MILITARY COHESION IN THE INFORMATION AGE: AN INTERDISCIPLINARY THEORETICAL AND METHODOLOGICAL REVIEW

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LIST OF ABBREVIATIONS

AB Div – Airborne Division

a.k.a – Also Known As

CA – Canadian Army

CAF – Canadian Armed Forces

CAIPS – Canadian Army Integrated Performance Strategy

CFB – Canadian Forces Base

CFC – Canadian Forces College

CMBG – Canadian Mechanised Brigade Group

CMC – Computer Mediated Communication

CoC – Chain of Command

DADT – Don't Ask, Don't Tell

Et Al. – Et Alia, meaning *and others*

IBM – International Business Machines

Ibid – Ibidem, meaning *in the same place*

ICTs – Information Communication Technologies

ID – Infantry Division

IDF – Israeli Defence Force

iGen – Internet Generation

iPhone – Internet Phone

iTime – Internet Time

LGBTQ – Lesbian, Gay, Bisexual, Trans, and Queer

MAR Div – Marine Division

MOE – Measure of Effectiveness

MOP – Measure of Performance

MRT – Media Richness Theory

MSF – Micro-Social Fragmentation

ORBAT – Order of Battle

PACE Plan – Primary, Alternate, Contingency, Emergency, (Communication) Plan

PAR – Participatory Action Research

PPCLI – Princess Patricia's Canadian Light Infantry

PW – Prisoner of War

RM – Royal Marine

RQ – Research Question

RRU – Royal Roads University

SM – Social Media

SSI – Strategic Studies Institute

TR – Triple Revolution

US – United States

WWII – World War II

ABSTRACT

This is the Information Age. When the first smartphone – the Apple iPhone – hit the market, it fundamentally changed human communication.[1] The iPhone was Apple's crescendo product of the Triple Revolution (TR): the internet, social media (SM) and mobile phone technology, easily accessible and affordable for most.[2] The TR enabled networked individualism in iTime: most have moved away from social groupings that are tightly-knit and geographically concentrated in favour of groupings that are looser and more fragmented. These groupings provide on-demand assistance and support, blurred into iTime, where personal and professional time boundaries no longer exist.[3] Over the last decade, networked individualism and iTime have developed a symbiotic relationship in the workplace which can have positive aspects; however, the loss to productivity in civilian businesses has been defined as cyberloafing.[4] Cyberloafing can create a productivity problem in civilian businesses, but the impact on the military – which has not been studied to date – is likely to be far more insidious as there is much more at stake in the military than quarterly profits.

The Canadian Army's (CA) newest total fitness initiative, the integrated performance strategy (CAIPS) considers six components of soldier total fitness: physical, intellectual, emotional, social, familial and spiritual.[5] The focus of the CA leadership has

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[1] Apple had competition from BlackBerry and Nokia but the iPhone is often thought of as the first real smartphone due to the versatility of the user interface, software suite, and multi-media functionality.

[2] Lee Rainie and Barry Wellman, *Networked: The new social operating system* (Cambridge: MIT Press, 2012), 11-12.

[3] *Ibid.;* Ben Agger, "iTime: Labor and life in a smartphone era," *Time & Society* 20, no. 1 (2011): 119.

[4] Vivien Lim, "The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice," *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior 23*, no. 5 (2002): 677.

[5] Department of National Defence, *Mission: Ready – the Canadian army integrated performance strategy* (Ottawa: DND Canada, 2015), 2.

been on physical and intellectual fitness because they comprise the bulk of all mandated

high readiness training requirements for operations. In contrast to physical and

intellectual fitness, social, emotional, spiritual and familial fitness have less tangible

resource requirements that do not necessarily require management by the chain of

command. In these areas of total fitness all soldiers are able to add value equally to the

CAIPS. As such, social, familial, emotional and spiritual fitness, often suffer the worst

from the practice of cyberloafing.[6] At minimum, cyberloafing is a drain on the CA's

time. At worst, soldiers and leaders spend hours a day and tens of hours a week

cyberloafing when they could be enhancing CAIPS total fitness objectives. It is likely

that cyberloafing in the CA diverts resources away from the CAIPS priority fitness

components and undermines soldier readiness and resilience.

This directed study serves two purposes. First, this study proposes an

interdisciplinary theoretical structure to frame the social and emotional fitness

components of CAIPS in the existing literature. Historically, social and emotional fitness

were studied together as part of cohesion, a term that is used synonymously in many

cases with bonding.[7] The second purpose of this study was to determine the best

methodology to empirically study the impacts of the Information Age and networked

individualism on cohesion, and thus the social and emotional fitness components of

CAIPS.

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[6] This observation is based on the author's experience in leadership positions in infantry battalions and national schools.

[7] Cohesion, bonding and combat bonding are used interchangeably in the literature reviewed for this project. Additionally, the concepts of brotherhood, brothers in arms and military family are used in the literature to refer to social cohesion shared by military members due to military service. This paper will use the terms cohesion and bonding to broadly refer to all of these aspects of social and emotional fitness.

To propose a theoretical construct to inform cohesion from the CAF perspective, an interdisciplinary theoretical literature review was conducted considering models from psychology, sociology, management and communication studies and military, war and security studies. The models were combined to create a hybrid model that explains cohesion in the CA. The methodological review considered prominent qualitative research methodologies to include narrative studies, ethnography, grounded theory, phenomenology and case study research.[8] From this review, case study research was determined to be the most suitable methodological approach to study the impacts of the Information Age on cohesion due to its approach to data collection and analysis.[9] To inform the strengths and weaknesses of case study research, examples that studied cohesion in the Falklands Conflict and Operation *Iraqi Freedom* were considered. Although separated by two decades from a comparative perspective, and decades old from a relevance perspective, both are very good methodological examples with several findings that remain applicable military cohesion today.

The theoretical framework and methodological approach will be used to create a research proposal to empirically study the impacts of the Information Age on cohesion in the CA. This future project will look at measures of performance and effectiveness for social and emotional fitness to determine if resources are being diverted away from CAIPS priorities and if soldier readiness and resilience are being undermined. Given the CA's focus on training for and deploying on operations, understanding soldier cohesion in the Information Age would make for an interesting future research project.

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[8] John Creswell, William Hanson, Vicki Clark Plano, and Alejandro Morales, "Qualitative research designs: Selection and implementation," *The counseling psychologist* 35, no. 2 (2007).

[9] Robert Yin, *Case study research and applications: Design and methods*, (Thousand Oaks: Sage publications, 2017).

CHAPTER 1: INTRODUCTION

Men do not fight for a cause but because they do not want to let their comrades down.

- S.L.A. Marshall, 1947, *WW II historian*

INTRODUCTORY COMMENTS

Canadian society, inclusive of the Canadian Armed Forces (CAF), experienced a transition into the Information Age beginning in the 1970s. Just as the Industrial Revolution hailed the beginning of the Industrial Age, a fast-paced Digital Revolution continues to characterize the Information Age. In 2007, three decades after the emergence of the high tech industries, the Apple iPhone – the first smartphone – hit the market and fundamentally changed human communication, enabling the rise of networked individualism.[10] The iPhone was the product of what Information Age scholars Rainie and Wellman describe as the Triple Revolution (TR), a sub-set of the greater Digital Revolution.[11] The TR is the trifecta of the internet, social media (SM) and mobile phones into a do-it-all smartphone that is affordable by most, offers many conveniences, and enables online sociality.[12]

The CAF's history with digital technology is similar to that of Canadian society where some organizations were early adopters and others were laggards, but as of 2019 the CAF has essentially achieved saturation.[13] With digital saturation came the presence of the ubiquitous *Work BlackBerry*. This smartphone (-)[14] was deliberately put in the

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[10] Information Age, "The history of Apple's iPhone ahead of the next one," accessed 10 April 2019, https://www.information-age.com/history-apples-iphone-123468354/; Lee Rainie and Barry Wellman, *Networked: The new social operating system...,* 11-12.
[11] *Ibid*.
[12] *Ibid*.
[13] Everett Rogers, *Diffusion of innovations* (New York: Simon and Schuster, 2010), 279.
[14] BlackBerries are described as smartphone (-) because they are limited in applications when compared to the iPhone or other more versatile smartphones.

hands of anyone who was anyone in the chain of command to ensure members could be reached by phone or email regardless of time of day or location of the member. The BlackBerry brought iTime to the CAF enabling the "alter[ation] of the boundaries between public and private and day and night."[15]

Leader behaviour made iTime the new CAF norm. If leaders blur the line between their public and private lives, then other members of the CAF have implicit license to follow suit. The presence of the CAF BlackBerry was also mirrored in Canadian society through the ever increasing presence of personal smartphones. As of 2017, the Canadian Wireless Telecommunications Association reported that 86.1% of Canadians had mobile phones.[16] Not including toddlers, less than 9% of Canadians live without a mobile device. These statistics are not surprising and it is rare that a CAF member does not have a smartphone in 2019.

The TR, with networked individualism facilitated by BlackBerries and smartphones, started to be visible in the Canadian Army (CA), and specifically the infantry battalions, in 2008. The use of the smartphone became a staple to supplement a unit's communication PACE (primary, alternate, contingency, emergency) plan. The chain of command expected everyone, not only those with issued BlackBerries, to be contactable and capable of distance-work by smartphone in iTime. The boundaries between public and private life in the infantry were forever blurred.

iTime created a challenge for Canadian society and the CAF because as soldiers and leaders were expected to work in iTime it became acceptable for them to engage in

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[15] Ben Agger, "iTime: Labor and life in a smartphone era,"…, 119.

[16] Canadian Wireless and Telecommunications Association, "Facts & Figures," accessed 25 March 2018, from https://www.cwta.ca/facts-figures/.

personal matters at work using CAF hardware and internet, a term commonly referred to as cyberloafing.[17] The infantry has been forgiving when it comes to cyberloafing because the occupation is demanding and there is a recognition that soldiers may need to complete personal administration at work – which is especially true on deployed operations. Today cyberloafing is a garrison fixture: the behaviour has become an acceptable norm in virtually every office, vehicle bay, class room and conference room.[18] Two of the rare exceptions in the CAF are secure facilities and schools; however, in schools it is only students who are not permitted to cyberloaf, the policy does not extend to course staffs, other members of the administration or the chain of command.[19]

Cyberloafing, although simply defined, is a complex reality of the Information Age and networked individualism. The consequences of cyberloafing in the private sector are usually expressed in terms of decreased productivity; however, in institutions like the CA, which are not exclusively focused on productivity, the consequences have the potential to be far more insidious and are not well understood.[20] Fundamentally, time spent cyberloafing is time not spent working which is at best unprofessional and at worst prevents soldiers from meeting the requirements that enable them to be successful on operations.

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[17] The term "cyberloafing" was coined by Vivien Lim in 2002 and is defined as "any voluntary act of employees' using their companies' internet access during office hours to surf non-job related Web sites for personal purposes and to check (including receiving and sending) personal e-mail as misuse of the internet." Vivien Lim, "The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice," …, 677.

[18] The author has observed this behaviour on CFB Gagetown, Valcartier, Trenton, Wainwright, Shilo and Edmonton and on deployed operations in Latvia.

[19] The author has not been to the Canadian Forces Leadership and Recruit School in St Jean since 2000; however, she has observed several of their exported courses in Edmonton and the same joining instructions apply. Department of National Defence, "Joining Instructions – Basic Military Qualification and Basic Military Officer Qualification," last accessed 6 February 2019, http://www.forces.gc.ca/en/training-establishments/recruit-school-joining-instructions.page, restricted materials section.

[20] Vivien Lim and Don Chen, "Cyberloafing at the workplace: gain or drain on work?" *Behaviour & Information Technology 31*, no. 4 (2012): 352.

PROBLEM STATEMENT

The Canadian Army Integrated Performance Strategy (CAIPS), instituted in 2015, is intended to promote a healthy culture based on six areas of fitness to increase CA readiness by force generating soldiers who are better prepared for operations and more resilient.[21] The six components of fitness described in CAIPS are: physical, intellectual, emotional, social, familial and spiritual.[22] Leadership in the infantry is primarily concerned with physical and intellectual fitness, and strives to ensure that soldiers are physically ready to meet the demands of operations and that they have the requisite knowledge and experience required to perform in their assigned roles on operations.[23] Less attention is typically given to emotional, social, familial and spiritual fitness and many leaders are actually uncomfortable planning and participating in training that addresses emotional and spiritual needs.[24]

Interestingly, unlike physical and intellectual fitness which need chain of command resourcing, the other four elements of CAIPS fitness have less demanding resource requirements and all soldiers can provide added value to the groups in which they are members. For this reason attention given to social, familial, emotional and spiritual fitness often suffers the most from cyberloafing, one of the negative consequences of networked individualism. In its most modest form, cyberloafing is a minimal drain on time, but when left unchecked soldiers waste hours per day and tens of

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[21] Department of National Defence, *Mission: Ready – the Canadian army integrated performance strategy…*, 2.
[22] *Ibid*.
[23] This is the aim of Road to High Readiness Training (R2HR) and high readiness (HR) including deployed operations. The author participated in the infantry component of R2HR training in 2007, 2009, 2011 and 2016 with the Princess Patricia's Light Infantry.
[24] The author's experience reveals very few leaders in the combat arms openly talk about their emotional and spiritual fitness and arrange for resources and training to be dedicated to these two elements of soldier fitness.

hours per week that can and should be spent enhancing their total fitness through all the components of CAIPS.

There have been very few studies conducted on the effects of the Information Age on the human and social aspects of military service, but studies are starting to emerge from research in the fields of private sector business, childhood and adult education, family and relationship dynamics and interpersonal communication.[25] The results of these studies are not conclusive and are not generalizable to the CAF or CA because of the sociocultural aspects of military service. Still, the studies are extremely useful because they inform general trends in the North American population and they are providing insights into the nuanced impacts, positive and negative, of an increased human reliance on information communication technologies (ICTs) and computer mediated communications (CMCs).

To understand the impacts of the Information Age on the human and social aspects of military service, the CA in not an ideal unit of study because it is an expansive organization that is inherently heterogeneous. The infantry is a better unit of study because of its homogeneity and its vulnerability to the negative aspects of cyberloafing and networked individualism. The infantry is particularly vulnerable because of its reliance on social and emotional fitness to achieve the cohesion needed to fulfill its role of closing with and destroying the enemy. It is likely that cyberloafing in the infantry

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[25] Lee Rainie and Barry Wellman, *Networked: The new social operating system…*; Sherry Turkle, *Reclaiming conversation: The power of talk in a digital age* (New York: Penguin Books, 2016); Jean Twenge, *iGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy--and completely unprepared for adulthood--and what that means for the rest of us* (New York: Simon and Schuster, 2017).

diverts resources away from the CAIPS priority fitness components and undermines soldier readiness and resilience.

The purpose of this project is to determine the best way to study the impacts of the Information Age on cohesion because of its importance in developing resilient soldiers who are ready for operations. Because CAIPS is a relatively new Canadian initiative, there is currently no existing literature that informs the most suitable theoretical framework or methodology to study CAIPS. To address this gap and determine a researchable component of the problem outlined in this chapter, a theoretical literature review, a qualitative methodologies review and a methodological literature review were conducted in Chapters 2, 3 and 4, respectively, of this directed research project.

CHAPTER ORGANIZATION

Chapter 2 takes an interdisciplinary approach to reviewing the existing western military theories related to the social and emotional components of CAIPS through looking at cohesion and combat bonding, terms that are used interchangeably in the literature. Chapter 2 also explores relevant existing theories related to communication and the Information Age to appreciate the societal context and related research that has been completed in other fields. Chapter 3 provides a brief overview of the principal qualitative methodologies currently used in social science inquiry and then reaches the conclusion that case study methodology is the most appropriate for a future project that studies cohesion and CAIPS total fitness in the Information Age. Chapter 4 examines two successful examples where case study methodology was used to study military cohesion in the South Atlantic Conflict in the Falklands and on Operation *Iraqi Freedom* in Iraq and concludes by discussing the strengths and weaknesses of both cases. Chapter

5 ends with recommendations and conclusions for the future study of cohesion and CAIPS total fitness in the Information Age.

FUTURE STUDY

The findings of this project will inform the theoretical framework and methodology of future doctoral research by the author planned for 2019-2021. The doctoral research will be conducted as part of the degree requirement for the Doctor of Social Sciences (DSocSci) program at Royal Roads University (RRU). The doctoral research is tentatively planned to take place in the 3rd Canadian Division, with a focus on the Princess Patricia's Canadian Light Infantry (PPCLI).

CHAPTER 2: THEORETICAL LITERATURE REVIEW

If you think of rival explanations only after data collection has been completed, your thinking will help you justify and design a future study, but you will not be helping to complete your current study.

-Dr. Robert Yin, *on Case Study Research*

INTRODUCTORY COMMENTS

In order to study social and emotional fitness in the Information Age, a literature review of military cohesion and bonding and a literature review of social considerations of the Information Age are required because there is very little information available in the literature on contemporary military cohesion and/or bonding. This chapter begins with a review of theories across disciplines that are related to cohesion starting with Durkheim's concept of anomie, moving to contemporary ideas from Israeli Defense Force (IDF) and US Army scholars, and ending with a hybrid model of cohesion developed for research on the CAIPS. The chapter proceeds to cover applicable social theories from the Information Age related to communication, social cohesion and empathy, and concludes with a discussion of theoretical gaps concerning the study of cohesion in the Information Age.

THEORETICAL LITERATURE REVIEW

Theories Related to Cohesion

In order to set the conditions for the discussion of contemporary cohesion this section first considers the applicable definitions and the historical perspective of anomie and cohesion by reviewing works from social theorists Durkheim, Marshall, and Shils and Janowitz. The discussion then progresses to a consideration of cohesion in modernity by considering the theories advanced by military sociologists Wong (LtCol Ret'd), Siebold (LtCol Ret'd), King, MacCoun and Hix, and Gal. These theoretical

models of cohesion and bonding in combat are accepted in the military academic community although there have been long running debates on their validity and compatibility.[26] These models are compatible in general, but this section concludes with a hybrid theoretical model for cohesion based on these supporting perspectives and the experiences of the author.

Definitions

In the literature, bonding is related to task and social cohesion and is sometimes used interchangeably. The following definitions will be used throughout this chapter:

- **Task Cohesion**. Task cohesion is the shared commitment among group members to accomplish a common objective, assigned mission or task that requires the collective efforts of the group.[27]

- **Social Cohesion**. Social cohesion is the quality of the shared interpersonal relationships among group members that motivates the provision of material and emotional support to other group members.[28]

- **Bonding**. The literature is less precise on the definition of bonding, but for the purpose of this project it is the combination of the social/emotional and task/action components of bonding at the primary group level.[29]

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[26] Prior to WWII, there was consensus that soldiers fought for *King and Country*, but research conducted at the end of the war indicated that soldiers were more likely to *fight for the soldier next to them*, putting more emphasis on the importance of primary group cohesion. This view was challenged during the Vietnam War and more elaborate theoretical models of cohesion emerged. Most recently, the historical theoretical perspective of cohesion has been challenged by American academics involved in US policy debates concerning openly homosexual service members in the US armed forces. This argument is explained in more detail later in the chapter.

[27] James Griffith, "Cohesion forgotten? Redux 2011 – knowns and unknowns," in *The science of unit cohesion–its characteristics and impacts*, edited by M. Salo and R. Sinkko (Järvenpää: Military Sociological Society of Finland, 2012), 13.

[28] *Ibid*.

[29] Guy Siebold, "The science of military cohesion," in *The science of unit cohesion–its characteristics and impacts*, edited by M. Salo and R. Sinkko (Järvenpää: Military Sociological Society of Finland, 2012), 46; Mikael Salo, "Unit cohesion: Theoretical implications and practical recommendations," in *The science*

Historical Perspective

In the late 1800s, Émile Durkheim wrote about society in modernity at a time when the religious and social institutions of pre-industrialized Europe were no longer assumed and new institutions were coming into being. Durkheim believed that modernity was creating the societal conditions for normlessness – or a mismatch of norms and values within society – a condition he described as anomie.[30] For Durkheim the state of anomie created a dysfunctional societal ability to integrate social standards – or worse – an absence of coherent societal norms and values into which people could integrate.[31] Although his theory of anomie is approaching its sesquicentennial anniversary, it informs contemporary theories of social cohesion. In the absence of anomie, a society experiences nomos – the Greek form of the Latin word for mores – further understood in English as norms and values.[32] Without shared norms and values, members of society feel alienated and lack purpose. With them, the opposite is the case. Concerning the social cohesion aspect of bonding, militaries have endeavoured to ensure that their organizational norms and values are shared by the members of their ranks and that their members share a sense of purpose and belonging, to improve their social and emotional fitness.

In 1947, the US Army's chief war historian S.L.A. Marshall famously said, "Men do not fight for a cause but because they do not want to let their comrades down."[33] Marshall was referring to his observation that, in the heat of battle, soldiers do not fight

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of unit cohesion–its characteristics and impacts, edited by M. Salo and R. Sinkko (Järvenpää: Military Sociological Society of Finland, 2012), 96.

[30] Stephen Marks, "Durkheim's theory of anomie," *American Journal of Sociology* 80, no. 2 (1974): 332.

[31] *Ibid*., 335.

[32] *Ibid*., 331.

[33] S.L.A. Marshall, *Men against fire* (New York: William Morrow, 1947), 161.

for a higher purpose or calling such as ideology or patriotism, but that they fight for each other based on the quality of the relationship that they share. He was refuting the common theory that soldiers fight for *King and Country* and presenting the theory that *soldiers fight for the soldier next to them*, the precursor to the task and social cohesion debate. Tactical level infantry training is based on Marshall's theory and it is ingrained in every soldier from the first day they arrive at recruit school.

Marshall's findings were supported by many others including Stouffer who studied American WWII veterans for the War Department and Shils and Janowitz who studied German prisoners of war (PWs) to better understand the enemy's motivation to fight and surrender.[34] Shils and Janowitz observed,

> It appears that a soldier's ability to resist is a function of the capacity of his immediate primary group (his squad or section) to avoid social disintegration. When the individual's immediate group, and its supporting formations, met his basic organic needs, offered him affection and esteem from both officers and comrades, supplied him with a sense of power and adequately regulated his relations with authority, the element of self-concern in battle, which would lead to disruption of the effective functioning of his primary group, was minimized.[35]

Shils and Janowitz found that as long as a soldier's basic needs were met, and they felt that they were cared for, they continued to fight. This was an important finding because Nazi ideology or German patriotism were not found to be deciding factors in the daily decision to continue the fight during WWII – soldiers fought for the soldier next to them.[36]

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[34] Samuel Stouffer, et al, *Studies in social psychology in World War II: The American soldier, volume 2* (Princeton: Princeton University Press, 1949); Edward Shils and Morris Janowitz, "Cohesion and disintegration in the Wehrmacht in World War II," *Public Opinion Quarterly 12*, no. 2 (1948).

[35] In the context of the infantry, the primary group refers to the platoon level and below and the secondary group refers to the company level and above. Guy Siebold, "The essence of military group cohesion," *Armed Forces & Society 33*, no. 2 (2007): 287; Edward Shils and Morris Janowitz, "Cohesion and disintegration in the Wehrmacht in World War II,"…, 281.

[36] *Ibid*.

Contemporary Perspective

The knowledge gained in the wake of WWII informed military social science until the Vietnam War. When the war started going badly for US forces, American social scientists had a renewed interest in studying soldiers in combat. Rich social science research concerning military cohesion emerged in the post-war years, primarily led by Wong and Siebold, both retired US Lieutenant-Colonels who went on to become military sociologists.[37] Siebold's work concerns group cohesion, combat motivation and leadership and he promulgated what he calls the *Standard Model* of military group cohesion. In Siebold's model there are four structural relationships that create social bonding: peer/horizontal, leader/vertical, organizational, and institutional.[38] In his definition, peer and leader bonding are designated as primary group cohesion and organizational and institutional bonding as secondary group cohesion.[39] In the model "each type of bonding has been considered to have two aspects: affective (an emotional/reactive side) and instrumental (an action/proactive side)."[40] Bonding with the primary group creates the warrior who is ready and willing to fight and bonding with the organization and institution creates the professional soldier who is ready to serve.[41]

In his model, Siebold emphasized the importance of trust in the development of cohesion in the primary group.[42] Task and social cohesion exist at both levels; however,

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[37] Siebold's work is primarily theoretical and is presented in this section while Wong's work has tended to be more empirical. An example of Wong's research is included in Chapter 4 as a methodological example of case study research.

[38] Guy Siebold, "The essence of military group cohesion,"…, 287.

[39] *Ibid*.

[40] *Ibid*.

[41] *Ibid*., 288.

[42] *Ibid*.

the emphasis is on task cohesion in the former and social cohesion in the latter. Siebold's definition differs from those offered by Marshall, Shils and Janowitz because it expands the affective definition to include task cohesion. A visual depiction of Siebold's model, described by Salo, is depicted in Figure 2.1.
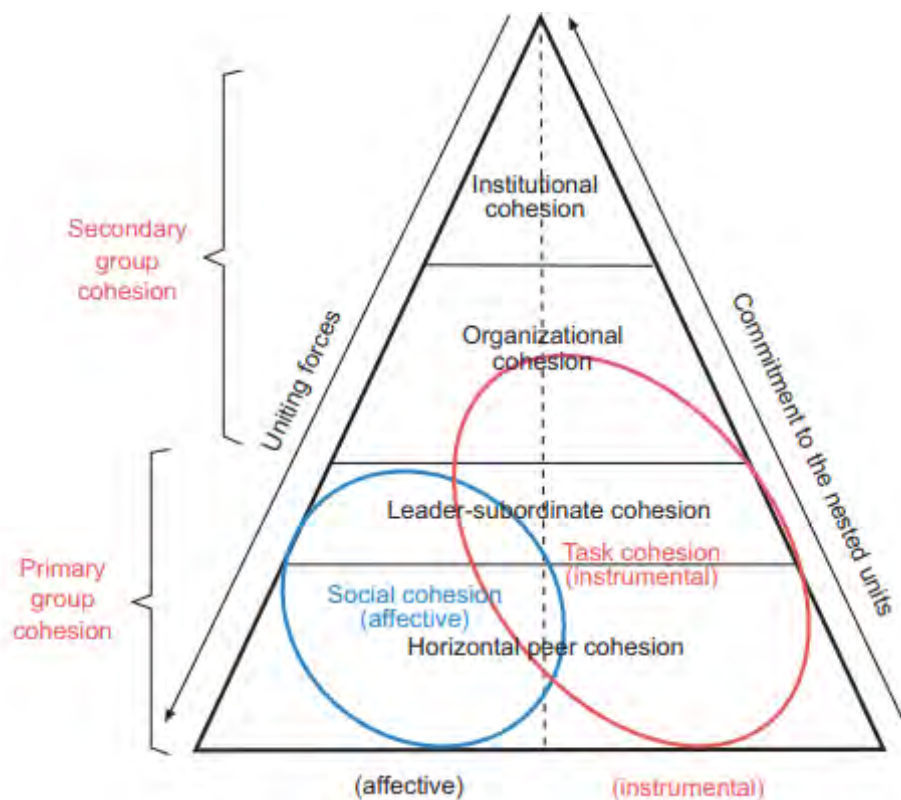
Figure 2.1 -- Siebold's Standard Model of Military Cohesion

Source: Salo, "Unit cohesion: Theoretical implications and practical recommendations," 96.

Siebold further described the characteristics of his model in 2011 to advance his *Standard Model* in the military academic community and demonstrate its applicability to military theory and research on cohesion.[43] A summary of the characteristics of Siebold's model is presented in Table 2.1.

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[43] Guy Siebold, "Key questions and challenges to the standard model of military group cohesion," *Armed Forces & Society 37*, no. 3 (2011): 449.

Table 2.1 -- Characteristics of Siebold's Standard Model of Military Cohesion

WHO	The applicable population is the military small group
WHAT	The model describes small group cohesion as measured in the four types of bonding (peer, peer-leader, organization, institutional); each type of bonding has affective and instrumental aspects; the pattern of cohesion shown by the bonding is related to important outcomes such as group performance and level of discipline
WHERE	Cohesion is located in the relationship structure exhibited in the four types of bonding during daily activities and especially in the field in combat or mission training where interdependency is high.
WHEN	Cohesion is measures at a given time but can be expected to change over time in patterned way as the group develops or proceeds.
HOW	Measurements for the model may be done by giving questionnaires to group members, observation, and using record data; many different factors may affect the different types of bonding.
WHY	Group members naturally seek cohesion (positive relationship), particularly trust and integrated performance, because it increases the change of group and individual success including survival.

Source: Siebold, "Key questions and challenges to the standard model…," 450.

The trend of increasing emphasis on task cohesion, as opposed to social cohesion, in bonding continued from the end of the Vietnam War to present day. This is primarily due to the politicization of the science by politicians, lobbyists and researchers in the US. American scholars MacCoun, Hix and Kier reported on literature and conducted studies that produced results that were in contravention to the historical knowledge produced after WWII favouring the socially cohesive aspect of bonding. Although the political motivation behind their studies is irrelevant to the Canadian situation, many of their findings regarding task cohesion are worth considering as long as their bias is understood. MacCoun and Hix, and later Kier, were advocates for LGBTQ integration and the elimination of the "don't ask – don't tell" (DADT) policy in the US military in the early 2000s.[44] MacCoun Hix, and Kier were opposed by several groups who advocated that

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[44] Robert MacCoun, William Hix, "Unit cohesion and military performance," in *Sexual Orientation and US Military Personnel Policy* (Santa Monica: RAND, 2010), 13-14.

members of the LGBTQ community should not be allowed to openly disclose their sexual orientation for fear that it would affect military cohesion and operational effectiveness. MacCoun, Hix, and Kier's strategy was to demonstrate that task cohesion was more important to military effectiveness and performance than social cohesion in order to prove that LGBTQ integration and the elimination of DADT would not negatively impact military effectiveness or performance.[45]

The main weakness in their argument was that they used non-combat and non-military examples in their research such as sports teams and civilian businesses, but their research does describe the relationship between performance and cohesion. Effective performance is clearly important during operations and MacCoun and Hix found that in their study cases, task cohesion was the strongest predictor of effective performance.[46] Although their findings are not directly transferable to bonding in the military context they are important to CAIPS because they show that cohesion and performance are cyclical. The relationship with CAIPS is illustrated in Figure 2.2.

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[45] *Ibid*.; Robert MacCoun, Elizabeth Kier, and Aaron Belkin, "Does social cohesion determine motivation in combat? An old question with an old answer," *Armed Forces & Society* 32, no. 4 (2006): 652.

[46] Robert MacCoun, William Hix, "Unit cohesion and military performance,"…, 142; Bernard Rostker et al., *Sexual orientation and US military personnel policy: Research brief* (Santa Monica: RAND Corporation, 2010), 3.
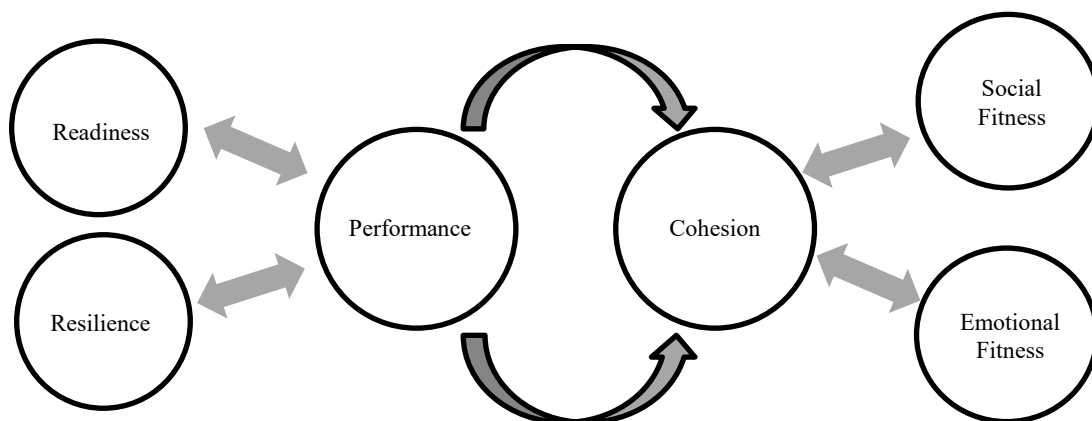
Figure 2.2 -- Chicken-Egg Relationship of Performance and Cohesion

From the schematic in Figure 2.2, social and emotional fitness are connected to cohesion and are linked to performance in the chicken-egg relationship. In CAIPS, performance is synonymous with operational effectiveness and includes the elements of readiness and resilience.

Alternatively, King, a British military sociologist specializing in small unit cohesion, offers a perspective on cohesion and bonding that is different from, but compatible with, Siebold's model. King's research found that training and communication rituals were central to the development of unit cohesion and bonds between British Royal Marines (RMs).[47] At the tactical level, where combat bonding occurs, King observed, "three kinds of communication drills are identifiable: collective representations, collective movements, and commands on contact."[48] King found that these communication methods were the framework upon which soldiers oriented themselves to achieve collective goals, usually in the form of a mission.[49] King's work

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[47] Anthony King, "The word of command: Communication and cohesion in the military," *Armed Forces & Society 32,* no. 4 (2006): 496.
[48] *Ibid*.
[49] I*bid*.

adds depth to Siebold's model of military group cohesion and is relevant to CAIPS because it identifies the importance of the training environment as a platform to enable cohesion through drills and communications: practicing together creates shared understanding.[50]

Gal, of the Israeli Defence Force (IDF), is the final academic considered in this section. His perspective on cohesion is based on his service as a combat commander and as the Chief Psychologist of the IDF. His model is important to a holistic understanding because of its focus on the human factors of combat.[51] Gal identifies the components of pride, shame and trust in cohesion for bonding between peers and leaders.[52] On pride he writes, "when your friends are risking their lives – you cannot stay behind," and "trust, in a cohesive unit, means to be ready to sacrifice your life for your comrades in the squad or platoon and to know for sure that they will do the same thing for you."[53] Gal's perspective supports the affective component of horizontal and vertical bonding and reinforces the importance of trust, as identified in Siebold's work previously. Gal's components also work well with King's model because the concepts of pride and trust are initially developed in military training systems by all members of professional armies, where "mutual trust can be created and affirmed only through cycles of concrete cooperation, as soldiers do things together."[54]

Having considered the historical perspective and the contemporary perspectives on task cohesion, social cohesion, and bonding, the next section will look at how a hybrid

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[50] *Ibid.*, 504.
[51] Reuven Gal, "Why is cohesion important?" In *The science of unit cohesion–its characteristics and impacts,* edited by M. Salo and R. Sinkko (Järvenpää: Military Sociological Society of Finland, 2012), 37.
[52] *Ibid.*, 39.
[53] *Ibid.*
[54] Anthony King, "The existence of group cohesion in the armed forces: A response to Guy Siebold," *Armed Forces & Society 33*, no. 4 (2007), 641.

model, that accounts for the literature as well as the experiences of the author, can be useful for research on CAIPS by integrating the existing theories of cohesion holistically.

A Hybrid Theoretical Model of Cohesion

Given the review of the dominant American, British and Israeli perspectives on cohesion and bonding in the literature, the following is a hybrid theoretical model that was developed to inform research on Canadian soldiers.[55] Of note, the current literature is missing the consideration of stressor intensity in social cohesion which has been added to the hybrid model. The model in Figure 2.3 is a visual representation of how the theories presented in this chapter can be integrated into one framework and of how stressor intensity can be included in the model.
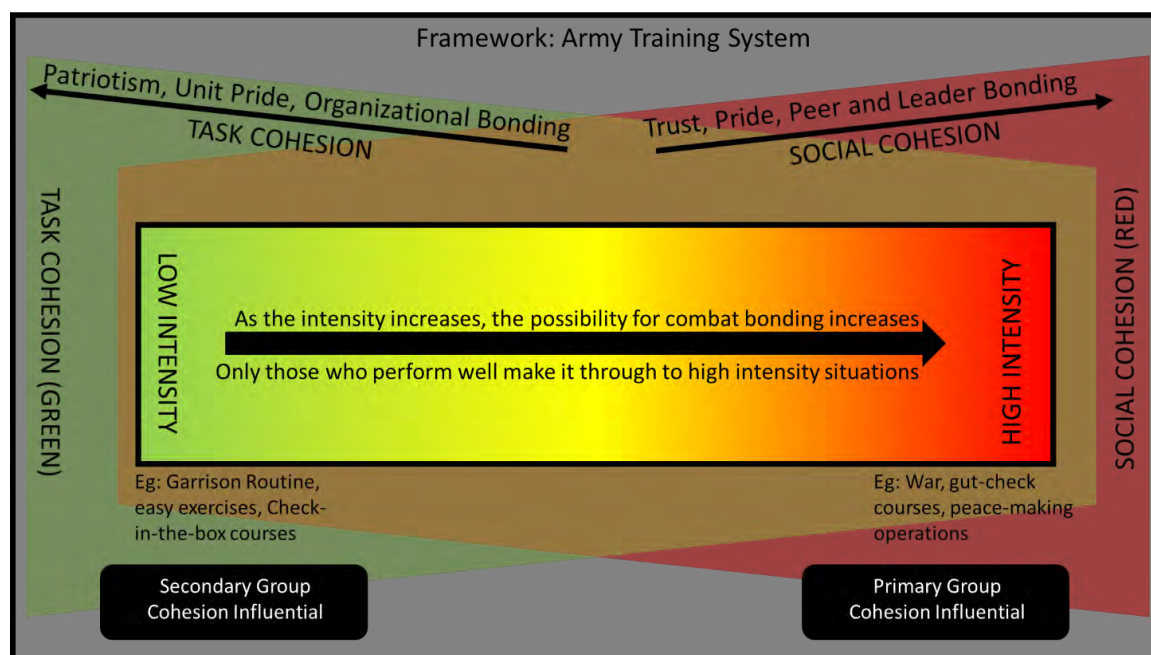
Figure 2.3 -- Hybrid Model of Cohesion as a Function of Stressor Intensity

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[55] This model was developed by the author in July 2018 under the directed study of Dr. Jaigris Hodson in support of the course requirements for the DSocSci course at RRU.

Model variation with stressor intensity is important to the discussion for the CA because without high intensity stressors, similar to those present and inevitable in war, the cohesiveness required to build resilience and to be successful on operations is not possible.[56] This may explain why the historical perspective on bonding was focused on the primary group and social cohesion: all of the research observations were made in war or a war-like setting. The high intensity of war also explains Gal's findings because Israel has long faced an existential threat and engaged in significant combat operations. The experience is different for most modern, professional armies, which are not fighting existential threats. Militaries from these countries, Canada included, will experience a continuum of stressor intensity. Any model for cohesion and bonding that is used to explore social and emotional fitness bonding should consider this continuum.

The next section considers theories of the Information Age associated with the social concerns of cohesion, communication, emotions and actions that influence or are related to cohesion. This component of the literature review allows the theories of cohesion and bonding presented in this chapter to be examined through a modern, generational lens. It also explores some of the challenges and opportunities of the Information Age from a social and emotional perspective.

Theories Related to the Information Age

According to relational sociologist Sherry Turkle, "[o]ur technologies have not only changed what we do; they have changed who we are."[57] Canadian society has moved away from tight-knit, geographically anchored, social groups, to networks where

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[56] The experience of the author is consistent with the traditional views of cohesion and observations from Operations *Lentus, Podium, Athena* and *Reassurance* support adding stressor intensity variation to the model to make it more useful from a CA perspective, where existential conflict is not the norm.

[57] Sherry Turkle, *Reclaiming conversation…*, 172.

the individual is central, tied to geographically disparate and loose social networks, many of which are maintained through online sociality.[58] These shifts towards networked individualism have been largely enabled by the Triple Revolution (TR) and have had measureable effects on the social and emotional fitness of North American society.[59]

In order to study cohesion in the Information Age, the theories described at the beginning of this chapter are insufficient. Social theories related to the Information Age must also be explored as these contemporary concepts are not examined in the existing military literature. This section begins with an overview of rich and lean communications in Daft and Lengel's Media Richness Theory (MRT) and then evaluates the two competing views of social cohesion in the Information Age. The principal theoretical view is that the TR decreases cohesion, but there is a rival theoretical view that the TR increases social cohesion.[60] Scholars Gergen, Turkle and Twenge's work will be considered as theories that support decreased social cohesion in the Information Age, whereas Rainie and Wellman's work will be considered as the rival theory that supports increased sociality and social cohesion.

Definitions

The Information Age has unique terminology and definitions. The following definitions will be used throughout this chapter:

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[58] Lee Rainie and Barry Wellman, *Networked: The new social operating system*…, 16-17.

[59] Jean Twenge, *iGen*…, Figure D-3.

[60] Although beyond the scope of this paper, it is likely that the truth lies somewhere in the nuanced middle ground. Scholars on both sides of the debate are actively publishing and new material becomes available regularly. The research for this paper considers materials published until the end of 2018, but given that these theoretical models inform current affairs there are always updates and refinements available for both the principal and rival theories.

- **Absent Presence**. A constant connection with friends, family and colleagues enabled by information communication technologies that allows those who are physically absent to be connected in real-time.[61]

- **Cyberloafing**. Cyberloafing occurs when employees use their workplace internet access during work-hours to surf the internet, check their email or any other misuse of the internet on company time.[62]

- **iGeneration (iGen)**. iGen includes those born after 1995. iGen is described as the generation that had no choice to know life without iPads, iPhones and other ICTs.[63]

- **iTime**. iTime challenges the pre-internet boundaries of time, blurring the line between public and private, day and night, and work and leisure.[64]

- **Micro-Social Fragmentation (MSF)**. The state of absent presence that leads to small, fragmented social groups enabled by information communication technologies.[65]

- **Networked Individualism**. A move away from social groupings that were tightly-knit and geographically concentrated to groupings that are looser and more fragmented enabled by TR technologies. Successful networked

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[61] Kenneth Gergen, "The challenge of absent presence," in *Perpetual contact: Mobile communication, private talk, public performance*, edited by J. E. Katz and M. Aakhus (Cambridge: Cambridge University Press, 2002), 233.

[62] Vivien Lim, "The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice," …, 677.

[63] Jean Twenge, *iGen*…, 2; Sherry Turkle, *Reclaiming conversation*…, 172.

[64] Ben Agger, "iTime: Labor and life in a smartphone era,"…, 120.

[65] Kenneth Gergen, "Self and community in the new floating worlds," in *Mobile democracy: Essays on society, self, and politics*, edited by K. Nyiri (Vienna: Passagen-Verlag, 2003), 105.

individuals have on-demand assistance and support through their savvy,

balance use of on and offline sociality.[66]

- **Triple Revolution**. The trifecta of the internet, social media (SM) and mobile phones into a do-it-all smartphone.[67]

Historical Perspective – Media Richness Theory

In the early 1980s communication and management studies experts Daft and Lengel introduced the concept of information richness in a study completed for the US Office of Naval Research.[68] Their research was designed to create a new proposal for managerial behaviour and organization design where the goal was equivocality reduction and information processing to the minimum acceptable levels to produce efficient and successful organizations.[69] They recognized that, "organizational success is based on the organization's ability to process information of appropriate richness to reduce uncertainty and clarify ambiguity."[70] In their model, information richness is defined as the potential information carrying capacity of a medium of communication: media that provide low understanding are considered to be lean, whereas media that provide substantial understanding are rich.[71] Table 2.2 provides an overview of Daft and Lengel's characteristics of media that determine information richness.

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[66] Lee Rainie and Barry Wellman, *Networked*…, 11-12.

[67] *Ibid*.

[68] Richard Daft and Robert Lengel, *Information richness: A new approach to managerial behavior and organization design*, No. TR-ONR-DG-02, (College Station: Texas A & M College of Business Administration, 1983), 1.

[69] Richard Daft and Robert Lengel, *Information richness*…, report documentation.

[70] *Ibid*., 5.

[71] *Ibid*., 7.

Table 2.2 -- Characteristics of Media that Determine Information Richness

Information Richness	Medium	Feedback	Channel 1	Source	Language
High	Face-to-Face	Immediate	Visual, Audio	Personal	Body, Natural
	Telephone	Fast	Audio	Personal	Natural
	Written, Personal	Slow	Limited Visual	Personal	Natural
	Written, Formal	Very Slow	Limited Visual	Impersonal	Natural
Low	Written, Numeric	Very Slow	Limited Visual	Impersonal	Numeric

Source: Daft and Lengel, *Information richness…,* 10.

Daft and Lengel wrote the theory of information richness at a time when IBM's *Acorn* and Apple's *Lisa* where brand new on the market, cost prohibitive and not widely in use by those in management or the Department of the Navy. Given the characteristics in Table 2.2 it would be logical to insert video chat programs between face-to-face and telephone calls, text messaging and emails between telephone and written-personal due to the feedback and channel properties of these methods of communication.[72]

Four years after publishing their monograph on information richness, Trevino, Daft and Lengel were already writing on the impact of email and proposed a theoretical framework for overall media choice which included message ambiguity, symbolic cues conveyed by the medium, and situational determinants on information processing.[73] They posited that in situations with high ambiguity, meaning must be negotiated and that a shared understanding of the content is achieved through synchronous language

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[72] Kim Zimmerman, "History of computers: A brief timeline," last accessed 31 March 2019, https://www.livescience.com/20718-computer-history.html.

[73] Linda Trevino, Robert Lengel, and Richard Daft, "Media symbolism, media richness, and media choice in organizations: A symbolic interactionist perspective," *Communication research 14*, no. 5 (1987): 555-556.

communication and non-verbal social cues.[74] In highly ambiguous situations that require

rapid feedback, effective communicators will choose richer media to ensure equivocality

reduction and adequate information transfer.[75] Regarding symbolic cues, the selected

medium has a meaning beyond the content of the information being exchanged: face-to-

face communication may symbolize caring and concern, while formal written

communications may symbolize authority.[76] Lastly, media choice may be situationally

determined by time, distance, expediency, role expectations and/or structure.[77]

In the three decades following Daft and Lengel's work on media richness theory

(MRT), there have been several critics, but the argument has not been substantially

advanced from its original form and is still a valid framework for understanding

communication richness and media choice. In the theoretical discussions of social

cohesion that follow, MRT will feature predominantly due to the importance of

ambiguity reduction, information exchange, symbolism and situational determinants in

the human interactions that are the foundations of creating and maintaining social

cohesion. To augment MRT, the following section considers the contemporary research

perspectives on the TR, social cohesion, communications, emotions and actions.

Contemporary Research Perspectives – The Triple Revolution (TR)

Members of iGen use new leaner media including texting, instant messaging,

gaming, and video chat on their smartphones for approximately six hours per day and

91% of Canadians, excluding toddlers, have a personal mobile device.[78] When mobile

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[74] *Ibid.*, 558.
[75] *Ibid.*
[76] *Ibid.*
[77] *Ibid.*, 559.
[78] Jean Twenge, *iGen*…, 51; Canadian Wireless and Telecommunications Association, "Facts & Figures,"…, 1.

phones were a nascent technology and personal computers were becoming the norm, prominent social constructivist Kenneth Gergen theorized that mobile phones and other information communication technologies (ICTs) would enable a constant connection with family, friends, colleagues, and others who are physically absent, leading to what he called a state of *absent presence.*[79] In Gergen's state of absent presence, people would create small, fragmented social groups – what he called *micro-social fragmentation* (MSF), in real-time.[80] Gergen cautioned that absent presence resulting in MSF would result in a "wholesale devaluation of depth in relationship" because people could use leaner media to connect with those who are absent while forsaking the opportunity to engage in richer media exchange with those who are physically present.[81] His theory of MSF has been supported by empirical work done by both Turkle and Twenge, presented in the following two paragraphs, and is important to social and emotional fitness because of the negative effects of both absent presence and MSF on social cohesion.

Turkle's research found that as a society, North Americans are facing an empathy crisis caused by the societal move away from richer face-to-face conversation in favour of leaner ICTs or computer mediated communications (CMCs).[82] Her findings show that without empathy, relationships with friends and family, education, work and public life suffer.[83] She concludes that we tell ourselves positive stories to prove that our technologies are progress, but that society is lonelier than before the TR and that the children of the Information Age are 40% less empathetic than the previous generation.[84]

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[79] Kenneth Gergen, "Self and community in the new floating worlds," …, 105.
[80] *Ibid.*
[81] Kenneth Gergen, "The challenge of absent presence,"…, 233.
[82] Sherry Turkle, *Reclaiming conversation*…, 4.
[83] *Ibid.*
[84] *Ibid.*, 170.

Turkle's research supports the position that the TR has decreased society's social cohesion, that societal absent presence keeps conversations lighter than they were previously and that people are prevented from developing and feeling meaningful emotional connections with one another, negatively affecting both social and emotional fitness on a large scale.[85]

In contrast to Turkle's qualitative research, Twenge is a generational studies psychologist with expertise in studying quantitative longitudinal survey data in the US. Since the 2010s, she documented the following primary differences between Millennials and iGeners, making them an empirically distinct generation: iGeners are growing up more slowly, spending more time online, prefer virtual over in-person interactions, are more insecure, less religious, more concerned about personal safety, more inclusive, delaying sex, marriage and children, and they are more likely to be political independents.[86] She concluded that adolescent loneliness has increased and that there is a significant increase in the number of young people who report feeling socially left out.[87] Twenge also reports that youth engage less frequently in richer in-person social activities in favour of time spent online in leaner engagements.[88] Her findings are problematic because they result in a decrease in psychological well-being that can be linked to increases in use of ICTs and CMCs.[89] Although her studies focus primarily on youth and adolescents, her findings are likely generalizable to older people with similar ICT and CMC usage habits, implying negative consequences for both social and emotional fitness.

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[85] *Ibid*., 157.
[86] Jean Twenge, *iGen*…, viii.
[87] *Ibid*., 98.
[88] *Ibid*., 75.
[89] Jean Twenge, Gabrielle Martin, and Keith Campbell, "Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology," *American Psychological Association, advance online publication* (2018): 12.

Unlike Gergen, Turkle and Twenge, Rainie and Wellman focused more on the opportunities that emerged after the Digital Revolution and subsequently during the TR. In *Networked*, they describe how networked individuals can easily tailor their social lives and how beneficial communities of choice can emerge.[90] Networked individuals are connected and findable as a requirement of their online sociality and they are able to access large social networks regardless of time or location.[91] Successful networked individuals are able to move throughout their social networks in-person and online, striking a balance between taking advantage of opportunities from their online networks and their need to be present or conduct activities without interruption.[92]

One of the important considerations in optimizing online networks is the extent to which the online platform allows for cultural and mechanical affordances.[93] Not all social media are created equal when it comes to creating the strong and lasting ties that are needed to optimize networked individualism. Platforms that allow users to communicate richer personal information and to extend support will be culturally preferred, while platforms that can aptly manage frequent communication over the long term will be mechanically preferred.[94] According to Rainie and Wellman, successful networked individuals will emerge socially ahead of others because of their abilities to optimize meaningful interactions in iTime from rich and lean communication, taking full advantage of all affordances in their social networks on and offline.[95] If Rainie and Wellman's findings are generalizable to the CA, then successful networked individuals

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[90] Lee Rainie and Barry Wellman, *Networked: The new social operating system…*, 67.
[91] *Ibid.*, 290.
[92] *Ibid.*, 274.
[93] Stephen Ostertag and David Ortiz, "Can social media use produce enduring social ties? Affordances and the case of Katrina bloggers," *Qualitative Sociology 40*, no. 1 (2017): 59.
[94] *Ibid.*, 64.
[95] Lee Rainie and Barry Wellman, *Networked: The new social operating system…*, 274.

may derive advantages in social and/or emotional fitness from their use of ICTs and CMCs.

CONCLUDING REMARKS: NOT GOOD, NOT BAD, AND NOT NEITHER

There are many academics studying human communication in the Information Age and there are as many competing theories. The four theoretical perspectives presented in this chapter may be relevant to the social experiences of today's soldiers. From a Regimental perspective, the question of *who* forms a soldier's social network is typically more important than the questions of *how big their network is* or the *media used to communicate within the group*, but this may not be the case in the future.[96] This is addressed in Siebold's model of cohesion by identifying a soldier's primary and secondary groups. In the CAF, the Regimental system is responsible to answer the *who* question. In garrison and during training prior to deployments in Canada and overseas, soldiers are supposed to be building the cohesion and the special bonds that will carry them through the stresses of combat that they would otherwise not be able to endure.[97] WWII-era and subsequent research contends that once war or war-like conditions are present, these bonds become the reason soldiers fight.[98]

Gergen's theory of MSF informs the idea that soldiers can now be simultaneously absent and present in the workplace. Rather than developing cohesion at the sub-unit level and below, they can be involved in cohesive groups that are unrelated to the military to the detriment of their workplace relationships. His theory of MSF is closely related to

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[96] The author has never been in an HR meeting where social group size or communication media selection have been considered in social and emotional fitness; however, social group composition is given considerable thought in the Regimental system. The ideas of network size and media selection could be very important factors in soldiers' social and emotional fitness in the future as online sociality develops.

[97] Leonard Wong, Thomas Kolditz, Raymond Millen, and Terrence Potter, *Why they fight: combat motivation in the Iraq war*, (Carlisle Barracks: Strategic Studies Institute, 2003), 131.

[98] S.L.A. Marshall, *Men against fire…*, 161.

the concept of cyberloafing in iTime. When soldiers engage in conduct that is socially fragmented during work time, then MSF may also help to explain decreases in social and emotional fitness in the CAIPS model.

Turkle's research on empathy shows that soldiers are less likely to engage in meaningful conversations and are thus less likely to form cohesive bonds when they are together if they are engaging in cyberloafing behaviours. Additionally, Twenge's conclusions indicate that a preference for online sociality can have negative impacts on soldiers' psychological well-being. Both of these findings may also help inform impacts on soldiers' social and emotional fitness.

Conversely, Rainie and Wellman's theory supports the idea that individuals will strike a savvy balance between on and offline sociality to optimize the benefits of their social networks, which would equally apply to soldiers. In the case of Rainie and Wellman's theory, soldiers would aptly manage their social networks to optimize their social and emotional fitness and cyberloafing would actually increase (or have a neutral effect) on total fitness in the CAIPS model rather than having an adverse impact.

These complimentary and competing theories are fundamental to researching cohesion in the Information Age because they inform the consequences of a large-scale shift towards time spent online and leaner online sociality away from richer face-to-face networks and social activities. This societal shift towards networked individualism may have an impact on cohesion and bonding in the CAF from a social and emotional fitness perspective.

From this theoretical background, it is clear elements of CAIPS total fitness have been studied, although no CAIPS-specific study exists. Drawing on the literature, social

and emotional fitness in the Information Age have been studied as cohesion and bonding in traditional military fields and communication and human social interactions in the Information Age have been the focus of several contemporary studies. In this literature review, qualitative and quantitative methods have been used successfully by several researchers in the study of cohesion and the Information Age.

Recalling that the aim of this research project is to inform future empirical research from a theoretical and methodological perspective, the next step is to consider the types of inquiry available in the social sciences. Typically social science research follows a quantitative, qualitative or mixed-methods methodology. Given that studying social and emotional fitness relies heavily on the lived experience of soldiers participating in the research project, the focus will be on selecting the most appropriate qualitative methodology for the future study. Although an exploration of quantitative and mixed-methods methodologies is outside the scope of this project, qualitative methodologies that incorporate quantitative data and analysis are explored in the next chapter. Chapter 3 describes the primary qualitative methodologies available in the social sciences and determines which would be the most appropriate for future research on cohesion in the Information Age.

CHAPTER 3: QUALITATIVE METHODOLOGIES

The case study is the method of choice when the phenomenon under study is not readily distinguishable from its context.

-Dr. Robert Yin, *The Role of Theory in Doing Case Study Research*

INTRODUCTORY COMMENTS

In humanities research there are three types of inquiry: qualitative, quantitative and mixed methods. Canadian social scientist Andrea Noack describes the difference between qualitative and quantitative research as being that qualitative research seeks to describe the social world with words, while quantitative research seeks to describe it with numbers.[99] She notes that researchers should choose the approach that will best capture their phenomena of study and that due to the imperfection of both qualitative and quantitative approaches, researchers are more often turning to a mixture of both in what is called a mixed-methods approach.[100] This chapter describes the five most common qualitative methodologies and then makes a recommendation on which methodology is best suited for a future study of cohesion in the Information Age.

There are five popular methodologies in qualitative inquiries: narrative research, case study, grounded theory, phenomenology, and participatory action research (PAR).[101] When deciding on one of these methodological approaches, researchers need to carefully consider their assumptions about reality, *ontology*, their beliefs about knowledge, *epistemology*, and the inclusion of their values in their research, *axiology*.[102] Typically, qualitative research has a subjective ontology that seeks to understand reality through the

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[99] Andrea Noack, *Social statistics in action: A Canadian introduction* (Don Mills: Oxford University Press, 2018), 9.
[100] *Ibid*.
[101] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 237.
[102] *Ibid*.

experiences of research participants and takes an epistemological view that knowledge

generated from research participants is true from their perspective and valid from a

scientific perspective. In Table 3.1 the contrasting characteristics of the five primary

qualitative methodologies according to methodology experts Creswell et al. are

summarized. These methodologies are detailed in the sections that follow.

Table 3.1 -- Characteristics of the Main Qualitative Methodologies

Charac.	Narrative Research	Case Study	Grounded Theory	Phenomenology	PAR
Type of problem best suited for design	When detailed stories help understand the problem	When research has a case bounded by time or place that can inform a problem	When no theory exists or existing theories are inadequate	When the researcher seeks to understand the lived experiences of a person about a phenomenon	When a community issue needs to be addressed so that change can occur
Discipline background	Humanities	Psychology, law, political science, medicine	Sociology	Psychology, education	Philosophy, broadly in the social sciences
Unit of analysis	One or more individuals	An event, program, activity or more than one individual	A process, action, or interaction involving many individuals	Several Individuals who have the shared experience	An entire community
Data collection forms	Interviews, documents	Multiple forms, interviews, observations, documents, artifacts	Primarily interviews	Primarily interviews, although documents, observations and art may be considered	Depends on the community needs; can be both quantitative and qualitative
Data analysis strategies	Chronology Elements of a story, restorying	Description of the case and themes of the case as well as	Open coding, axial coding, selective coding	Bracketing, statements, meaning units or themes, textual description, structural	Involve the community in how decisions as to how to

Charac.	Narrative Research	Case Study	Grounded Theory	Phenomenology	PAR
		cross-case themes		description, essence of the phenomenon	analyze the data
Degrees of structure	Little set structure	Some structure	High level of structure depending on the "camp"	Structured approach in data analysis	Little set structure

Source: Creswell et al., "Qualitative research designs…," 241-242.

In the next five sections, narrative research, case study, grounded theory, phenomenology and PAR will be examined in detail to determine which approach would best be suited to the future study of cohesion in the Information Age.

Narrative Research

Narrative research expert Czarniawska describes the method as being "understood as a spoken or written text giving an account of an event/action or series of events/actions, [which are] chronologically connected."[103] This type of research is the most suitable when narrative storytelling assists in developing a deeper understanding of the field of study and is typically used in biography, autobiography, life history and personal-experience storying.[104] Narrative research comes from the humanities and has been used in the fields of literature, history, anthropology, sociology and education.[105] Each of these fields has adopted their own set of guidelines for narrative research, but all focus on the stories that individuals tell.[106]

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[103] Barbara Czarniawska, *Narratives in social science research* (Thousand Oaks: Sage Publications, 2004), 17.
[104] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 243.
[105] *Ibid*., 240.
[106] *Ibid*.

Narrative research is typically done with one or two individuals, but there is no limit to the number of individuals that may be included in a narrative research project. The trade-off is that research resources are diluted as additional participants are added to the project.[107] Data collection begins with assembling the stories of the research participants.[108] Stories are typically collected through semi-structured or open-ended interviews and/or documents that help to capture richness related to the story such as journals, community folklore or testimonials.[109] Once researchers have all of the stories collected, they assemble them in chronological order in an attempt to sequence the meaning of the experience.[110] The chronological narrative is then restoried to the participants to ensure validity.[111]

Throughout the project, researchers negotiate meaning making through understanding relationships and smoothing out the transitions between the stories as they collect the data.[112] Clandinin and Connolly, professionals in the method, describe this research as "stories lived and told."[113] Narrative research has little set structure and typically varies from project to project as it is focused on creating meaning for research participants through their own lived experiences.[114]

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[107] *Ibid*., 243.
[108] *Ibid*.
[109] *Ibid*.
[110] *Ibid*.
[111] *Ibid*., 244.
[112] *Ibid*.
[113] Michael Connolly and Jean Clandinin, *Narrative inquiry: Experience and story in qualitative research* (San Francisco: Jossy-Bass Publishers, 2000), 20.
[114] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 242.

Case Study

Case studies focus on an issue within the bounds of a case and select an individual, multiple individuals, a program, or an activity to provide insight into the issue.[115] In a case study, the research focus is not an individual's storytelling, such as in narrative research, but rather on collecting multiple sources of information to understand the issue in-depth and in context.[116] Case study research is popular because of its versatility and has traditionally been used in the fields of psychology, law, political science, and medicine.[117] It is the most cited qualitative research methodology in the social sciences.[118]

The case, in case study research, is typically an event, program, activity or group of more than one individual.[119] The case is bounded by the research context and can be designed as a single case with a single unit of analysis, a single case with multiple units of analysis, a multiple case with single units of analysis or a multiple case with multiple units of analysis.[120] Data collection can include qualitative and quantitative sources and is typically collected through multiple sources of information such as observations, interviews, audiovisual material, documents and reports.[121]

In general, it is typically better to have more than one case or more than one embedded unit of analysis in a single case design because it allows for replication in case

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[115] *Ibid.*, 245.
[116] *Ibid.*
[117] *Ibid.*, 241.
[118] Robert Yin, *Case study research and applications…*, xvii; Robert's Yin's current publication is in the 6th edition, the original version of the textbook was published in 1984 and is credited with popularizing the mode of inquiry.
[119] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 241.
[120] Robert Yin, *Case study research and applications…*, 48.
[121] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 245-246.

design and is considered by practitioners to be more robust.[122] Cases where single case

design is appropriate include those that are critical, unusual, common, revelatory or

longitudinal.[123] When analyzing a case study it is important to consider that the results

may not be generalizable due to the context of the case; however, the analysis usually

contains a broad interpretation and lessons learned from the project with the expectation

that they can be useful to others.[124] Case studies have some structure; however, they are

considered to be flexible because of the variability of the designs and because they are

effective at analyzing diverse sources of data.[125]

Grounded Theory Research

Grounded theory research is most suitable when no theory exists or the existing

theory is inadequate for the topic of study.[126] Grounded theory takes its name from the

fact that the theory is produced from the participant data collected during the research

project.[127] This type of research is very good at understanding process, action and

interaction from the perspective of large numbers of research participants.[128] Grounded

theory comes from sociology and was developed by researchers who sought to

understand people's awareness of dying through the production of a theory from the data

gained through their experiences. Since its inception it has since split into two diverging

methods: the systematic and constructivist grounded theory methodologies.[129]

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[122] Robert Yin, *Case study research and applications*…, 55.
[123] *Ibid.*, 49.
[124] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 247-48.
[125] *Ibid.*, 242.
[126] *Ibid.*
[127] *Ibid.*, 249.
[128] *Ibid.*
[129] *Ibid.*

In both systematic and constructivist grounded theory the unit of analysis is the individual person.[130] Research projects do not set out with predetermined numbers of participants, but rather continue the research process until their data reaches saturation.[131] The primary mode of data collection in all grounded theory is one-on-one semi-structured interviews because the structured element of the interview keeps the participant focused on the research topic while the unstructured part of the interview allows the participant to contribute their unique views and experiences.[132] The main difference in data collection between systemic and constructivist grounded theory is that the former is more accepting of diverse data sources, while the latter typically relies almost exclusively on interviews.[133]

Systematic grounded theory collects data, codes and analyzes the data, and continues until the process reaches saturation and finds the core phenomenon in order to build a model that informs theory.[134] This model can be used for macro-theorizing, but because it typically takes a lot of resources to collect the data needed for macro-theorizing, it is more commonly used for low-level theorizing.[135]

Constructivist grounded theory follows the same general analysis; however, there is much less emphasis on model construction and more emphasis on active coding.[136] In

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[130] *Ibid.*, 241 and 251.

[131] Barney Glaser and Anselm Strauss, *Discovery of grounded theory: Strategies for qualitative research* (London: Routledge, 2017), 61.

[132] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 251.

[133] Kathy Charmaz and Liska Belgrave, "Qualitative interviewing and grounded theory analysis," in *The SAGE handbook of interview research: The complexity of the craft 2nd edition*, edited by J. Gubrium, J. Holstein, A. Marvasti and K. McKinney (Thousand Oaks: Sage Publications, 2012), 347.

[134] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 250.

[135] *Ibid.*

[136] *Ibid.*

the constructivist approach recognizes the researcher's role in the research process and effort is made to determine how the role influences the research outcomes – just by choosing codes and categories, the researcher brings their values to the research process and the research is co-produced.[137]

Grounded theory tends to be very structured when compared to the other four qualitative methodologies due to the guidelines it sets out for data analysis. The structure is in place to provide a measure of validity to the theories generated through this methodology.[138]

Phenomenology

Phenomenologists seek to describe what all research participants share in common when they experience a phenomenon and work from specific statements and experiences rather than abstracting to create a model based on interpretation, such as in grounded theory.[139] In this methodology, researchers want to understand the *lived experience* of research participants as it relates to the phenomenon of study.[140] Phenomenology is rooted in psychology; however, it has also been used extensively in the fields of education and health sciences due to its effectiveness at understanding lived experience.[141]

The unit of analysis in phenomenology is the individual, but it is essential that multiple individuals who have shared in the experience of interest are willing to participate in the research project for it to be analyzed using this methodology.[142] Similar

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[137] *Ibid.*
[138] *Ibid.*, 242.
[139] *Ibid.*, 252.
[140] *Ibid.*, 241.
[141] *Ibid.*, 253.
[142] *Ibid.*, 241.

to grounded theory, data is most often collected through interviews in phenomenology, but other data sources including observation, documents, and art are commonly used.[143] In phenomenology, data is collected, it is reduced to significant statements or quotes, it is combined into general themes and then a description of the essence of the experience is prepared.[144]

Phenomenology is deliberately empathetic and the reader of a phenomenological research project should come away feeling that they "understand better what it is like for someone to experience that [phenomenon]."[145] Phenomenology has a structured method of data analysis because it relies on the researcher to make an interpretation of the data in order to describe the essence of the experience.[146] The other elements of phenomenology are not highly structured.

Participatory Action Research (PAR)

PAR is best used when there is a need for a community to produce social change, solve social problems and/or improve quality of life.[147] This type of research has been effectively used in oppressed and exploited communities where social justice and equality have been denied because this research is not *done on* the community, but rather co-created with the community to meet their requirements.[148] PAR is common throughout the humanities, but it is a methodology typically used by researchers in the

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[143] *Ibid.*

[144] *Ibid.*, 254.

[145] Donald Polkinghorne, "Phenomenological research methods," in *Existential-phenomenological perspectives in psychology*, edited by R. Valle and S. Halling (Boston: Springer, 1989), 46.

[146] John Creswell, William Hanson, Vicki Clark-Plano, and Alejandro Morales, "Qualitative research designs…, 253-254.

[147] *Ibid.*, 255 and 258.

[148] *Ibid.*, 255-256.

critical paradigm because of its suitability to address social justice research topics and its view of the community as co-creators rather than research participants.[149]

In PAR the unit of analysis is almost always at the community level; however, the definition of community will vary depending on the research project.[150] PAR methodology employs flexible data collection methods as long as they are practical, collaborative and emancipatory.[151] Flexible data collection is essential as the community members who co-create the research project are not trained researchers. As PAR is co-created no clear data analysis process exists and ideally, data is also co-analyzed.[152] Data analysis tends to be qualitative, although this is not always the case, due to the fact that it is often more accessible to community members than quantitative analysis.[153]

PAR has very little structure and the structure is unknown until the community and researcher begin the project.[154] PAR is a very unique methodology and it best allows researchers to emancipate their co-creators and develop action plans from a community perspective.[155]

DISCUSSION

The five qualitative methodologies described in this chapter differ in what they aim to accomplish as the product of the research project and the desired product should be carefully considered before a methodology is selected. Table 3.2 provides an overview of the products of the five methodologies described in this chapter.

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[149] *Ibid*., 241 and 256.
[150] *Ibid*., 241.
[151] *Ibid*., 257.
[152] *Ibid*., 257-258.
[153] *Ibid*., 258.
[154] *Ibid*., 242.
[155] *Ibid*., 257.

Table 3.2 -- Overview of the Primary Qualitative Methodology Research Outputs

Narrative Research	Case Study Research	Grounded Theory Research	Phenomenology	Participant Action Research
In-depth understanding of an individual's story	In-depth study of a case or cases in a bounded system	Emergence of a theory from participant data	Description of the essence of a phenomenon	Community action plan

Considering that the aim of this directed study is to determine the best way to study cohesion in the Information Age, a discussion on the suitability of each of the five qualitative methodologies described above follows. The three least suitable are discussed first and eliminated, while the remaining contenders are discussed in more detail.

Narrative research is viable option, but it is not preferred because of its extremely limited generalizability. Narrative research would provide an in-depth understanding of combat bonding in the Information Age from a select few individuals, but it would not accurately portray the reality in the CA or the Princess Patricia's Canadian Light Infantry because the sample size is too small.

Phenomenology is emergent and holistic, but its focus on lived experience and its avoidance of abstraction in theory development are not the most suitable from a generalizable CAF usability perspective. Ultimately, the product of the research on cohesion in the Information Age needs to be capable of informing commanders regarding decision-making and policy change to improve soldier wellness sustainably over the long term. As phenomenology focuses on describing lived experience it may be limited for the future study of cohesion in the Information Age.

PAR would be an excellent option if the community of soldiers involved in the research were available for an extensive commitment. Due to the co-created nature of

PAR, there is an increased demand on the research community to be involved with the project. Given the current tempo demands on CAF soldiers, a PAR approach is likely not feasible.

This leaves case study research and grounded theory, the two most common qualitative methodologies in the social sciences as good methodological contenders, which is not surprising given their versatility and the fact that they are very well established methodologies. The remainder of Chapter 3 examines case study research and grounded theory in the context of cohesion in the Information Age.

CASE STUDY RESEARCH

In the overview, the type of problem best suited to case study research, the disciplinary background, the units of analysis, data collection methods, data analysis strategies and the degree of structure were briefly discussed. This section takes a closer look at the case study research process and assesses its suitability for researching cohesion in the Information Age.

Author of *Case Study Research and Applications*, Robert Yin describes the method as "a linear, but iterative process."[156] In his methods book he uses Figure 3.1 to show the process schematically. The research process is plan, design, prepare, collect, analyze, share – noting that the connections between prepare and collect, and collect and analyze are bi-directional, that design is revisited in both the collection and analysis phases and that sharing also occurs during the preparation phase of the case study research process.[157]

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[156] Robert Yin, *Case study research…*, 1.
[157] *Ibid.*
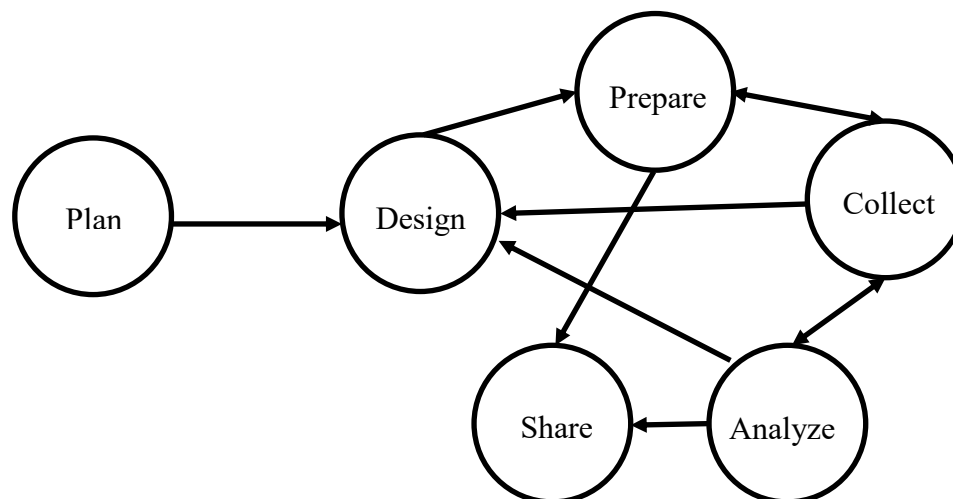
Figure 3.1 -- Case Study Research Process

Source: Yin, *Case study research and applications: Design and methods*, 1.

Step 1: Plan

Case studies are best suited to *how* and *why* questions when a researcher is looking to explain a contemporary circumstance, especially if the answer to the how or why question requires in-depth description.[158] For the study of cohesion in the Information Age, the research question(s) could be structured around how cohesive groups are formed in the Information Age. This line of questioning meets the criteria established by Yin regarding methodological suitability.

Yin further elaborates on two criteria for method selection: control over behavioural events and focus on contemporary events.[159] The purpose of the study of cohesion in the Information Age is to understand contemporary events, as the history of this topic of study is well known and well documented. Control over behavioural events is not desired because the study first seeks to understand what is rather than what could

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[158] *Ibid.*, 4.
[159] *Ibid.*, 13.

be if an exogenous stimulus is applied by a researcher. In this case, the method would be used to "*explain* the presumed causal links in real-world interventions that are too complex for survey or experimental methods."[160]

Step 2: Design

In case study research there are five components of research design: defining the case study's questions, its propositions (if any), its cases, the logic of linking the data to the propositions and the criteria that will be used for interpreting the findings of the study.[161] A potential design for the research project on cohesion in the Information Age could look like Table 3.3.

Table 3.3 -- Cohesion in the Information Age Using Case Study Design

Component of Research Design	Example for Cohesion in the Information Age

Research Questions	• RQ: How do soldiers develop cohesive relationships in the Information Age?
	• Examples of possible supporting RQs:
	  o How much of a soldier's work day is spent cyberloafing?
	  o How is social media used by soldiers?
	    ▪ Work/personal lives
	  o Do soldiers trust each other? Their leaders?
	  o Does posting location matter?
	  o Does the nature of the soldier's employment matter?

Propositions	• Soldiers spend work time on social media • The work time soldiers spend on social media is not primarily spent interacting with other soldiers in their primary group • Soldiers are less cohesive within their primary groups today than they were prior to the Digital Revolution • Computer mediated communications (CMCs) are regularly used in the work place

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[160] *Ibid.*, 18.
[161] *Ibid.*, 27.

Component of Research Design	Example for Cohesion in the Information Age
	• CMCs are lean compared to richer communications, such as face-to-face, and result in reduced ability to share norms and values • Shilo-based soldiers and Edmonton-based soldiers will report different experiences based on the geographical isolation of CFB Shilo • Soldiers from light and mechanized battalions will report different experiences from soldiers in light battalions based on the nature of the tactical tasks they perform and their tactical order of battle (ORBAT)

Case(s):
• Defining
• Bounding
	• The Princess Patricia's Canadian Light Infantry as an organization (more concrete)[162]
	• Three regular force battalions
	   o 1 PPCLI (mechanized)
	   o 2 PPCLI (mechanized)
	   o 3 PPCLI (light)
	• Two geographical locations
	   o Edmonton (1 and 3 PPCLI)
	   o Shilo (2 PPCLI)
	• Two options[163]
	   o Embedded single-case design with multiple units of analysis (sampling logic)
	   o Multiple-case design with single unit of analysis (replication logic)

Logic of Linking Data to Propositions	• Quantitative analytic component
	   o Statistical analysis of primary and secondary data
	• Qualitative analytic component
	   o Explanation building
	   o Logic models

Criteria Used to Interpret Findings	• Quantitative Analytic Component
	   o Statistical analysis
	• Qualitative Analytic Component
	   o Thematic analysis
	   o Theory evaluation and development
	• Theoretical Explanation
	   o Hybrid model of military cohesion
	   o Micro-Social Fragmentation
	   o Empathy Gap
	   o Media Richness Theory

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[162] *Ibid.*, 32.
[163] *Ibid.*, 48 and 55.

Component of Research Design	Example for Cohesion in the Information Age
	• Rival Theoretical Explanations o Networked Individualism

The role of rival theoretical explanations in case study research design is important for the subject of cohesion in the Information Age because there are two major theories in the field of ICTs: they increase human connection, or they increase human isolation, as described in Chapter 2. Both sides acknowledge that the TR is irreversible; however, they identify differing strategies on how humanity should proceed in this new environment to achieve – in CAIPS terminology – acceptable levels of social and emotional fitness.

Case study methodology is very capable of addressing rival theories and making inferences between theory and practice.[164] In the case of research where there are two opposing theoretical explanations, the propositions can be designed to ensure that data is collected to address both the theory and rival theory in the analysis and interpretation phases.[165]

Step 3: Prepare

When preparing for case study research, protocols are established, ethics reviews and approvals for research on human participants are completed if required, candidates are selected and a pilot case study is performed.[166] In the first steps, case study research design is similar to all other methods; however, the last two steps are unique and are explored further in the following sections.

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[164] Robert Yin, *Case study research…*, 39.
[165] *Ibid.*
[166] *Ibid.*, 80.

Internal to the CAF and CA, many cases are possible, but given participant diversity, access and locality, units in 3rd Canadian Division are preferable because they have operational diversity and can be researched without extensive travel.[167] Within 3rd Canadian Division there are six combat arms units which would produce viable cases: the three PPCLI battalions, the Lord Strathcona's Horse Armoured Regiment, the 1st Combat Engineer Regiment and the 1st Royal Canadian Horse Artillery Regiment. Given that none of these units have been researched, a good starting point would be the three most comparable: the infantry battalions. Future studies could include the remaining three units as additional cases or units of analysis. The pilot case is an essential first step because it supports protocol development.[168] If case study research is done on the PPCLI Regiment, an Edmonton based organization could be conveniently selected as it is accessible and would meet the pilot case requirement.

Step 4: Collect

Case study research is good at considering multiple different types of evidence. Generally, case study evidence falls into six categories: documents, archival records, interviews, direct observations, participant-observation, and physical artifacts.[169] When considering evidence in case study research, it is important to ensure that there is confirmatory evidence from at least two or more different sources and that evidence is collected to investigate both the theory of interest and rival theories.[170] Given the resources required for both direct and participant observation, it is likely that the main

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[167] The author is posted to 1 Canadian Mechanized Brigade Group (CMBG) in July of 2019 and can reduce research costs by beginning with a project in 3rd Canadian Division. If successful, post-doctoral research that is more expansive will be planned.
[168] *Ibid.*, 107.
[169] *Ibid.*, 110.
[170] *Ibid.*, 112.

sources of evidence for case study research done on infantry battalions would be documents, archival records, interviews (including survey interviews) and physical artifacts. With four options for evidence collection, data triangulation is possible.

Step 5: Analyze

There is a bias in the CAF and CA towards favouring quantitative evidence.[171] Given this bias, any project outcomes that aim to create change in CA or inform decision making will be considered more credible and reliable if there is a quantitative component in data collection and analysis. There is also a model or theoretical bias in the CA.[172] Any qualitative analysis that can support model validation or development is generally preferred in the CA because models are familiar communicative methods to soldiers and leaders.

Given that there are multiple sources of evidence in case study research, explanation building and logic models, as described by Yin, are the two most relevant analytic methods for CA research due to the biases described above.[173] Explanation building analyzes all data sources in a series of iterations and relates the information back to the research propositions.[174] The research propositions are revised until they converge with the data in order to answer the research question(s).[175] Explanation building and

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[171] The author has seen this bias on several occasions. The operational planning process uses measures of performance and effectiveness to judge operational success and this information is almost always communicated quantitatively, making commanders used to receiving information quantitatively.

[172] This bias comes from the fact that briefing notes are used to communicate complicated ideas. Since there is a two page limit, visual models are often used to communicate and commanders and staffs are used to seeing and interpreting them.

[173] Robert Yin, *Case study research…*, 179 and 186.

[174] *Ibid.*, 180.

[175] *Ibid.*, 180.

logic models can work well together as analytical techniques as long as the explanations created can be linked causally to support the creation of a logic model.[176]

Step 6: Share

In Yin's model, research design is shared during the preparation phase and then the results are shared after the final analysis.[177] Yin presents six options for compositional structure, which are dependent on the method of analysis selected. Given that the project of future interest aims to understand how contemporary cohesion is developed, the theory-building method of reporting would likely be the most effective, assuming that the data collection and analysis support this type of reporting.[178]

Yin's model does not account for co-creation or input from participants during any of the phases, with the exception of the pilot study in the design phase. Soldier and leader participation in knowledge creation is important in this type of research to ensure that the results are seen as reliable and credible. For this reason participant interaction and feedback would ideally be incorporated throughout the research process in this model if it is selected.[179]

Discussion

The steps in case study research are possible in a project designed to study cohesion in the Information Age; therefore, case study research would work as a methodology. Case study research has the advantage of being capable of collecting and analyzing diverse sources of evidence and in research projects where multiple cases or

[176] *Ibid.*, 186.
[177] *Ibid.*, 218.
[178] *Ibid.*, 231.
[179] Brian Belcher, Katherine Rasmussen, Matthew Kemshaw, and Deborah Zornes, "Defining and assessing research quality in a transdisciplinary context," *Research Evaluation 25*, no. 1 (2016): 9.

units of analysis are possible. In this manner, case study methodology gives an additional measure of internal validity. Additionally, given that each of the battalions in the PPCLI can be included in the study, it offers a good measure of external validity for the Regiment as each of the units is considered in the analysis. This methodology has the disadvantage of being bounded by the research protocols and being less flexible than other methodologies to deal with emergence. It also has the limitation of being context dependent as it looks specifically at defined cases.

GROUNDED THEORY

The second remaining methodology is grounded theory. This section is dedicated to expanding on the methodology so that it can be compared to case study research in terms of suitability in a future project that studies cohesion in the Information Age. As mentioned in the overview, there are two main types of grounded theory: systematic and constructivist. The constructivist approach advanced by Charmaz is capable of producing theory based on data collected through semi-structured interviews; however, it is not as well suited for multiple sources of evidence when compared with the systematic approach advanced by Glaser and Strauss. Contemporary grounded theory is associated with qualitative methodology, but in *The Discovery of Grounded Theory*, Glaser and Strauss emphasize the flexible use of data and demonstrate how both qualitative and quantitative data can be used in grounded theory.[180]

The principal difference between Glaser and Strauss' systematic grounded theory and Charmaz's constructivist approach is that Charmaz espouses a pragmatic and relativist epistemology, seeing the researcher and participants as *co-constructors* of the

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[180] Barney Glaser and Anselm Strauss, *Discovery of grounded theory…*, 161.

grounded theory, rather than an emergence of the theory from the data. In this approach, theories are not *discovered* as they are in the original version of the methodology, but rather *co-created* during the research process.[181]

In order to compare grounded theory with case study research, the same steps in the research process will be used in this discussion. Note that the steps interact differently in grounded theory. Figure 3.2 shows an author-approximation of the grounded theory research process using Yin's terminology for ease of comparison.
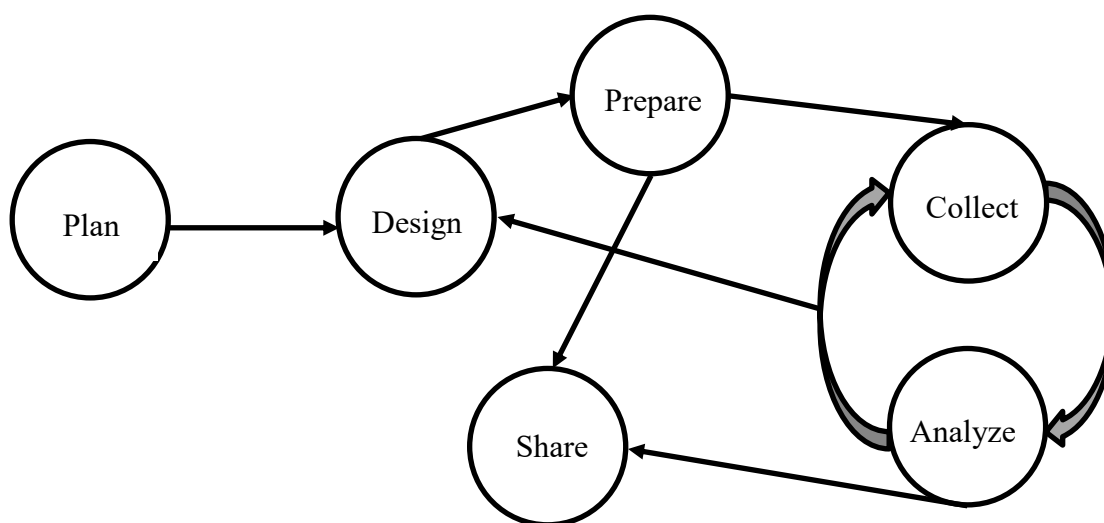
Figure 3.2 -- Grounded Theory Research Process

Step 1: Plan

Grounded theory was conceived as a methodology that produces theory from data. In order to use grounded theory, the desired research product must be the verification or generation of a theory.[182] In this way, grounded theory is similar to case study research if theory-building is the outcome of the research. Recall that for the study of cohesion in

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[181] Anthony Bryant and Kathy Charmaz, "Grounded theory in historical perspective: An epistemological account," in *The SAGE Handbook of Grounded Theory*, edited by A. Bryant and K. Charmaz (Thousand Oaks: Sage Publications, 2007), 49.
[182] Barney Glaser and Anselm Strauss, *Discovery of grounded theory…*, 18.

the Information Age, the research question could be something similar to: how do soldiers develop cohesive relationships in the Information Age? In this case a grounded theory approach could answer this question because it is well suited to describe a "well codified set of propositions or [a] running theoretical discussion."[183]

Step 2: Design

The design of a grounded theory project is very different from case study research. In grounded theory the literature review is ignored initially to ensure that the emergence of themes and categories are not influenced by the existing literature.[184] In the design phase, the most important consideration is the sampling strategy. In grounded theory, "theoretical sampling is the process of data collection for generating theory, whereby the analyst jointly collects, codes, and analyzes his data and decides what to collect next and where to find them, in order to develop his theory as it emerges."[185] Other sampling strategies are possible, but they decrease the internal and external validity of grounded theory research.

The criteria established by Glaser and Strauss to design the theoretical sample are sample purpose and sample relevance.[186] In the design phase, the researcher must choose units of study that will further generate the emergence of theory.[187] It is important to note that it is just a starting point as the subsequent units of study will be selected as the project advances according to emergence in the data to meet the requirements of theory development.[188]

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[183] *Ibid.*, 31.
[184] *Ibid.*, 37.
[185] *Ibid.*, 45.
[186] *Ibid.*, 48.
[187] *Ibid.*, 49.
[188] *Ibid.*

The last point to note in the design step is that the number of units of study are not known in advance in grounded theory. Unlike a case study, in grounded theory the research process continues until theoretical saturation is met. In this case, "*[s]aturation means that no additional data are being found whereby the sociologist can develop properties of the category.*"[189] In order to complete a grounded theory research proposal, the literature can provide a reference for predicting rough numbers of units of study. A potential design for the research project on cohesion in the Information Age using grounded theory could look like Table 3.4.

Table 3.4 -- Cohesion in the Information Age Using Grounded Theory Design

Component of Research Design	Example for Combat Bonds in the Information Age
Research Questions	- RQ: How do soldiers develop cohesive relationships in the Information Age? - Examples of possible supporting RQs - How much of a soldier's work day is spent cyberloafing? - How is social media used by soldiers? - Work/personal lives - Do soldiers trust each other? Their leaders? - Does posting location matter? - Does the nature of the soldier's employment matter?
Sampling Strategy - Convenience - Theoretical	- The Princess Patricia's Canadian Light Infantry as a sampling pool - Three regular force battalions 1 PPCLI (mechanized) 2 PPCLI (mechanized) 3 PPCLI (light) - Two geographical locations - Edmonton (1 and 3 PPCLI) - Shilo (2 PPCLI) - Convenience sampling conducted in Edmonton from both 1 and 3 PPCLI in order to refine the semi-structure interview questions and data collection procedures

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[189] *Ibid.*, 61.

Component of Research Design	Example for Combat Bonds in the Information Age
	• Theoretical sampling conducted in 1, 2, and 3 PPCLI • Collect/code/analyze in the constant comparative method of analysis[190]
Units of Study and Saturation	• Units of study are not fixed • Based on previous US military research using grounded theory plan for minimum of 20 semi-structure interviews[191] • Interviews continue until saturation is reached
Literature Review	• Literature review is conducted after data is analyzed and serves a comparative function against the model produced from the data • Participants are invited to participate in analysis and theory building to ensure findings are representative

Step 3: Prepare

Grounded theory shares the need to develop a research protocol and gain ethics approval with case study research, but it differs because there is no pilot study and the final screening of cases is replaced with the selection of initial units of study from the theoretical sampling strategy. If grounded theory were the selected methodology, a couple of initial units of study would be selected in both 1 and 3 PPCLI as a convenience sample in order to refine the semi-structured interview guide and the data collection procedures. Additionally, the convenience sample is initially very useful because it allows for an overview of the research process and can assist to establish the trajectory and bounds of the project.[192] These initial interviews would serve as the basis for subsequent theoretical sampling in 1, 2, and 3 PPCLI.

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[190] Barney Glaser and Anselm Strauss, *Discovery of grounded theory…*, 101.

[191] Ramon Hinojosa and Melanie Sberna Hinojosa, "Using military friendships to optimize post-deployment reintegration for male Operation Iraqi Freedom/Operation Enduring Freedom veterans," *Journal of Rehabilitation Research & Development 48*, no. 10 (2011): 1147.

[192] Janice Morse, "Sampling in Grounded Theory," in *The SAGE Handbook of Grounded Theory*, edited by A. Bryant and K. Charmaz (Thousand Oaks: Sage Publications, 2007), 234.

Step 4/5: Collect/Analyze

In grounded theory, theoretical sampling, data collection and data analysis all take place concurrently in what Glaser and Strauss call the *constant comparative method of analysis*.[193] The units of analysis are selected through theoretical sampling, data is collected, and analysis via coding begins immediately.[194] In this approach, coded data are sorted into emerging categories and the categories are continuously compared against the data until theoretical properties start to emerge.[195] As the theory emerges, theoretical sampling continues to direct new data collection to fully integrate theory development.[196]

In Glaser and Strauss' model of grounded theory, unit of analysis selection is flexible. Most grounded theory projects use one-on-one semi-structured interviews as the main source of data and plan for a minimum of 20 interviews that are approximately 45 to 60 minutes in length.[197] If quantitative data is used, it is typically used at the end of the qualitative analysis to elaborate on the theory and the methodology works with both primary and secondary quantitative data.[198] Gaining access to a minimum of twenty research participants in the PPCLI is manageable; however, soldier face-to-face availability can be difficult to determine with large lead times. If this method were selected, alternative collection methods should be considered given the deployed nature of the regiment on domestic and overseas operations.

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[193] Barney Glaser and Anselm Strauss, *Discovery of grounded theory…*, 101.
[194] *Ibid*.
[195] *Ibid*., 106.
[196] *Ibid*., 109.
[197] Ramon Hinojosa and Melanie Sberna Hinojosa, "Using military friendships to optimize post-deployment reintegration…, 1147.
[198] Barney Glaser and Anselm Strauss, *Discovery of grounded theory…*, 187.

Step 6: Share

Unlike Yin's guidance on results sharing, Glaser and Strauss provide no such guidance, but focus on credibility of the results produced instead.[199] They recommend thick descriptions, thorough explanations and multiple comparison groups to enhance the credibility of the grounded theory which would be achieved by conducting interviews in 1, 2, and 3 PPCLI.[200]

Like case study research, the grounded theory research process described by Glaser and Strauss does not describe co-creation or input from research participants. This has been addressed by later scholars who advise reviewing collected data with participants after transcription and who describe an additional step of validation interviews by discriminant sampling as a means to ensure an extra measure of validity and to engage participants in the verification process.[201]

Discussion

The steps in grounded theory research are also possible in a project designed to study cohesion in the Information Age; consequently, grounded theory would also work as a research methodology. Grounded theory has the advantage of producing theory that is grounded in the data and its methods are well established in the literature. As a research methodology, it has good internal validity as long as the theoretical sampling is done in accordance with established procedures and theoretical saturation is reached through the data collection and analysis process. Grounded theory may have limited external validity because it can only be grounded in the data it collects and may not be

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[199] *Ibid*., 230.
[200] *Ibid*.
[201] Janice Morse, "Sampling in Grounded Theory," …, 240-241; Nick Emmel, *Sampling and choosing cases in qualitative research: A realist approach* (Thousand Oaks: Sage Publications, 2013), 24.

transferable to a larger community. In the study of cohesion in the Information Age,

interviews would need to be conducted at each of the PPCLI infantry battalions which

has the potential to be a resource intensive venture.

CONCLUSION

Both case study and grounded theory methodologies could be used to study

cohesion in the Information Age in a future research project. Table 3.5 is a comparative

summary of the strengths and weaknesses of case study and grounded theory

methodologies.

Table 3.5 -- Strengths and Weaknesses of Case Study vs Grounded Theory Methods

Comparator	Case Study	Grounded Theory
Requirement for theoretical basis prior to the beginning of the research project	Neutral	Advantage
Resource intensive from the perspective of participant time and engagement	Advantage	Disadvantage
Ability to process diverse types of evidence	Advantage	Disadvantage
Allows for emergence throughout the research process	Neutral	Advantage
Includes participants in research process	Neutral	Neutral
Research process is familiar to and accepted by the CAF	Advantage	Neutral
Research data collection costs	Neutral	Neutral

Given the advantages and disadvantages of both methods, case study research is

better suited to the study of cohesion in the Information Age because many supporting

theories already exist, this method is better suited to considering diverse types of

evidence, and context is relevant in the study of cohesion. Additionally, if there are any

problems sourcing research participants or getting access to participants, case study

research can be done with limited or without participant access, which would be very

difficult, if not impossible, in grounded theory. Finally, although not the method

selected, grounded theory can be used in data analysis within a case study.[202] Following the literature review and development of the research design, theoretical gaps may be apparent. Grounded theory is designed to verify and create theory, so it can be used to fill gaps or verify existing theories as part of the analysis phase of case study research.

Based on the conclusions of this chanter, Chapter 4 considers two successful case studies: the South Atlantic Conflict in the Falklands and Operation *Iraqi Freedom* in Iraq. These cases provide examples of strengths and weaknesses of the method in empirical applications, allowing for recommendations for future research to be captured in the concluding chapter of this study.

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[202] Robert Yin, *Case study research and applications…*, 168-169.

CHAPTER 4: THE CASE STUDY METHOD, TWO EXAMPLES

Military cohesion is a special bonding that implies that men are willing to die for the preservation of the group, the code of honour of the group, or the valor and honor of the country.

-Nora Stewart, 1988, *South Atlantic Conflict Case Study*

Soldiers fight for each other, but today's soldiers are also sophisticated enough to grasp the moral concepts of war.

-Leonard Wong et al., 2003, *Operation Iraqi Freedom Case Study*

INTRODUCTORY COMMENTS

This chapter considers two examples of research using the case study method to study cohesion in combat: the South Atlantic Conflict (a.k.a. the Falklands War, 1982) and Operation *Iraqi Freedom* (a.k.a. the Iraq War, 2003). A methodological literature review using Yin's research process as the framework for comparative purposes considers these two drastically different cases.[203] The suitability of case study research is highlighted for use in a future project that studies cohesion in the Information Age.

This literature review further enables a discussion of the strengths and weaknesses of the case study research process from the perspective of two recent conflicts. Both Stewart and Wong et al. found that social and task cohesion contributed to holistic cohesion in units, further demonstrating the theoretical principles in Chapter 2.

CASE STUDY 1: SOUTH ATLANTIC CONFLICT (2 APRIL TO 14 JUNE 1982)

The first example considered in this methodological review is the *South Atlantic conflict of 1982: A case study in military cohesion* conduct by Stewart for the US Army's Research Institute for the Behavioural and Social Sciences. The purpose of the case study was to examine the strengths and weaknesses in cohesion and effectiveness in combat of the Argentinian and British land forces during the conflict. This information

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[203] Robert's Yin's current publication is in the 6th edition, the original version of the textbook was published in 1984 and is credited with popularizing the mode of inquiry.

was then used by Stewart to develop an analytical framework for the combat effectiveness of a nation given the cohesiveness of their land forces.[204]

She found that societal, organizational, vertical and horizontal cohesion were force multipliers in the conflict and that highly cohesive units on both sides of the conflict were better able to withstand the privations of war than non-cohesive units.[205] The following paragraphs describe Stewart's research using Yin's case study framework.

Step 1: Plan

Stewart conducted the case study five years after the end of the war and published her report in 1988. She looked extensively at both side of the conflict to gain an in-depth perspective of both the British and Argentinian perspectives.[206] Being American and working for an US institution, her research brings an element of objectivity given that the US was *officially* neutral during the South Atlantic conflict.

Stewart took an interdisciplinary approach to the case study integrating the disciplines of military history, psychiatry, sociology, and secondary data from military analysts.[207] She selected a case study methodology because it supported a contemporary study of the reactions of soldiers at war from a human factors perspective on both sides of the conflict.[208]

Step 2: Design

Stewart developed a theoretical model for the case study based on an extensive literature review of human factors including cohesion, morale, esprit and combat

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[204] Nora Stewart, *South Atlantic conflict of 1982: A case study in military cohesion*, No. ARI-RR-1469, (Alexandria: Army Research Institute for the Behavioural and Social Sciences, 1988), 2.
[205] *Ibid.*, xiii.
[206] *Ibid.*, 2.
[207] *Ibid.*, 118.
[208] *Ibid.*

effectiveness.[209] She found that a model considering factors that contribute to societal, organizational, vertical and horizontal bonding was most appropriate to explain cohesion, and thus combat effectiveness from a human factors perspective in her case study.[210] Stewart's model is illustrated below in Figure 4.1. Her model shares many of the same elements with Siebold's model of cohesion presented in Figure 2.1. Both models share horizontal, vertical and organizational cohesion and both models consider the task and social elements of cohesion.
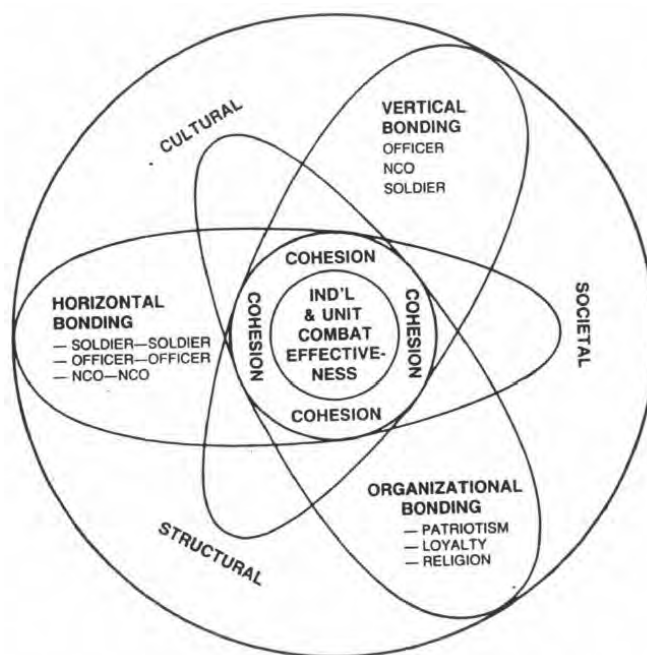
Figure 4.1 -- Stewart's Model of Military Cohesion

Source: Stewart, *South Atlantic conflict of 1982: A case study in military cohesion,* 29.

Stewart's case study was conducted as a single case with two units of analysis: one unit based on the experiences of the Argentinian land forces and the second unit of analysis based on the experiences of the British land forces including the Royal Marines.

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[209] *Ibid.*, x.
[210] *Ibid.*

Her ability to consider both sides of the conflict as units of analysis is a strength of the case study method.

Step 3: Prepare

Stewart developed her research protocols in collaboration with several US federal agencies, the Army Research Office in London and the Office of the Military Attaché to the Republic of Argentina.[211] She makes no comment about how participants were selected or how she obtained participant informed consent, but she notes that participants were identified by and that consent was obtained through the British and Argentinian governments.[212] Her research protocols were based on semi-structured interviews; however, she also considered documentary evidence and archival records for both of her units of analysis.[213] She does not mention whether or not a pilot case study was conducted to inform her research protocols.

Step 4: Collect

The primary method of data collection in this study was through semi-structured interviews with research participants, but as mentioned previously, documentary evidence and archival records were also collected. Stewart does not provide information on how her data base was assembled and stored or how she maintained her chain of evidence during their study. At this point in her study, she does highlight the limitations posed by conducting the research five years after the end of the conflict. She mentions that recollections and points of view change with time and that the five intervening years had given both the Argentinians and the British time to reflect, talk to each other, read

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[211] *Ibid*., 118.
[212] *Ibid*.
[213] *Ibid*., Annex A.

each other's books and newspaper articles and that this resulted in both sides repeating each other's words inadvertently.[214] Essentially, the perspectives of both sides had come to include reflections from the media of the conflict rather than just their own experiences, a marked disadvantage of the five year time delay in data collection.

Step 5: Analyze

Stewart analyzed her data through the model presented in Figure 4.1, addressing societal factors, organizational bonding, horizontal bonding and vertical bonding. She found that Britain's social position regarding the necessity of the war as a means to defend their sovereignty combined with their military experience and continuation training prepared British forces for a quick response and good command of battlefield tactics.[215] On the other hand, the Argentinians, although convinced of their historical and political justification for the conflict, lacked the combat experience, skills and equipment to effectively meet the British in combat.[216] She found that both parties to the conflict were patriotic and loyal, exhibiting excellent organizational bonding but that due to their lack of combat experience, the Argentinians struggled to integrate their patriotism and loyalty into cohesion at the unit level.[217] Regarding horizontal bonding, Stewart found that overall the British combined arms team structure created trust, respect and friendship, but that at times, their teamwork was lacking. For the Argentinian officers she found a high degree of cohesion but for their conscripts there was virtually none.[218] Finally, the British forces had fostered an open organizational climate where all members

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[214] *Ibid.*, 122.
[215] *Ibid.*, xi.
[216] *Ibid.*, xii.
[217] *Ibid.*
[218] *Ibid.*

in the chain of command, from the Regimental Commander down to the lowest private, shared in hardships. The shared hardship created highly cohesive units with members caring deeply for each other.[219] This was in contrast to the Argentinian forces where rigid relationships existed between the officers and the soldiers and there was very little cohesion or bonding between the ranks.[220]

The South Atlantic conflict case study does not examine rival theories and does not consider rival explanations in the analysis, which is a weakness in case study method.

Step 6: Share

Stewart's audience was primarily US Army academics, but the study was also aimed at serving leaders in the US Army and American allied militaries. The study is 160 pages long and is difficult to read in sections due to the intermixing of theory and thick description throughout the analysis. She wrote a book based on her study in 1991 to make the content more accessible.[221] Finally, Stewart's study presented more than enough evidence to convince the reader of the logic of her theoretical model and the findings of her case study.

South Atlantic Conflict Case Study Quality Evaluation and Summary

Yin considers four tests for quality in case study research design: construct validity, internal validity, external validity and reliability.[222] Table 4.1 reviews the quality tests and tactics employed in during the design of the South Atlantic conflict case study. Overall, the quality of this case study is very good.

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[219] *Ibid.*, xiii.
[220] *Ibid.*
[221] Nora Stewart, *Mates and muchachos: Unit cohesion in the Falklands-Malvinas War* (Washington: Potomac Books Incorporated, 1991).
[222] Robert Yin, *Case study research and applications…*, 42.

Table 4.1 -- South Atlantic Conflict Case Study Quality Tests and Design Tactics

Quality Tests	Design Tactics	South Atlantic Conflict Case Study
Construct Validity	Considers multiple sources of evidence	-Interview of enlisted personnel and officers of the Argentine Army (33 interviews)[223] - Interview of enlisted personnel and officers of the British Army and Royal Marines (30 interviews)[224] -In both Argentina and the United Kingdom secondary data was collected from: • Military researchers; • Psychiatrists; • Historians; and • 2ndary data from military analysts
	Have key informants review draft of report	-Information not provided by researcher
Internal Validity	Do pattern matching	-Researcher looks for patterns between Argentinian and British forces and compares and contrasts throughout her analysis
	Do explanation building	-Thematic emergence: • Motivated by societal factors; • Cohesion increases with organizational bonding; • Cohesion increases with horizontal bonding; and • Cohesion increases with vertical bonding
	Address rival explanations	-This research project does not address rival explanations directly
External Validity	Use theory in single-case studies	-Literature considering human factors including cohesion, morale, esprit and combat effectiveness informed the case -Stewart created a model that considered factors that contribute to societal, organizational, vertical and horizontal bonding to explain cohesion, and thus combat effectiveness in her case study
Reliability	Use case study protocol	-No pilot case -Otherwise, established case study protocols as described by Yin were followed
	Develop case study database	-Researcher and research team developed an extensive data base of multiple sources of

[223] Nora Stewart, *South Atlantic conflict of 1982…,* xi.
[224] *Ibid*.

Quality Tests	Design Tactics	South Atlantic Conflict Case Study
		evidence to inform the case study and subsequent work based on the case study
	Maintain chain of evidence	-Information not provided by researcher

Stewart's study of cohesion during the South Atlantic conflict is a very detailed, interdisciplinary example of case study research that considers two units of analysis and analyzes the results through a highly developed theoretical lens. Her research uses thick description to build a multi-faceted explanation of cohesion that was and can still be used for military professional development. The disadvantages of her work are that rival theories are not addressed and that her research was conducted five years after the event, presenting challenges for data collection and analysis. Finally, her report is difficult to read and may be inaccessible to non-academic audiences.

Rather than being presented as a US Army research report, the second case study was presented as an abridged monograph. The second case study was selected for this methodological review because although it is similar in structure to the first, it has different advantages and weaknesses. It is also examine through Yin's design lens.

CASE STUDY 2: OPERATION IRAQI FREEDOM (20 MARCH TO 1 MAY 2003)

The second example considered in this methodological review is the case study *Why they fight: Combat motivation in the Iraq War* conducted by Wong et al. of the Strategic Studies Institute (SSI). Their monograph was researched during Operation *Iraqi Freedom* with the aim of examining the primary motivation of soldiers in combat in light of US DADT policy related studies that emerged at the end of the 1990s and early

2000s. These studies questioned the findings of earlier research on the effects of cohesion on unit performance.[225]

Wong and his team found that cohesion remains a primary motivator in combat, but that today's volunteer soldiers are sophisticated enough to understand the moral concepts of war, an advance the researchers attribute to the US Army's transformation to a professional force.[226] The following paragraphs describe Wong et al.'s research using Yin's case study framework in order to examine strengths and weaknesses of the study.

Step 1: Plan

Wong et al. conducted their data collection shortly before and shortly after the cessation of major combat operations during Operation *Iraqi Freedom*.[227] They looked at Iraqi prisoner of war (PW) and US soldier perspectives from both sides of the war, and they considered the US embedded media's perspective in order to get a third party perspective on cohesion with a measure, although not perfect, of objectivity.[228]

Wong et al. are a collection of full time military academics from the SSI and other established US military institutions.[229] They adopted a traditional sociological approach to the case study basing data collection primarily on interviews with thick description; however, they also include secondary data in their analysis.[230] There is no evidence in their monograph that an interdisciplinary approach to the study was taken. From the report, it appears that the authors preferred to stay within their discipline for this case study.

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[225] Leonard Wong, Thomas Kolditz, Raymond Millen, and Terrence Potter, *Why they fight: combat motivation in the Iraq war…,* vii.
[226] *Ibid.*
[227] *Ibid.*, 5.
[228] *Ibid.*, 6.
[229] *Ibid.*, v-vi.
[230] *Ibid.*, 10-19.

Step 2: Design

Wong et al. developed the theoretical basis for their study on classic cohesion

literature from WWII, the Korean War and the Vietnam War.[231] Given that the aim of

their study was to examine the role of cohesion in combat motivation in light of political

criticisms, they also reviewed the literature that supported the counterargument.[232] Table

4.2 summarizes the sources consulted by Wong et al. and the important findings they

referenced in their literature review.

Table 4.2 -- Operation *Iraqi Freedom* Case Study Theoretical Considerations

Wong et al.'s Literature Review by Source and Author	Key Theoretical Findings Referenced by Wong et al.
Men Against Fire by S.L.A. Marshall (1947)	-Soldiers fought because they do not want to let their comrades down
Cohesion and disintegration in the Wehrmacht in World War II by Edward Shils and Morris Janowitz (1948)	-German soldiers in WWII fought because of interpersonal relationships as long as their basic needs were being met
The American Soldier by Samuel Stouffer (1949)	-Soldiers wanted to get the war over so that they could go home -Loyalty to fellow soldiers
Buddy Relations and Combat Performance by Roger Little (1964)	-Buddy relations were critical to basic survival during the Korean War
The American Enlisted Man: The Rank and File in Today's Military by Charles Moskos (1970)	-Primary group ties were important to combat effectiveness -Concern for personal safety, rather than altruism, may have been the primary motivator behind small unit cohesion
Crisis in Command: Mismanagement in the Army by Richard Gabriel and Paul Savage (1978)	-Replacements in the later stages of the war were correlated with a decline in cohesion
Homosexuals in the US Military: Open Integration and Combat Effectiveness by Elizabeth Kier (1998)	-Argues that cohesion is not critical to effectiveness, so DADT policy should be changed -Finds that task cohesion is more correlated to unit effectiveness than social cohesion

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[231] *Ibid.*, 1-4.
[232] *Ibid.*, 4-5.

This study considers one case with three units of analysis. The researchers attempted to get variability within their analysis by considering both parties to the conflict and including a third unit of analysis, the US embedded media, to have a measure of objectivity.[233] The first unit of analysis were the Iraqi PWs at Camp Bucca from the Iraqi Army and the Republican Guard.[234] The second unit of analysis were US soldiers from 3rd Infantry Division (ID), 101st Airborne Division (AB Div), and 1st Marine Division (MAR Div).[235] The third unit of analysis consisted of embedded American journalists who were included to provide objective feedback on the role of cohesion in combat.[236]

Step 3: Prepare

Wong et al. briefly describe their methodology, but they do not provide details of how their research protocols were developed, how they gained approval for research on human subjects or how the screened and selected their participants. Also, there is no indication that a pilot study was planned or conducted. Given that the SSI is the US Army's formal institute for security research and analysis, and that their research is guided by the US Army's strategic research priorities, it is logical to assume that research approvals were straightforward for this project.

Step 4: Collect

Data collection in this study was primarily conducted through semi-structured interviews with research participants; however, documentary evidence and secondary administrative data were also considered in the data collection phase. Wong et al. do not

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[233] *Ibid.*, 5.
[234] *Ibid.*
[235] *Ibid.*, 6.
[236] *Ibid.*

provide information on how their data base was assembled and stored or how they

maintained their chain of evidence during their study.

Step 5: Analyze

The researchers conducted a thematic analysis of the data and found that four

distinct themes emerged. The first theme was that the *Iraqi PW's were motivated by fear*:

the Iraqi PW's were motivated by coercion and fear of the Ba'ath Party, loyalty up and

down the chain of command was not present, and there was little or no cohesion in Iraqi

squads and platoons.[237] The second theme was that the *US soldiers were motivated for*

others: US soldiers were motivated to fight for their "buddies" and their crews, they

believed that their fellow soldiers were protecting them, and they believed that their

contributions contributed to success and help to protect their units from harm.[238] The

third theme was that the *embedded media formed cohesive bonds with the US soldiers by*

virtue of sharing in the combat experience: almost all of the embeds reported that they

formed emotional bonds with the soldiers they were embedded with, and that the bonds

created mutual trust which helped the journalists to maintain objectivity because they

trusted the soldiers and the soldiers trusted them to report fairly.[239] The final theme was

that *US soldiers were motivated by the caus*e: soldiers were motivated to liberate the Iraqi

people and bring freedom to Iraq, but ideological motivation didn't seem to emerge until

the outcomes of the war – an American victory – became apparent.[240]

In order to address the rival explanation that soldiers are motivated to fight

primarily by task cohesion, rather that social cohesion, Wong et al. began their interviews

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[237] *Ibid*., 7-8.
[238] *Ibid*., 10.
[239] *Ibid*., 14 and 16.
[240] *Ibid*., 19.

by asking questions about participant motivation for joining the military initially and by structuring the interview questions to prevent response bias towards social, over task cohesion or vice versa.[241] They found that cohesion was the primary motivator, but that soldiers were also motivated by the cause, acknowledging the counterargument and challenges that led the researchers to conduct the study.[242] The researchers explain that ideological awareness comes from three sources: US soldiers are well educated, they are well informed of pressing political issues and that they are all volunteers.[243]

Step 6: Share

Wong et al. prepared their monograph for a military and political audience. The writing style is accessible, with thick descriptions to illustrate their key findings. The monograph is 24 pages long, making it a short read that is more likely than a long document to reach their intended audience. The researchers present an adequate amount of evidence to convince the reader of their findings, but their monograph is short on methodological details which would make an experiment designed to replicate their findings difficult, if not impossible, from what they published.

Operation *Iraqi Freedom* Case Quality Evaluation and Summary

Yin's tests for quality in case study research design will be revisited for this second case to summarize methodological quality and enable the final discussion of the strengths and weaknesses of both of the methodological examples.[244] Table 4.3 reviews the quality tests and tactics employed in during the research process of the Operation *Iraqi Freedom* case study. Overall, the quality of this case study is also very good.

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[241] *Ibid.*, 9.
[242] *Ibid.*, 16.
[243] *Ibid.*, 21.
[244] Robert Yin, *Case study research…*, 42.

Table 4.3 -- Operation *Iraqi Freedom* Case Study Quality Tests and Design Tactics

Quality Tests	Design Tactics	South Atlantic Conflict Case Study
Construct Validity	Considers multiple sources of evidence	-Interviews with enlisted and officers who were prisoners of war from the Iraqi Army (30+ interviews)[245] - Interviews with three US divisions (3rd ID, 101st AB Div, and 1st MAR Div) in Bagdad and Al Hillah (40+ interviews)[246] -Interviews, tele-interviews and email interviews of embedded journalist (12+ interviews)[247]
	Have key informants review draft report	-Information not provided by researcher
Internal Validity	Do explanation building	-Thematic emergence: • Motivated by fear (Iraqi soldiers); • Motivated for others (American soldiers); • Embeds experienced bonding by sharing in hardships; and • Motivated by the cause (American soldiers)
	Address rival explanations	-Rival theoretical explanation was addressed through interview design and the consideration of secondary evidence
External Validity	Use theory in single-case studies	-Literature of the history of military cohesion in combat and effectiveness informed the case -Rival theories were introduced in the literature review for this case
Reliability	Use case study protocol	-It is unlikely that a pilot case was conducted and detailed methodological information was not provided by researchers -The majority of the case study protocols as described by Yin were followed
	Develop case study database	-Researcher and research team developed an extensive data base of multiple sources of evidence to inform the case study and subsequent work based on the case study
	Maintain chain of evidence	-Information not provided by researcher

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[245] Leonard Wong, Thomas Kolditz, Raymond Millen, and Terrence Potter, *Why they fight: combat motivation in the Iraq war…,* 5.
[246] *Ibid*., 6.
[247] *Ibid*.

Wong et al.'s study of combat motivations during the Iraq War is an interesting example of disciplinary case study research that builds an explanation, but also accounts for the rival theoretical explanation using case study methods with three units of analysis. Their project was specifically designed to enable this theoretical discussion and this style of case study would be particularly useful in the study of cohesion in the Information Age because there are also two rival theoretical explanations. The disadvantage of their work is that the theoretical model is not well developed in their monograph and not really referenced in their discussion.

CONCLUSIONS

The methodological literature review considered two recent examples of effective case study research conducted on soldiers to assess cohesion in combat. Both examples have strengths and weaknesses that can inform a future project on cohesion in the Information Age.

The structure of both case studies demonstrates an advantage of using the case study method. In Stewart's study of the South Atlantic conflict, she considered one case with two units of analysis, whereas Wong et al. considered one case with three units of analysis. Both are advantageous because they allowed for a *compare and contrast* of both parties to the conflict within the case study. Wong et al.'s study had the added advantage of being able to consider a third *more* objective unit of analysis in that he was able to consider the experiences of journalists who were embedded with the US ground forces.[248]

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[248] Whether or not the journalists are objective is for each reader of their monograph to determine for themselves. The author thinks that they are more objective than the US soldiers and Iraqi PWs, but that they are still subjective participants given that they were embedded with US forces.

In the first case study, the major advantage was Stewart's use of her interdisciplinary theoretical model as the standard of comparison because she was looking at a single case study. For a future project that looks at cohesion in the Information Age, a research strategy that uses a theoretical model for comparative purposes could increase the external validity of the project. Two disadvantages of her project were the time lag from the end of the conflict to the start of data collection and that rival theories were not addressed; both disadvantages decrease the internal validity of her work as they take away from explanation building. A final disadvantage is that her case study was difficult to read and would like be inaccessible to non-academic audiences, a style to avoid in CAF-centric results sharing.

In the second case study the major advantage was Wong et al.'s inclusion of the rival theoretical explanation and simple explanation building that was clearly based on multiple sources of evidence. A secondary advantage was that their monograph was easy to read, making it accessible to a military audience.

For a future project on cohesion in the Information Age, the following summary of lessons learned from the strengths and weaknesses of the two case studies is useful:

- Principal and rival theoretical explanations should be introduced in detail and are necessary where there is only one case;

- Theoretical models are useful in explanation building during data analysis;

- Explicit methodological clarity is informative for the reader and essential for reproducibility;

- The study of complex social phenomena can benefit from an interdisciplinary approach;

- When possible, data should be collected during or shortly after the case of interest to enable data collection;

- Results should be shared in a manner that is accessible to academic and non-academic audiences; and

- High priority topics of study identified by the chain of command are facilitated from an approvals and conduct perspective.

Chapter 4 considered two case studies: the South Atlantic Conflict in the Falklands and Operation *Iraqi Freedom* in Iraq. Both studies were conducted by experienced American research teams and provide very good examples of research using case study methods. The final chapter will present the recommendations and conclusions of this directed study project concerning the future study of cohesion in the Information Age and other future studies related to CAIPS effectiveness.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSIONS

The Canadian Army will adopt a performance-oriented and health and fitness based culture in order to increase readiness by generating better prepared and more resilient soldiers.

-Lieutenant-General Lanthier, *Commander Canadian Army 2018-present*

RECOMMENDATIONS

The purpose of this directed research project was to determine the best method to study the impacts of the Information Age on cohesion because of its importance in developing resilient soldiers who are ready for operations in accordance with the CAIPS directives. This project recommends that a qualitative inquiry using a case study methodology would be the most appropriate. This recommendation was reached through the completion of a theoretical literature review in Chapter 2, a methodological review in Chapter 3, and an analysis of two case studies that examined cohesion on combat operations to develop an appreciation of best practices when using the case study method in Chapter 4.

The following specific recommendations should be followed in a future inquiry on cohesion in the Information Age:

- The hybrid theoretical model of (task and social) cohesion developed in Chapter 2, based on Siebold's model, should be used to inform future research protocols and units of analysis;

- The principal theoretical and rival theoretical explanations of the social implications of the Information Age need to be included in the case study design so that data collection can be planned to ensure that both theoretical explanations can be explored;

- Case study method was determined to be the most appropriate and is recommended for use in a future inquiry; however, grounded theory may be a useful tool in data analysis if sufficient semi-structured interviews are conducted to allow for the method to be used, pending data saturation being reached. The following case study considerations are recommended:

  o A pilot study should be conducted during the preparation step of the case study method. A suitable unit of analysis for the pilot study is an Edmonton-based sub-sub unit. The pilot study would confirm research protocols prior to data collection in the study; and

  o One case with three units of analysis based on the three regular force battalions of the PPCLI is recommended. These units of analysis allow for good internal and external validity and are a manageable scope for doctoral research.

- Regarding the use of the case study method, the following recommendations are based on the literature review of the South Atlantic conflict in the Falklands and Operation *Iraqi Freedom* in Iraq:

  o **Interdisciplinarity**: An interdisciplinary approach can be useful in all steps of case study research;

  o **Transdisciplinarity**: Neither case study presented considered a transdisciplinary approach, and so including participants in the research process is worth considering for future research to increase the relevance, credibility, legitimacy and effectiveness of the research;[249]

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[249] Brian Belcher, Katherine Rasmussen, Matthew Kemshaw, and Deborah Zornes, "Defining and assessing research quality in a transdisciplinary context…, 9.

- o **Theoretical Models**: Principal and rival theoretical models should be developed prior to the case. This is critical if there is only one case of study, even if it has multiple units of analysis;

- o **Data Collection**: Primary data collection should happen during and/or immediately following the case of interest to enable participants' recollections of events. Large time lags confuse recollection and may alter the results of the research project;

- o **Data Analysis**: The focus of data collection and analysis should be on qualitative data given the nature of future research; however, the incorporation of quantitative data, where relevant, will increase study validity and should also be considered;

- o **Results Sharing**: If the results of future research are shared by a cumbersome monograph, then it is important that supporting material be created that enables knowledge transfer for the CAF audience because few will find the time or be interested in reading an academic tome. Examples of accessible mobilization include, but are not limited to, journal and/or magazine articles, social media or other internet-based sharing platforms, town halls, and professional development sessions; and

- o **Chain of Command Support**: In order to have access to research participants and resources and to support the CAIPS aims, it is essential that a future project to explore CAIPS, have chain of command support. This support will enable sustainable change and increase the legitimacy of the research findings from the perspective of the chain of command.

These recommendations are specific to a future project that explores social and emotional fitness through the study of cohesion in the Information Age. Although they are specific in nature, they may also be of interest to any researcher who intends to use the case study method to study a social phenomenon in the CA in the future. The next, and last, section presents the conclusions of this research project.

CONCLUSIONS

The findings of this directed research project will inform the literature review and methodology of future doctoral research by the author which is planned for 2019-2021. The doctoral research will be conducted as part of the degree requirement for the Doctor of Social Sciences (DSocSci) program at Royal Roads University (RRU) in which the author is currently enrolled. Based on the recommendations herein, planning steps will soon be taken to enable research in the 3rd Canadian Division, with a focus on the PPCLI.

Lieutenant-General Lanthier, the present Commander of the CA, published the CAIPS initiative when he was the Commander of the Army Doctrine and Training Centre in 2015. Having spoken with him about the future of CAIPS, he is very interested in future work that develops measures of effectiveness (MOE) and measures of performance (MOP) for each of the components of soldier total fitness identified in CAIPS. The doctoral research planned for 2020-2021 is one of the first steps to developing transdisciplinary, evidence-based, MOEs and MOPs for social and emotional fitness, but these are only two of the six components of total fitness identified in CAIPS and more research will be required to ensure that results obtained from infantry battalions in the 3rd Can Div are generalizable to, and useful for, the remainder of the CA.

The author has had several conversations about social and emotional fitness with CA officers and non-commissioned members and there is still resistance to CAIPS although it has been in effect for four years. Most accept physical and intellectual fitness as givens, but still have a hard time valuing social, emotional, familial and spiritual fitness to the same level. To avoid an uncomfortable conversation, most agree publicly that social, emotional, familial and spiritual fitness are important, yet no further actions are taken to understand or improve fitness in these areas.

Canadian and other western democratic societies have experienced a lot of change in the Information Age. The TR has changed most people's idea of sociality, books have been written about the *mostly* negative impacts of ICTs and CMCs on people's emotional wellness, the notion of the non-blended, nuclear family is not the norm for many of the CA's soldiers, and most soldiers and leaders are not too certain about what spiritual fitness actually means. This is not good news and is a cause for concern given that CAIPS was based on extensive empirical research conducted by the CA. The organization knows that physical and intellectual fitness are not enough on their own and that social, emotional, familial and spiritual fitness are critical parts of a soldier's resilience and contribute directly to operational readiness.

The CA has not taken its own integrated performance strategy seriously enough. Leaders and soldiers in the CA know that their experiences of service are not as good as they could be, but many do not know where to start to make the changes that we need to improve readiness and resilience. Concerning the focus of this directed research project, social and emotional fitness, soldiers and leaders already intuitively know that these components of total fitness enable cohesion. The CA also knows that cohesive units

perform well and that units who perform well also happen to be cohesive, this is a chicken-egg situation.

The same is true for the other components of total fitness. The CA's problem is that it is really hard to achieve total fitness. It is hard because it means putting the important ahead of the urgent from time to time. It means walking away from office computers, portable Blackberries, and digitized command posts that are always reminding leaders of the urgent, and recognizing that most of CAIPS is about human contact and that for the time being, soldiering is still a human enterprise. Sherry Turkle calls the present *our nick of time moment*. Regarding social and emotional fitness in the Information Age, she says that "[t]his is our nick of time and our line to toe: to acknowledge the unintended consequences of technologies to which we are vulnerable, to respect the resilience that has always been ours."[250] This is sage advice the CA would be smart to heed.

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[250] Sherry Turkle, *Reclaiming conversation*…, 362.

GLOSSARY OF TERMS

Absent Presence: A constant connection with friends, family and colleagues enabled by information communication technologies that allows those who are physically absent to be connected in real-time.

Anomie: Émile Durkheim's classic theory where an absence of shared norms and values leads members of society feeling alienated and having a lack purpose.

Case Study: Case studies focus on an issue within the bounds of a case and select an individual, multiple individuals, a program, or an activity to provide insight into the issue.

Canadian Army Integrated Performance Strategy (CAIPS): CAIPS is the army's newest total fitness model, empirically validated and designed to identify the components of total fitness that enable army soldier's to be resilient and ready for operations. The CAIPS components of total fitness are physical, intellectual, emotional, social, familial and spiritual fitness.

Combat Bonding: the affective and instrumental components of horizontal and vertical bonding at the primary group level during combat or combat-like operations where stressor intensity is high. Trust and pride are important pre-conditions for combat bonding.

Cyberloafing: Cyberloafing occurs when employees use their workplace internet access during work-hours to surf the internet, check their email or any other misuse of the internet on company time.

Digital Revolution: The Digital Revolution began in approximately the 1970s and represents the fast-paced introduction of digital technologies that continue to characterize the Information Age.

Empathy Gap Theory: The empathy gap is a qualitative social phenomenon that has been studied and quantified Sherry Turkle. Her empirical research has found that North Americans are facing an empathy crisis caused by the societal move away from face-to-face conversation in favour of ICTs or electronically mediated communications. She found that children of the Information Age are 40% less empathetic that they should be for their age compared to previous generations.

Grounded Theory: Grounded theory is research process that produces a theory from the participant data collected during the research project to describe a process.

iGeneration (iGen): iGen, includes those born after 1995 and are differentiated from Millennials by Jean Twenge because they grew up knowing life with ICTs.

Information Age: The Information Age followed the Industrial Age and is defined by a transition from the Industrial Revolution to the Digital Revolution. The Information Age began in the 1970s.

iTime: The blurring of the boundaries between public and private life, day and night, due to devices than enable worldwide connectivity 24/7.

Media Richness Theory: Media that provide low understanding are considered to be lean, whereas media that provide substantial understanding are rich. In this theory, richer media are thought to be optimally selected to reduce ambiguity and equivocality to the level required to ensure effective communication.

Micro-Social Fragmentation: The state of absent presence (see above) that leads to small, fragmented social groups enabled by information communication technologies.

Narrative Research: Narrative research is a technique that uses storytelling to chronologically connect an account or accounts of an event or series of events.

Networked Individualism: A move away from social groupings that were tightly-knit and geographically concentrated to groupings that are looser and more fragmented enabled by Triple Revolution technologies. Successful networked individuals have on-demand assistance and support through their savvy, balanced use of on and offline sociality.

Participatory Action Research (PAR): In PAR researchers and participants co-create the research process which aims to address a community need to produce social change that solves a social problem or improved participant quality of life.

Phenomenology: Phenomenology documents the lived experience of research participants in order to understand a phenomenon their perspective.

Readiness: Readiness describes the army's preparedness to deploy on operations. Readiness includes individual soldiers, small teams, formed units and formations.

Resilience: Resilience is the capacity of a soldier to adapt, resist, and thrive in the face of the stress imposed by army life in garrison, training and operational environments.

Standard Model of Military Cohesion: In Siebold's model there are four structural relationships that create social bonding: peer, leader, organizational, and institutional. Peer and leader bonding are designated as primary group cohesion and organizational and institutional bonding as secondary group cohesion. Each

type of bonding has an affective and instrumental component. His model considers social and task cohesion as defined below.

- **Social Cohesion**: Social cohesion refers to the quality of the relationship between the members of a group.

- **Task Cohesion**: Task cohesion refers to the shared commitment among group members to achieve a common goal.

Triple Revolution: The Triple Revolution is the trifecta of the internet, social media (SM) and mobile phones into a do-it-all smartphone.

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