaptable interfaces within configurable applications, the junior soldiers, sailors, and airmen most familiar with the technology can be the catalyst for the change. Improvements can then be captured and iteratively fed back into the enterprise.

CHAPTER 4 - CONCLUSION

A culture of change has flourished throughout the Canadian military. In the transformational activities of 2006, rapid change was an essential element of the strategy to set the conditions for achieving Hillier's goals.²⁰² As the next volley of transformation is yet to be fully realized, it will be seen how much institutional memory the Canadian Forces has and if it is pulled back onto the pattern of path dependence. As there is a significant lag time between the introduction of an innovative change and the resulting efficiencies, short-term metrics will favour returning to the pre-change state.

From an information management perspective, the transformations of command support can be driven bottom-up. Although Gen Y and the incoming Gen Z have the fluid intelligence and technical competence to lead the change, they may not yet have the resilience to cope in a failure-accepting learning environment. Gen X again must step up to bridge this gap, harnessing the innovations of the younger cohorts, yet consoling and guiding them through the downside of chaotic learning and operating environment. The

²⁰² Jeffery, "Inside Canadian Forces Transformation . . .", 15.

Baby Boomers, as they get closer to the end of their service years, must ensure their operational knowledge is passed to the youngest cohort, but they don't constrain them to their old ways.

As we have seen in large networks, diversity is the key. Developing solutions that cater to one cohort could block the experience of the Baby Boomers or ignore the fresh-perspective innovations of Gen Y. Some solutions sets would include training and user interfaces that are modified for each cohort that allow each to fully contribute to the *same* network. Entry into the network doesn't just need more input, but it needs *different* input to provide a rich information set.

When describing *edge organizations*, Alberts and Hayes stated that these organizations are better equipped to deal with uncertainty and unfamiliarity “because they make more of their relevant knowledge, experience, and expertise available.”²⁰³ If the Canadian Forces focuses on the needs of one specific cohort, the rich experiences or fresh perspectives will be excluded. Although Gen Y appears ready to take the reins of such an organization, they may require a little more maturity to cope with the failures expected in such an environment of uncertainty.

²⁰³ Alberts and Hayes, *Power to the Edge ...*, 217.

CONCLUSION

The adage that ‘age is just a number’ may not hold as much weight as most would hope. Although exceptions are garnering attention, the general case of diminished fluid intelligence and physical capability is a reality. Although there are arguments that the nature of military service has fundamentally changed and that very few will require the youthful energy necessary of a frontline soldier, the promised technological capabilities are still a few years out. For the near term, the Canadian Forces will be dependent on an intake of young recruits.

Generally, the various generations within the Canadian Forces each take in, assimilate, and distribute information in different ways. An underlying factor appears to be the environment in which they were nurtured, primarily due the institutional socialization that occurs early in their career. Although some ‘lessons learned’ from previous generations are intended to assist the younger generations to avoid the pitfalls that earlier cohorts experienced, in some cases these lessons may be creating a cycle of path dependence.

Inter-generational tension is a reality that must be negotiated in the Canadian Forces. The leaders at all levels must make an effort to understand each generation’s core values. For the older cohorts still dwelling in the workforce, although some of them may be technically challenged, they still want the loyalty, respect and commitment that they demonstrated in the past to be shown back to them by the junior members. Younger cohorts want a workplace where they fit in, that emphasises their family-centric lifestyle,

which doesn't just focus on output, but also considers environmental concerns and people.²⁰⁴

In the Canadian Forces, it is forecasted that “[g]aps in age and experience are set to affect the military most heavily just as the effects of the aging population begin to be felt.”²⁰⁵

The much-prized experience resident with the Baby Boomers must be captured by the younger generations. The role to mentor Gen Y may facilitate this transfer, but the handover of information must come as knowledge, not the one-and-only way to operate. The Gen Xers in the Canadian Forces should not be experiencing the same employment apprehension shared by the fellow members of their cohort, as the log-jamming Baby Boomers will be pushed out by compulsory retirement age shortly.

It may be too late to completely leverage the full potential of Gen Y. As the oldest of the cohort have now been institutionalized for over a decade, risk-aversion may have made them conform to the ways of their elders. To find favor with some of their modern-day Luddite superiors, some may openly reflect distaste to technological solutions. Gen Z is ready now to enter the Canadian Forces and has experienced an information-saturated social lifestyle and is ready to be employed in a highly-networked knowledge-based organization. Unfortunately, the conditions are currently not set to launch these intakes into such a futuristic construct.

²⁰⁴ McCrindle, *The ABC of XYZ...* 6.

²⁰⁵ Tasseron, "Military Manning ...", 58.

What we are witnessing in the Canadian Forces is an inversion of expertise, albeit technical. The most senior now are typically not the most proficient. Those who have served now must return to classrooms to learn what the new recruits already know. It is when we place all these generations together in a collaborative environment that the dissimilarities become more pronounced. ‘I am not a techie’ is a crutch that is being used by some to wait out until the end of their career. Others will openly revel when integration of technology stumbles and will be quick to revert to ‘tried and tested’ industrial-age methods.

Castells showed that the period for integrating new technologies into the commercial workplace demonstrated a two-decade lag. However, it is the no-fail aspect of military operations that makes this interval significantly elongated for the military innovations. Simpkin explained that the adoption of a viable technology may take as much as a three to five decade timeframe before it is widely accepted. Though information technologies are pervasive in the military, they are currently overlaid on obsolete and linear processes, possibly causing a drop in operational efficiency. Shirky states that trying to compare before and after revolutionary change “is useless, since society before and after the revolution are too different to be readily compared.”²⁰⁶

²⁰⁶ Shirky, *Here Comes Everybody ...*, 305.

Even though each generation learns and communicates differently, the underlying information is the same. Highly-configurable user interfaces in C2 applications and training packages that can be modified for individual competences could be a start to bridge the generational gap. Underlying operational data can be queried to be displayed as a list, table, geo-referenced on an electronic map, or on an appropriate timeline. Users could access a training package as a document, interactive presentation, or an audio book. The goal should be to attain *platform independence*, where the platform is not a system, but an *operator*. The goal of the system should be to present the underlying data into information that the various generations can make into relevant knowledge. It will be the study of ergonomics, and not information technology that will formulate the recommendations for the adaption of such systems.

Fundamental methods in the way militaries design information systems should be revisited. Shirky stated that “[g]enerations do differ, but less because people differ than because opportunities do.”²⁰⁷ The youngest cohorts have seen what technology can achieve. At the coal face of operations, these individuals can contribute to a system of bottom-up innovation, led by primarily tactical-level development. National-level project managers, in lieu of providing top-down solutions, could guide, collect and integrate the improvement made to the system literally from the front lines.

²⁰⁷ Shirky, *Cognitive Surplus* ..., 121.

Another way to incorporate the younger cohorts' perspective is to seek out their opinion while still in the training system. Shortfalls in the current content management systems, common operating picture applications, or data search engines should be first offered as challenges to engineers and technicians in training. Undergraduate science and engineering projects at the Royal Military College of Canada could provide the perspective of the younger cohort as they are about to join their respective services. However, it will be the older cohorts who must frame the questions correctly to achieve any results.

Shirky stated that “we are absolutely terrible at predicting our own behavior.”²⁰⁸ In lieu of designing enterprise-level solutions that cater to all generations, the scope could be focused. The emphasis should be placed on detachment and section-level communications, where networking with this size of organization is significantly easier. Building off small successes, and allowing an environment of acceptable failure, the overall system will be able to evolve. Whether or not such an evolution can become the catalyst for the anticipated revolution in military affairs, such an outcome truly cannot be predictable. Shirky provides a sociological insight on the pattern followed by fundamental transformations.

[R]eal revolutions don't involve an orderly transition from point A to point B. Rather they go from A through a long period of chaos and only then reach B. In that chaotic period, the old systems get long broken long before new ones become stable.²⁰⁹

²⁰⁸ *Ibid*, 191.

²⁰⁹ Shirky, *Here Comes Everybody ...*, 68.

Alberts and Hayes concede that in truly decentralized decision rights “in which every individual is involved directly in every decision and has an equal voice in each one, is unlikely to work for most military missions.”²¹⁰ The pushing towards an edge-organization construct may be like aiming for a target one can never hit. As LGen Jeffery said about transformation, change “is not a *destination* but a *journey*.”²¹¹ The older cohorts are the ones guiding this journey, but it may be the burden of younger age groups to provide the insight on the direction where they should be going.

²¹⁰ Alberts and Hayes, *Understanding Command and Control* ..., 43.

²¹¹ Jeffery, "Inside Canadian Forces Transformation ...", 17.

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