

**A Practice-Based Exploration of Knowledge Utilization in the Canada Post  
Rural Mail Safety Review: *Applying Pragmatic Inquiry and Engaged  
Scholarship to a Workplace and Public Health Challenge***

by

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## **Author's Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## **Abstract**

The purpose of this research undertaking is to explore the form and content of one of the most extensive workplace occupational health and safety interventions undertaken to date by a Canadian employer: Canada Post Corporation's Rural Mail Safety Review. In December 2006, the Canadian Government directed Canada Post Corporation to develop and implement an operational plan to restore and maintain mail delivery to rural roadside mailboxes, taking into account the health and safety of rural mail carriers as well as any and all applicable laws.

This research study examines the structure, coordination, and application of the RMSR knowledge utilization guided by John Dewey's conception of pragmatic inquiry, Andrew Van de Ven's notion of engaged scholarship and a qualitative grounded research methodology. A fundamental premise for this study is that negotiation serves to act as a hinge on the gate between knowledge and practice by facilitating shared understanding and generating options to overcome impasse.

The research findings support the importance of including negotiation strategies to motivate and support implementation understanding, acceptance and uptake. They also confirm the primary role of relational, interpersonal communications – building rapport, to help obtain and sustain acceptance of and commitment to execute implementation activities and processes. These are aspects of knowledge utilization that are often assumed or overlooked and an implication issuing from this study concerns reorienting

the structure of implementation plans to ensure that communications between people occupy a primary role in situating, adapting, and humanizing data and technologies. The initial estimated schedule for the Canada Post Rural Mail Safety Review assessments was three years but as the importance of interpersonal communications with customers became more apparent the time-line was extended to allow for more intensive outreach efforts. Acceptance of and cooperation with the workplace safety intervention is largely attributable to interpersonal communications and negotiations.

The University of Waterloo Collaborative PhD Program in Work and Health is an interdisciplinary system of study designed to cross departmental and specialization boundaries. This thesis follows the spirit and intent of the Work and Health Program guiding principles by drawing on material from a range of research areas including: philosophy, workplace and labour law, systems engineering, communications, implementation science, quantum physics, occupational health and safety, negotiation theory, cognitive science, conflict management, and psychology. The temporal range of the research and knowledge referenced in this dissertation spans ninety-nine years, from 1916 to 2015.

**Key Words:** workplace safety, knowledge utilization, negotiation, pragmatic inquiry, communication, Canada Post, complex adaptive systems, rapport, project implementation

## **Acknowledgements**

I think of this work and my role in terms of a driver of a large bus, made roadworthy by a number of unheralded hands and accompanied by many helpful passengers. I may have mapped and marked the travel but numerous people have helped to keep me from going off the road. The output of an engine is measured in horsepower and it occurs to me that I was born in a year of the horse which may account for the traits of perseverance and durability required to complete this dissertation.

First and foremost, my thanks and gratitude go to Professor Phil Bigelow for putting fuel in the tank and allowing this journey to begin. My application to the PhD program in Work and Health was initially declined but upon arriving at the University of Waterloo, Dr. Bigelow picked-up my file and saw something that led him to believe that I should be admitted to the program and offered to be my advisor. Without his initial and ongoing interest, guidance, and support this dissertation would not exist.

Ironically, my trio of job applications to work on the Rural Mail Safety Review were also declined as I apparently did not meet the selection criteria. It seems that at some point the Canada Post human resources department must have run out of candidates who possessed the desired criteria because months after my original application, I was contacted to interview for a position. To put this in perspective; the topic of the dissertation before you concerns a workplace health and safety intervention that I was very nearly not a part of, while the research resulting in this treatise occurs under the auspices of an academic

program from which I was initially excluded. Years ago, I took a course offered by the Canadian Institute for Applied Negotiation and I recall the instructor advising that when faced by adversity or impasse it is important to *stay curious* (and available) as things can, and often do, change, revealing new possibilities. I keep that advice close and I believe this work is a testament to *staying curious*.

It was my good fortune to enroll in a couple of courses led by Professor John Garcia and, through those interactions, establish an enduring rapport leading to his agreement to co-supervise my doctoral efforts. This work and my experience at the University of Waterloo have been very much enriched by Professor Garcia's kindness, intellect and guidance. I recall a chance encounter with Professor Paul MacDonald, who was the head of the department at the time, and during our short conversation he asked if I was enjoying the qualitative methods course led by Professor Garcia. I explained that the course was going really well and that Professor Garcia was an engaging and inspiring instructor. Professor MacDonald smiled, nodded in approval, and commented that Dr. Garcia is very knowledgeable but above all else he is a genuinely nice person. I couldn't agree more.

I also wish to extend my gratitude to Professor Heather Mair whose comments and critique of my thesis proposal resulted in significant improvements to the spirit and content of this work. I am grateful to Dr. Agnieszka Kosny for kindly agreeing to serve as the external examiner of my dissertation defense committee and to Professor Mark Havitz for his participation as the internal-external examiner.

Without the interest and participation of many of my RMSR colleagues, this dissertation would not be possible in its present form and would very likely have been abandoned as a viable topic. I am thankful that their engagement has helped to bring this work to fruition. I would like to thank my mother (Jean MacIntosh), my father (Claire Ervine) and my wife (Charlene Ervine) for their ongoing interest in this pursuit and for those many justified times when they asked; “Are you done yet?” I can now, finally, reply: YES!

To the unwitting passengers, represented in the reference section, who accompanied me on this journey, I hope I have represented your work in such a way that it would meet with your approval.

Lastly, I would like to thank the reader for taking the time to see what this is all about. In an age where demands on each person’s time are constant and varied, I am happy that you chose to explore the contents of this work and I hope that the experience provides some value.

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*All of the best recollections of wisdom and friendship, from Plato’s “Apology” for Socrates to Boswell’s Life of Johnson, resound with the spoken, unscripted moments of interplay and reason and speculation. – Christopher Hitchens, “Mortality”*

## **PROLOGUE:**

*“The light work sheds is a beautiful light, which, however, only shines with real beauty if it is illuminated by yet another light.”* – Ludwig Wittgenstein, *Culture and Value*

I come to this investigation via a non-linear and somewhat peripatetic academic route. I began my studies at the University of Waterloo graduating some years ago with a Bachelor of Arts, Honours Philosophy. I continued my education in the philosophy department at Queen’s University where I graduated with a Master of Arts. From there, I ventured to Osgoode Hall Law School of York University and completed a Master of Law degree. I took a break from academia for six years but returned to the University of Waterloo upon discovering the collaborative Work and Health Ph.D. program. I was fortunate to be a member of the first cohort admitted to the program which leads me to the current state of the research described herein.

Although my academic career has led me to explore some diverse and seemingly unrelated paths, throughout the duration and geographic range of my studies I have maintained employment with a single organization: Canada Post Corporation. There is a particular symmetry in returning to the University of Waterloo to undertake Ph.D. studies and have the topic of my doctoral dissertation focus on an organization with which I have significant history and familiarity. This research undertaking examines the Canada Post Rural Mail Safety Review (RMSR) which was initiated in early 2007 following a directive by the federal government in the late 2006.

I began work as part of the rural mail safety review in November 2007 as a rural mail delivery safety assessor and customer contact/outreach official. My background at Canada Post, prior to this appointment, included experience in collection and delivery as a letter carrier and in operations in the areas of mail dispatch, mail preparation and distribution, and premium products administration. I was the co-chair (union appointee) of the local joint health and safety committee from 2003 to 2007 and have served in numerous other union roles; including steward, grievance officer, financial officer, and chairperson of the disciplinary committee. Additionally, from 2003 to 2008 I operated my own consulting business specializing in labour relations and occupational health and safety issues, including WSIB case management assistance, small claims court proceedings and dispute mediation.

I had not originally planned on exploring the rural mail safety review for my dissertation proposal but as other research initiatives, for one reason or another, failed to gain sufficient traction it occurred to me that I was in an ideal position to explore a significant national workplace safety intervention and that I should take advantage of the access, experience and social capital available to me to undertake this research. This opportunity became even more vivid and viable as I enlarged my experience within the RMSR as a local area team lead and, later, as an acting regional team lead. The team lead positions deepened my understanding of the complexity and coordination of the manifold parts of the RMSR process and confirmed the value of making it the subject of my dissertation research.

Kathy Charmaz notes that both a researcher's background and disciplinary development inform and shape the form and content of a research study. (1) I have included a section disclosing the sensitizing concepts which guided this research program in Section 2.2, but it may be of additional value to note that my training as a philosopher steeped in a background of applied, pragmatic and postmodern philosophy orients my perspective towards an exploration of contextual linkages, connections, and possibilities that may emerge through transdisciplinary exploration and investigation. This background informs my choice of pragmatic inquiry as the sail of this research vessel and grounded research theory as the rudder.

What distinguishes grounded research from other research methodologies, as Bob Dick clearly explains, is that grounded theory is emergent (2, p.5); dynamically and interactively combining curiosity and discovery, and these characteristics (among others) links it to pragmatist and postmodern philosophy as well as negotiation processes.

Charmaz cites the philosopher Henri Bergson's remark that: "Philosophers agree in making a deep distinction between two ways of knowing a thing. The first implies going all around it, the second entering into it." (1, p. 47; 3, p. 980) Her advice to grounded researchers is to seek the second way of knowing a thing. (1, 3) In the case of the present research enterprise, starting from the inside means operating with my own experience (4, p.60) of the RMSR and exploring the experience through relationships that are already established and available. (5, p.58) I do not have to begin my data collection tentatively - wondering if, or to what extent, I will be accepted by those who operate in the research domain because rapport and shared vocabulary are already in play. (1-5)

Just as my academic training influences my research interests and approaches, my professional work orientation is similarly informed and shaped according to my particular background circumstances. Though my colleagues and I shared many of the same experiences in relation to the RMSR milieu, my work approach was rooted in negotiation processes - seeking ways to mitigate or overcome impasse through using language with care and attention and exploring resolution options through dialogue rather than directive. This is not to suggest that similar approaches were not undertaken by other members of the RMSR team but, for me, it was a natural extension of my prior training and development.

Based on my academic and practical development, I have come to recognize the wisdom in Wittgenstein's remark: "It is not single axioms that strike me as obvious, it is a system in which consequences and premises give one another *mutual* support." (6, S142) My experience, both as an academic and as a professional, suggests that negotiation is an important proficiency for communicating contentious, provocative, and/or challenging information and that effective knowledge utilization is inextricably linked to negotiation processes. My experience further suggests that the Canada Post RMSR provides a rich and diverse organizational initiative within which these ideas may be explored.

## **1.0 Context**

### **1.1 Introduction**

The purpose of this research undertaking is to explore the form and content of one of the most extensive workplace occupational health and safety interventions undertaken to date by a Canadian employer: Canada Post Corporation's Rural Mail Safety Review. The intervention is distinctive in that the health and safety assessment of the workplace is not a singular location or a few clusters of locations, but a collection of close to a million diverse sites across the span of Canada. Adding to the complexity of the RMSR work is the fact that every location reviewed was located on a public roadway, opening points of intersection and consideration between occupational health and safety outcomes and public health concerns. The magnitude of the undertaking coupled with the manifold contingencies flowing from the public, organizational, and political outreach component of the health and safety review process and outcomes make this a particularly interesting and rich area of study.

The investigation is structured according to the pragmatic theory of inquiry explicated by John Dewey. Dewey's theory of inquiry views knowledge and knowledge development arising from active and adaptive contacts and interactions in the environment or context within which human activities occur and which contain the customs and habits that inform and condition particular forms of life. (7-10) Dewey's pragmatic conception of knowledge as fallible, adaptive, and evolving shares common ground with critical realist perspectives (11-13) and Van de Ven's conception of *engaged scholarship*. (11, 12)

Engaged scholarship is a collaborative research system, rooted in critical realist philosophy, emphasizing multiple stakeholder and practitioner perspectives in the exploration of a problem domain. (11,12) The combination of Dewey's theory of inquiry and Van De Ven's engaged scholarship forms a research system which embraces deductive, inductive, and abductive investigative processes to identify, assess, address and resolve existing or emerging problems or concerns. (7-12)

This research initiative is further shaped by my positionality; (14) maintaining dual status as an organizational *insider* and academic-researcher *outsider*. From an organizational perspective, I occupied dual roles in the RMSR as both a team lead (acting) and a member of the investigative teams tasked with operationalizing the RMSR occupational health and safety assessments and communications. There are both benefits and challenges to operating within and across particular positional spaces (14) as a practitioner-researcher (4, 5, 15) due to perceived or actual boundaries (power, social status, gender, language are some examples). In order to mitigate boundary issues, strategies were undertaken to seek impartial spaces, monitor bias, and maintain sensitivity concerning influences on data stemming from positional dynamics. (4, 5, 14, 15)

One advantage accorded through my occupational status is the access granted to me due to my understanding of and participation in the workplace intervention. The absence of such a connection or, put another way, the absence of credible social capital, would make this research enterprise highly unlikely. The social capital I have developed is based on relationships which are, in turn, built on respect and rapport.(1, 16, 17) Following



Charmaz, I have a responsibility to honour the respect and rapport extended to me by reciprocating the same through careful, honest attention to my colleagues perspectives and their lived experience. (1, p.35) My efforts to meet this responsibility were directed towards active and ongoing reflexivity to examine and test my own thoughts and ideas concerning the research. (1, 3, 4) Reflexive analysis of my personal thoughts and ideas throughout the research process elevated my sensitivity and awareness, helping to provide a more comprehensive understanding of the experiences and meanings communicated in the interviews. (3)

A second advantage is that I possess specific insight gleaned through operating within the *work as done* and *work as imagined* contexts. (18) I was part of the research milieu in thought *and* deed and being actively involved, with ongoing sustained contact, in the research setting provided access to implicit meanings and non-linguistic information augmenting the verbal communications. (3, 4, 5, 15) My experience in various roles and at various levels of the RMSR provided valuable insight into the ways the process directives (work as imagined) were sometimes misaligned with field applications (work as done). In many ways, the idiom; “where the rubber meets the road” speaks directly to the subject matter of this dissertation.

## **1.2 Background**

Rural mail delivery began in Canada on October 10, 1908 (19); thirteen days after the first Ford Model T left the assembly line at the Piquette Avenue Plant in Detroit

Michigan. (20) The affordability and popularity of the Ford Model T altered the North American landscape and automotive transportation has grown to become the most dominant form of transportation in the developed world. (21, 22)

Canada Post Corporation (CPC) employs over 6000 rural and suburban mail carriers (RSMCs) who collectively deliver, from their vehicle, to more than 840,000 rural mailboxes across Canada. On January 1, 2004 RSMCs, who were formally contracted personnel, became unionized employees of CPC, represented by the Canadian Union of Postal Workers (CUPW). As employees of CPC, the employment conditions outlined in the Canada Labour Code extended to RSMC's and their work environment.

In December 2006, the Canadian Government directed CPC to develop and implement an operational plan to restore and maintain mail delivery to rural roadside mailboxes, taking into account the health and safety of rural mail carriers as well as any and all applicable laws. (23) In order to action the Government directive and address the rising number of traffic-related health and safety complaints brought forward by rural mail carriers throughout the country, Canada Post organized and developed the Rural Mail Safety Review (RMSR).

The focus of the RMSR concerned assessing actual and potential risks related to roadside delivery activities including stopping on public roadways to access rural mailboxes and merging back into traffic to continue towards subsequent delivery positions. Traffic volumes, road conditions, road speeds, and vehicle visibility were among the variables

examined and adjusted through the RMSR. Rural mail carriers confront other work-related safety concerns; such as unleashed dogs (and other animals), package weight limits, mailbox height and condition but processes and procedures concerning these issues are addressed in existing policy documents, collective agreements, and/or other official manuals describing work safety standards. Prior to the RMSR, risks emanating from on-road, traffic-based delivery had not been assessed with any degree of uniformity and precision.

Canada Post Corporation has requirements under both the Canada Labour Code (Part II, particularly sections; *122.1, 122.2, 124, 125.1*) and the Canadian Criminal Code (Sections *22.1, 22.2*) to provide a safe work environment for its employees. Human Resources and Social Development Canada (HRSDC or Labour Canada) have investigated and adjudicated numerous workplace safety cases as a result of RSMC health and safety complaints. Additionally, Canada Post has received thousands of workplace safety complaints from RSMC's and, since January 2004, rural mail carriers have been involved in close to a hundred traffic incidents while delivering mail. The RMSR was developed as a comprehensive response to the workplace health and safety concerns of rural mail delivery employees (see Appendix B). (24) A general timeline outlining important aspects of the RMSR includes:

- Between 2004 and 2006 over a thousand traffic-related safety complaints were filed by RSMC employees
- Seventy road accidents, and three fatalities involving rural delivery personnel occurred during this period

- Forty rulings by Employment and Social Development Canada concerning RSMC files
- In late December of 2006, the Government of Canada directed Canada Post to maintain rural delivery while taking into consideration health and safety regulations
- In early 2007, Canada Post organized the RMSR to respond to the traffic safety concerns identified by RSMC employees
- 843,000 rural mailboxes across Canada needed to be assessed in light of RSMC on-road delivery safety concerns
- An initial schedule of three years was planned but was later expanded to five years as customer and stakeholder communications became more intensive

### **1.3 Canada Post Traffic Safety Assessment Tool (TSAT)**

The RMSR process was underpinned by a traffic safety assessment instrument (TSAT) developed by independent Canadian (Human Factors North) and international (iTRANS Consulting) engineering firms and a legal (Cotton Law) firm specializing in occupational health and safety. The TSAT assessed traffic related characteristics typically encountered by RSMCs including; road type and condition, traffic volume (2 & 4 lane roadways), posted speed, distance to controlled intersections, visibility measured according to front and rear visual distances, on and off-road vehicle position, as well as proximity to barriers (rail-road crossing, bridges, curbs and related obstacles). (25)

Each rural mailbox (RMB) was assessed using the TSAT and in cases where the RMB met established TSAT criteria, no change to the position of the mailbox was required. If the RMB did not meet TSAT criteria, the stipulated direction entailed relocation to a position that met criteria or the RMB owner could choose alternate mail delivery options (postal box, community or group Mailbox) where practicable. In cases where a RMB needed to be relocated due to traffic related safety concerns, the owner of the mailbox was contacted by the TSAT assessment team who explained the RMSR process, how the process affects the customer's mail delivery, relocation options, and time-lines to complete the required adjustment (see Appendix B).

#### **1.4 Traffic Safety as a Public Health Issue**

The World Health Organization has identified traffic related injuries and fatalities as a pervasive public health threat. (26) Related research has concluded that a significant public health toll is exacted globally due to roadway crashes. (27) Although Canada has a highly urbanized population, our reliance on the automobile as our primary mode of transportation and our increasing use of rural roadways has led to the consequence that a high proportion of traffic related injuries and fatalities occur on rural roads. (28) According to Transport Canada, nearly two-thirds of fatal and 30% of injury collisions in Canada take place on rural roadways (29), contributing to the outcome that traffic accidents are one of the leading causes of injury and death in Canada. (30) Additionally, a 2005 inquiry undertaken by the Alberta Centre for Injury Control and Research found that rural drivers routinely bend and/or break established traffic regulations as a result of

their view that such regulation is inconvenient, unreasonable and/or open to interpretation. (31)

Traffic safety is a public health issue which, in the case of rural mail carriers, also emerges as a workplace health concern. Tulchinsky and Varavikova note that public health knowledge developed through trial and error and that the need for public health surveillance and services emerged as a result of population density and urbanization. (32)

The issue of escalating traffic-related health and injury risk due to the increasing volume of vehicles on secondary and rural roadways, travelling at higher speeds (often as a direct result of commutes to urban centres), provides a strong support for Tulchinsky and Varavikova's observation.

A general legal definition of public health prevention processes describes such strategies as a single or series of interventions directed towards reducing or eliminating the occurrence of injury or disease. (33) These same points are featured in most, if not all, definitions of occupational or workplace health and safety many of which echo the World Health Organization's (WHO) collaborative definition of occupational health first proposed in 1950 and revised over the ensuing years, resulting in the following:

A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace by considering the following, based on identified needs: health and safety concerns in the physical work environment; health, safety and well-being concerns in the psychosocial work environment including organization of work and workplace culture; personal health resources in the workplace;

and ways of participating in the community to improve the health of workers, their families and other members of the community. (34)

In light of the legal, social, political and environmental aspects extending from the employment conditions of rural mail carriers in Canada, CPC; for the first time since rural delivery began, organized a workplace health intervention to protect and preserve the health of its RSMC workers. The intervention; due to the nature of the size of the worker group, the extensive geographical range and variety of the rural workplace context, and the traffic-related identified risks, shared many of the same aspects and principles of public health initiatives. (35)

In keeping with the view that public health goals cannot be realized through individual effort or action, but need to be activated through collective, coordinated strategies, (36) CPC created the RMSR to proactively and reactively examine traffic-related safety issues to help identify and minimize workplace health risk for rural mail employees. The RMSR consisted of six regions (Pacific, Prairie, Huron-Rideau, Greater Toronto Area, Quebec, Atlantic) within which teams of TSAT certified safety assessors reviewed and tested rural delivery positions throughout each geographic region (Huron-Rideau accounted for over 40% of Canada's total rural mailbox distribution and when the GTA was later added to the Huron-Rideau portfolio, the total combined number increased to nearly 50%).

In each region, the coordination of RMSR activities were similarly structured and can be generally described as beginning with the appointment of a manager(s), a coordinator(s), team leads and agents who performed the TSAT and customer outreach. A yearly plan

was developed based on assigning assessment teams to geographic areas that had the highest percentage of safety incidents, complaints, and concerns.

Early in each year, when winter conditions were no longer a factor obscuring road delineations, assessment teams began applying the TSAT. The TSAT teams worked in pairs with one agent driving the vehicle while the other recorded the time in seconds, using a stopwatch, of a car approaching the mailbox position from the front and also from behind without, at any time, losing visual contact with the approaching vehicle. Factors including; determining whether a delivery vehicle is on or off the road when stopped at the mailbox, distance to intersections, traffic volume for a road segment in a fifteen minute interval, and potential relocation positions (if needed) were part of the assessment team work. TSAT information was entered into an information systems program on-site for each mailbox route-by-route and uploaded at the end of each day to a regional information systems database.

Once all the rural mailboxes on a route system had been assessed the results would be shared with the RSMC and customers would be sent a letter describing the review process and the results of the review for their particular mailbox. In cases where a mailbox did not meet review criteria, agents would approach customer's in-person to explain the results and discuss subsequent options. This process would continue throughout the summer and fall until such a time that winter conditions no longer made it possible to reliably apply the TSAT. During the winter period, work continued in the form of preparing for upcoming offices through validating and updating existing route



information, and attending learning and development activities. Typically, the learning and development activities would take place at a yearly conference where agents could share, codify, and integrate their experiences through both formal and informal learning and development channels including presentations relating to best practices and new procedures, conversations with colleagues, team building activities and question and answer sessions with RMSR leaders. A sample conference agenda would resemble the following:

Day One:	Arrival, Check-In and Team Dinner
Day Two:	Team Breakfast, Opening Presentation, Year in Review, Upcoming Plan, Customer Contact Review & Update, Communications Exercise, TSAT Refresher Training, Guest Presentation
Day Three:	Team Breakfast, Customer Relationship Management Process, Information Systems Review & Questions/Answers, Communications Exercise, Communications Presentation, RSMC Safety & Our Role, Group Questions/Answers Session
Day Four:	Team Breakfast, Data Validation Best Practices, Regulatory & Compliance Information/Updates, TSAT Best Practices/Updates, Guest Presentation, Group Roundtable Discussion/Inquiries
Day Five:	Team Breakfast, Round Table Review & Wrap-Up, Check-Out & Departure

## **1.5 The Pragmatic (Deweyan) Conception of Inquiry**

This research study examines the structure, coordination, and application of the RMSR knowledge utilization following John Dewey's conception of inquiry. For Dewey, inquiry and analysis arise and occur within a particular context and we use our available resources to develop and test more robust theories and create more efficient tools to apply to present challenges in order to improve our outcomes. Inquiry, on Dewey's account, is an active and evolving practice and he preferred the term "knowing" because of its *active* connotations, against the static term "knowledge". (7, 37, 38)

According to Dewey, through the process of inquiry we develop methods or instruments to respond to challenges, and the settlements or solutions we are able to craft become features of our *knowing* which can be referenced to address future challenges. In this way, our tools, means, and methods are adaptable and amenable to new conditions, situations, and possibilities. Dewey also believed that our immersion in the practice and activity of inquiry has an instrumental quality. It improves our ability and efficiency concerning subsequent research or investigative undertakings (7, 39) by deepening understanding and extending the research-action repertoire. (7, 8, 37-39)

## **1.6 Knowledge Translation, Transfer, Utilization**

Following Estabrooks et al., knowledge translation (KT) may be defined as evidence-based decision making encompassing knowledge utilization, transfer, uptake,

dissemination; as well as, implementation research and innovation diffusion. (40)

Knowledge translation describes the experience and process of making research actionable (putting it into practice) through excursive and recursive knowledge development and application, (40-42) and it is becoming more clear that if knowledge translation is to be successful, it must be shaped according to an understanding of the contextual and relational (social) aspects of the presenting challenge and the conditions of its use. (40-44) Put plainly, the focus of knowledge translation work is to minimize and, where possible, close the gaps between knowledge and practice/knowledge to action. (45, 46)

Closely related to the idea of knowledge transfer is knowledge exchange (KE).

Knowledge exchange is the preferred term of the Canadian Health Services Research Foundation (CHSRF) emphasizing collaborative, interactive relationships between researchers and stakeholders in order to share or investigate existing research or plan and produce new research through cooperative partnerships. (47) The CHSRF preference for *knowledge exchange* over *knowledge translation* results from an undesirable impression imparted in the *translation* part of the phrase which suggests that the relationship between researchers and stakeholders is more vertical than horizontal. Researchers as experts, *translate* or attenuate research findings so that they may be understood by a particular audience. (47) This form of approach is not representative of the knowledge strategy that the CHSRF advocates, so a change in descriptive terminology was necessary to better reflect the knowledge orientation promoted by the Foundation.

If knowledge creation and use may be described as a process, the initial knowledge generation for RMSR purposes follows more closely the knowledge translation band along the continuum. Canada Post actively sought independent experts to assess and address the traffic safety issues confronting the rural mail delivery network and to provide an independently developed evidence-based tool to assess and manage risk. The development of the TSAT was not a participatory problem-solving undertaking defined by ongoing horizontal interactions. Instead, it would be more accurate to describe it as a vertical (expert enlisted by practitioner) relationship specifically directed towards producing scientifically validated assessment criteria and supporting rationale.

Green et al. (46) explain that knowledge dissemination, translation, transfer and diffusion can all be described as aspects of *knowledge utilization* and that knowledge utilization may refer to any or all of these terms. In order to avoid becoming entangled in conceptual boundary disputes, the term knowledge utilization will be used throughout this study to distinguish research-based knowledge from other forms or types of knowledge. Using knowledge utilization rather than other related terms or concepts will also help to maintain the link to pragmatic conceptions of knowledge use as advancing, improving, or refining practice and practical applications (knowledge in action/enaction). (9, 48)

Knowledge utilization was a core aspect of the RMSR work and consisted of multi-level, cross-jurisdictional complex stakeholder relations including; national, provincial, municipal and local representatives (MP, MPP, Mayors, Reeves, Road Superintendents,

and Municipal Offices) in addition to workplace actors (local postal officials, area managers, directors, supervisors and employees), representative systems (bargaining agents, health and safety committees) related processes (delivery planning, operations, parliamentary affairs), and Canada Post customers. The author and the committee members are not aware of a larger scale knowledge utilization workplace safety intervention in Canada. As such, the research framework deployed to examine the range of knowledge utilization interactions inherent to the RMSR required a broad, pluralistic and flexible structure to contain an array of strategies and approaches. (49, 50)

### **1.7 Purpose of the Study**

The RMSR was a workplace and, by extension, a public health safety implementation consisting of a series of activities undertaken to realize a specified plan. (51) Typically, implementation strategies either flow from a research-to-practice framework initiated by research and researchers or a community-centered model generated by a practical or practice-oriented circumstances. (52) For many scientific researchers involved in workplace health and safety issues, the guiding concern is not necessarily which perspective or model to select and use, but how to discern and apply particular strategies within a presenting context in order to maximize knowledge to practice commitment, engagement, and action. (52) To this point, implementation science research has more to say regarding unsuccessful implementation strategies and initiatives (51, 53) while the elusive success stories tend to cluster around multi-level, inclusive, relationally-driven and context specific applications. (46, 53)

Green et al. suggest that the persistent gap between science and practice may be partly due to *social distance*. Social distance results from a systemic focus on centralized storing and distribution of evidence-based research (national & international) supported by resource allocation authorities, as well as researcher focus on pursuing citations in professional periodicals as a primary concern rather than sharing research results directly with practitioners and other community members. (46, 48, p.275)

The CPC RMSR is an important example of a workplace safety intervention utilizing a recursive knowledge-to-practice framework to communicate and implement new safety regulations to both workplace stakeholders and the public at large. Through investigating, exploring and describing the structure of the CPC RMSR, insight into knowledge utilization processes and procedures that are both conceptually and instrumentally credible became apparent. The outcome of this research study provided viable strategies to serve as a response to the Madon et al. and Green et al. queries around why effective public health implementation remains challenging. (46, 54) These authors suggest that science has been slow to understand knowledge utilization as a dynamic and multilevel issue which can be addressed through a research lens focused on practice-based evidence rather than evidence-based practice. (48, 54) This study serves to shine a light in areas which, as suggested by Madon et al. & Green et al., have been overshadowed by other approaches.

## **1.8 Rural Mail Delivery History and Connections: Changing Work Systems, Workplace Safety, and Worker Activism**

Canada, in the latter part of the nineteenth century, experienced significant growth of new forms of work driven by the second industrial revolution. Prior to 1850, hunting, trapping and farming were the most common occupations throughout Canada and were, in most cases, rural-based small scale, independent forms of work. Industrialization altered the complexion of work bringing forward an era of manufacturing processes. Large-scale factory operations employing many workers within a facility or workplace and often situated in urban areas, quickly displaced the more rural traditional occupations as the dominant context of employment. (55) The increase in manufacturing employment and the strenuous nature of mass production work coupled with long work hours and often perilous conditions, resulted in escalation of workplace injuries and fatalities.

Many of the innovations that have led to improved working conditions and occupational safety standards under both the federal and provincial jurisdictions can be traced to worker activism and unionization in the public and private sectors. Trade unions emerged to leverage collective action through strength in numbers (organization) and to improve the working conditions and occupational safety of workers. (56, 57) The effort to overcome the uneven, uncertain and arbitrary nature of the rules governing early labour relations in Canada; the bulk of which was derived from the British Master and Servant Acts of 1823, culminated in the passing of The Trade Unions Act (tabled and championed by Sir John A. Macdonald) by the House of Commons in 1872. (57, 58, p.471) The Trade Unions Act extended legal legitimacy to unions and confirmed the right of workers to belong to or be associated with a union. The ability to use collective action to promote,

instigate, and bargain for improved working conditions up to and including withholding services, paved the way for greater worker participation in determining fair, predictable and consistent labour rules and regulations. (56-59)

Burgeoning labour unrest due to rising injury rates in industrial workplaces led to the implementation (under the guidance of Ontario Chief Justice, William Meredith) of legislation to provide an employer funded compensation system providing no-fault benefits for injured workers in exchange for workers relinquishing the right to legal action against an employer. (60) The Ontario “Workman’s Compensation Act” was passed in 1914 and established five fundamental principles. The primary tenet stated that workplace injuries are compensable regardless of fault and that participation in the compensation system requires that both the worker and employer release their right to sue. The Act further stipulates that the compensation board is an independent impartial entity (not tethered to the government or special interest groups) and possesses exclusive jurisdiction over matters referred for investigation, administration and adjudication. The Act also provides a guarantee that funds for payments will be available to meet present and future benefits requirements. The costs to maintain the compensation system are generated through employers who collectively contribute to a pooled fund. (60, 61) Although workers’ compensation legislation was first enacted in Canada in the province of Ontario, the development of similar compensation systems in other provincial jurisdictions soon followed. (55, 60)



The provisions prescribed in the workers compensation legislation were a significant step forward in according fair treatment to employees who had experienced work-related injury or illness; however, issues remained in the handling of complaints and claims. The administration of compensation systems tended to favour employers as workers had little influence over or say in investigative processes and outcomes. (62, 63)

The improvement of labour relations and occupational health and safety in Canadian (largely industrial) workplaces, as well as increased worker representation in matters pertaining to conditions of work, remained at the forefront of union activity and activism with particular momentum during the 1940's. (63-65) Ongoing challenges to existing workplace governance systems led to new regulations and in 1948 the Industrial Relations and Dispute Investigations Act (IRDI) was established to update, consolidate, standardize and extend aspects and elements of workplace legislation from various jurisdictions to federal employees and to serve as a reference and model for provincial mechanisms. (64) In 1967 the IRDI Act was further consolidated along with updated statutes, and integrated into the Canada Labour Code. (66-68)

The Canada Labour Code sets forth a constellation of rules, regulations and standards that govern the labour context of federal employees. In 1972 significant legislative changes to the Canada Labour Code were introduced which included the Canada Labour Relations Board becoming an independent, quasi-judicial entity to more effectively serve its mandate to promote harmonious industrial relations and mediate/adjudicate labour disputes. (66-68) The Canada Labour Code consists of three sections: industrial relations

(Part I), occupational health and safety (Part II), and employment standards (Part III), the contents of which apply to approximately ten percent of Canadian employees (ninety percent of people employed in Canada fall under provincial labour regulations) including employees of Canada Post Corporation (since 1981). (69, 70)

The relationship between Canada Post management and employees has had a lively and contentious trajectory. This relationship has shaped not only the conditions of work for those employed in the postal service, but has also influenced the landscape of Canadian labour history. (65, p.300; 71, p.141) The national wildcat (unauthorized) strike action in 1965 undertaken by post office workers was the largest incidence of job action ever undertaken by government employees and one of the largest national strikes in Canadian history. (65, 71, 72)

Arbitrary work rules and oppressive management behaviours and policies in the post office had reached a tipping point by the mid 1960's and this circumstance coupled with postwar economic prosperity, greater employment and educational opportunities (especially in the public sector) and growing awareness of and concern with civil rights, helped foment the desire for workers to take a stand against their work situation. (59, 62, 63, 65, 71) The postal strike in 1965 led to the creation of the Public Service Staff Relations Act (PSSRA) which, amongst its many prescriptions concerning labour relations processes and interactions, provided the legal right to strike to all federal employees. (71) Although the PSSRA was a step forward in improving labour relations

systems and interactions for federal workers, including postal employees, certain aspects of the work context remained non-negotiable, including; job security, introduction and impact of new technologies, the use of temporary (or “term”) workers and the structure of working conditions. (71, 72) These issues were becoming increasingly important to workers and the fact that they had no negotiation power concerning these matters generated continuing efforts to have their interests and concerns given fair consideration. (71, 72)

In October 1981 Canadian parliament unanimously passed the Canada Post Corporation Act which established Canada Post as a Crown Corporation and ended its status as a department of the government. As a Crown Corporation, Canada Post remains a responsibility of the federal government but operates similar to an independent business or enterprise with its own board of directors who oversee the overall direction and management of the corporation. (73, 74) As a Crown Corporation, the working conditions of employees of Canada Post were no longer regulated by the PSSRA but now fell under the purview of the Canada Labour Code. This change helped to streamline labour relations processes to the extent that employee unions and associations began negotiating directly with Canada Post management representatives rather than manifold levels of government. (72, 73)

An exception to the changes brought forward in 1981 concerned rural and suburban mail couriers (RSMCs) who were excluded from access to the provisions of the Canada Labour Code under section 13.5 of the Canada Post Corporation Act which stipulates:

*“Notwithstanding any provision of Part I of the Canada Labour Code, for the purposes of the application of that Part to the Corporation and to officers and employees of the Corporation, a mail contractor is deemed not to be a dependent contractor or an employee within the meaning of those terms in subsection 3(1) of that Act.”* (75, 76) The exclusion determined that rural mail delivery personnel had neither the occupational health and safety provisions stipulated in Part II (Occupational Health and Safety) or Part III (Standard Hours, Wages, Vacations, and Holidays) of the Canada Labour Code or access to the negotiated labour-management collective agreements that governed the working conditions of other delivery employees (letter carriers) employed by Canada Post.

Historically, RSMCs operated as independent contractors who obtained work from Canada Post through a competitive process of sending in sealed tenders for advertised vacant rural routes. If a tender was successful, the contractor would maintain the route for the period of time stipulated in the advertisement. Generally, the process was repeated every few years with no guarantee that the incumbent route holder would retain the assignment. (77) Arguably, section 13.5 of the Canada Post Corporation Act was developed to maintain the (pre)existing business relationship between the parties (RSMCs and Canada Post); however, the inclusion of this section was actively and continually resisted during consultations on the contents of the Act by unions representing Canada Post employees. (75, 78) Under Canadian law, a primary difference between an independent contractor (a person who is self-employed) and an employee (a person who works for someone else, a company or organization) is that a person who is

self-employed does not require and is not provided the labour protections and standards that dependent employees are accorded. (79) Dependent employees have rights and recourse related to fundamental employment and health and safety concepts including refusing unsafe work, wage protection(s), reasonable notice of lay-off or termination, and leave for cause (maternity leave), while self-employed people receive no such employment related securities or shelter. (77, 79)

Fudge, Tucker, and Vosko note in their analysis of the legal distinction between dependent employees and the self-employed that the majority of self-employed workers in Canada more resemble employees than entrepreneurs but are (inappropriately) classed as independent contractors in the eyes of the law. (79, p.197) In the case of RSMCs this distinction was particularly vexing because of the broad similarity of the duties they perform to the duties of letter carriers who are classed as employees of Canada Post and privy to the enhanced labour protections offered through the collective bargaining process and the Canada Labour Code. (75, 77, 78)

Dissatisfaction with the content and restrictions imposed by section 13.5 of the Canada Post Corporation Act led to court and tribunal challenges by RSMC groups (the Association of Rural Route Mail Couriers and, later; the Organization of Rural Route Mail Couriers with the support of the Letter Carriers Union of Canada and the Canadian Union of Postal Workers) to overcome the limitations to their employment status and negotiation power throughout the 1980's and 1990's. (75, 77, 78) The perseverance of the RSMC groups and union(s) led to a successful campaign in 2002 to have RSMC's

become members of the Canadian Union of Postal Workers. The CUPW subsequently petitioned the Canada Industrial Relations Board to recognize RSMC's as employees and formally assign their right to collective bargaining. Through a combination of political, public and legal pressures, Canada Post agreed to negotiate a collective agreement that would set-forth the rights and working conditions for the more than six thousand RSMC's across Canada. The first RSMC (as members of CUPW) collective agreement came into effect on January 1, 2004. (75, 77, 78)

The journey to their recognition as employees under the Canada Post Corporation Act and to their first collective agreement with their employer was a long, non-linear experience resulting in thousands of formerly contingent workers becoming full and part-time employees with coverage under and access to a myriad of labour rights and protections that had not previously been part of their work context. As Pollack notes, this somewhat unique and momentous outcome should have resonated in conversations, op-ed pieces, and other media communications throughout rural Canada, but instead the event passed virtually unnoticed. (77) The transition of RSMCs from contracted workers to employees may have gone relatively unnoticed by the Canadian public in 2004 because the transformation did not effect any change on the service aspect of rural delivery – rural customers received their mail in the same way and at the same time from the same people. Within three years; however, the voices of the public would be heard in MP and MPP offices, city and town halls, local news and online as a direct result of the change in employment status of rural and suburban delivery couriers and the legislative and contractual obligations and requirements issuing from the change.

Across all Canadian jurisdictions, occupational health and safety laws have been developed (the 1978 Ham Commission recommendations are a key example) and included in provincial and federal labour legislation(s) which impose duties on employers to inform workers of potential and actual job-related hazards (the right to know), to include workers in managing workplace risk (the right to participate), and to not require workers to perform unsafe work (the right to refuse). (55, 60, 62, 79) From January 1, 2004 forward, RSMCs were able to exercise their health and safety rights and as the majority of their workday consists of travelling down, stopping on, and re-entering rural roadways it is unsurprising that the majority of occupational health and safety concerns and complaints emanated from traffic-related risks and exposures. (80)

The sheer number of health and safety grievances and refusals generated from RSMCs across Canada between 2004 and 2006 underscored the need to assess their working conditions in a comprehensive and systematic manner. (80) To achieve this end, Canada Post Corporation launched the Rural Mail Safety review and, in consultation with CUPW, as well as independent health and safety organizations, developed a means (the traffic safety assessment tool or 'TSAT') to assess rural mail delivery risk factors. (80) Applying the TSAT to every rural mail box location, route by route, throughout Canada led to community outreach and conversations with Canada Post customers concerning the safety of their roadside mail receptacles. The content of these conversations invariably focused on Canada Posts responsibility to take steps to ensure that the RSMC workplaces (which include public roadways) meet occupational health and safety standards. (80)

It is interesting to note that the same group of workers who, for most of their occupational history, had minimal access to the scope and range of health and safety protections available to other work groups performing demonstrably similar work became the subject of (arguably) the largest workplace safety review ever undertaken in Canada. There are likely many contentious (following the observations on the development and current state of occupational health and safety regulation in Canada offered by Tucker, Fudge, and Barnettson) economic and political reasons underpinning the transformation of RSMC's from contract workers to indeterminate employees. Yet, it is equally likely that the commitment and endurance of the RSMCs and their labour, public and political partners and supporters (75, 77, 78) to mobilize in a sustained and adaptable way (75, 77) coupled with the patience to wait for the right or "ripe" temporal frame helped to motivate a positive political and economic response regardless of any (primarily financial) obstacles. (55, 62-65, 71, 75, 77, 78) This perspective gains greater persuasive force if it is agreed that the history of Canadian labour rights and health and safety protection is largely a history of worker diligence, perseverance, collective action/activism and communication. (55, 57-60, 62-65, 75, 77, 79) Interestingly, a plausible argument may be advanced contending that diligence, perseverance, collective action and communication are also hallmarks of successful public health outcomes. (81) Aspects of this argument will be recognized throughout this study.



## **1.9 Occupational Health and Safety and Knowledge Utilization**

A synoptic survey of important developments in the establishment and refinement of occupational health and safety legislation, with reference to the Canadian postal service, has been detailed in the previous section. However, it is useful to review current thinking in occupational health and safety from the perspective of knowledge utilization to develop an understanding of the general state of the relationship between the two and to identify potential contributions of the present research initiative.

Canadian regulations concerning workplace health and safety were substantially revised and redeveloped during the 1970's, instituting reforms that continue to endure and influence current rules and conversations relating to occupational safety. (55, 62) In Ontario, the current direction of workplace safety theory and regulation was undertaken as a result of the recommendations produced by Dr. James Ham who was appointed by the provincial government as Chairperson of a Royal Commission tasked with investigating workplace health and safety concerns in the mining industry in 1974. (60, 82) The Ham Commission (as it came to be known) recommendations were released in 1976 and many of the prescriptions suggested were utilized to create the most extensive occupational health and safety legislation in Canada at the time. (60, 82)

A core recommendation issuing from the Ham Commission report and adopted in the new governing legislation was the idea of an internal responsibility system which established the guiding principle that government representatives, employers and employees need to cooperate with diligence and commitment to improve occupational

health conditions and outcomes. (60, 82) The enactment of an OHS internal responsibility system included increasing worker participation in the administration of health and safety issues and concerns through the creation of joint (worker and employer) health and safety committees and through providing workers basic workplace health and safety rights: **the right to participate** (as OHS committee members), **the right to know** (through workplace training) and **the right to refuse** (unsafe work). (55, 60, 82)

The Ham Commission brought forward a number of important ideas that led to positive changes in the understanding and administration of workplace health but the emphasis on worker participation, worker-employer cooperation, and the sharing of knowledge was, considering the time-period, particularly notable and prescient. (60, 83, 84) The strategies communicated by the Ham Commission echo through to the current era as evidenced in remarks by Raymond et al., concerning the importance of the participation and collaboration of everyone in the workplace towards generating knowledge to ensure and promote safety in occupational settings. (85, p. 27) The influence and continuity of the Ham Commission recommendations is further acknowledged in the 2010 Ontario Expert Advisory Panel on Occupational Health and Safety chaired by Tony Dean which specifically identifies the internal responsibility system and its foundational principle; that all workplace parties share in preserving and protecting workplace safety, as the guiding philosophy for occupational health and safety since the publication of the Ham Commission report. (84, p. 28)

The Dean report recommends the strengthening of the internal responsibility system through enhanced training and development of local joint health and safety committees

(84 p.13, pp. 28-31) and generally advocates greater clarity concerning stakeholder and partner roles and responsibilities through better information sharing processes and procedures. (84, pp.15-17) Based on these recommendations, it is clear that knowledge utilization is recognized from both a practical and conceptual perspective as a primary concern for occupational health and safety systems. This concern is identified and discussed amongst health and safety practitioners, researchers, and administrative leaders across most, if not all, levels of activity: local, regional, provincial, and federal. (86-89)

There is some general consensus around certain features of this topic: 1) the use of different terminology to describe knowledge utilization (for example; transfer, translation, exchange, dissemination, implementation) processes can be inconsistent, confusing, and/or misleading (a more detailed discussion concerning terminology is in Section 1.5) (41, 89, 90), 2) the literature on OHS and KU is not well-developed (89, 91-93), and 3) that an active, systems-based, multidimensional and participatory understanding of knowledge utilization and OHS prevention processes may provide greater insights and options related to improving outcomes than passive, top-down, linear, and non-collaborative research or directives. (84, 86, 88, 89, 94)

There are also some consistent findings in OHS research and knowledge utilization indicating that knowledge utilization activities are generated primarily through practice networks codifying their experiential heuristics in guides, reports and process maps with little or no reference to peer-reviewed published knowledge transfer research. (89, 91) It is through the practice networks themselves and the relationships intersecting and emanating from such networks that knowledge is developed, shared, refined, and

actioned. Emphasis on distributing OHS knowledge and practice with wider audiences is placed in the areas of conference and symposia activities or member meetings, with less emphasis concerning formalized research submissions to professional or academic journals. (89, 91, 95)

These research findings suggest that in the field of OHS knowledge utilization is very much focused on practical requirements and needs mediated through rich relational networks. (43, 88, 89, 91, 93, 95) According to Laroche and Amara's 2010 OHS research study, researchers who focus on needs from a knowledge utilization perspective coupled with developing and maintaining relational capital showed increased knowledge transfer when compared to those who focused on the advancement of knowledge using traditional research dissemination systems. (89, p. 9)

There is a strong sense throughout OHS research that knowledge is recursive and relational which closely mirrors the pragmatist perspective of knowledge and philosophy of science. Ulrich comments that American pragmatism was the first philosophy of science to challenge the rationalist/empiricist chasm by identifying the social, iterative and referential dimensions of knowledge. (96, p.1110) Based on this understanding, the challenges confronting knowledge utilization are largely socially embedded and typically require socially structured resolution. (43, 89, 93, 96) Social and organizational networks, regardless of type or size, are more and more being identified and understood as complex adaptive systems (CAS). (97-99)

The idea of complex adaptive systems can be understood in different ways depending on the context within which the concept is located and derived. That being said, certain

consistent features of the concept can be identified. CAS are systems comprised of distinct or discrete parts which are interrelated directly or indirectly in ways which may or may not be structured hierarchically but emerge and operate as a whole. (97, 99, 100) CAS consist of (and are examples of) emergent, self-organizing properties; properties which dynamically grow and develop in response to existing and pre-existing conditions or contexts but are not necessarily governed by centralized parameters or controls. (97, 98-100)

CAS are complex because of the number and variety of interacting and interdependent constituents or parts, all of which influence the development and operation of the whole in non-linear and unpredictable ways. (97-100) A fundamental aspect of complexity concerns the effect of chaos. Non-linearity is a feature of CAS and the unpredictable nature of the interactions amongst interdependent constituencies leads to conditions where the initial state or status of a system is altered as a result of the uncertainty at play within it. Uncertainty within the initial conditions becomes magnified over time and grows in influence exhibiting what is usually described as chaotic or random behaviour. These kinds of situations can be identified when normally consistent observable features of a system, suddenly manifest new or unexpected behaviours or results. An understanding of the operation of chaos in relation to complexity leads to accepting the idea that long-term predictions are unrealistic and rest on shaky foundations while short-term predictions are generally reliable and robust. (97, 100)

CAS are adaptive because changes are motivated both internally and externally depending on manifest conditions. Change may issue from competitive or cooperative

conditions and take the form of alterations or refinements of existing properties or be a completely new attribute depending on the context within which the adaptation is provoked. (97-100)

If we allow the concept of CAS to guide our inquiry we come to realize, with Jordan et al., that interdependency and connectivity within a system translate to relationships and the linkage quality of those connections has extensive influence over intervention and knowledge utilization outcomes. (16, 97) Consistent with CAS concepts around chaos and contingency, social relationships are rarely predictable over long terms, but tend to be more consistent, stable and reliable across short time spans. Extending from this premise is the idea that knowledge utilization requires grounding in relationships or partnerships that are proximal to the practice arena or area(s) of deployment. This may be one reason why Laroche and Amara found that knowledge utilization success in OHS is closely attuned to and aligned with end-user needs. (89)

The value of social relationships and the role of communication and dialogue to form, maintain and extend social linkages, knowledge and cooperation is considered by Rochlin to be the fundamental feature of safe operation, especially in organizations where risk is ever-present (air traffic control, nuclear power plants, military operations) and errors are very likely to result in catastrophic injury or loss of life. (101) Rochlin states: “The maintenance of safe operation...is an interactive, dynamic, and communicative act...”, and he further elaborates that the communicative activities (described from an organizational point of view as communities of practice [102, p.139]) are largely informal, ongoing, self-organizing, co-evolving (dovetailing nicely with the Jordan et al.

description of CAS [16, p. 4]), and responsive with both individual and collective contributions operating to activate and integrate safety knowledge. (101, 103, p.21)

A similar view of workplace safety operations can be found in the literature around resilience engineering. Resilience engineering begins by recognizing that workplace safety and risk management cannot adequately be achieved, described or assessed according to static, reductionist or deterministic processes or procedures due to the inherent variability of people, environments, and technologies that collectively merge in a workplace or organization. (18, 98, 101, 104) Resilience engineering is grounded in the idea that safe operation and safety measures are not reducible to and cannot be defined by an absence or presence of predictable or assignable linear cause-effect mechanisms, but consist of active system-based adaptations to achieve and support stability and sustainability under variable conditions. (18, 98, 104)

The capacity to develop, share and integrate safety knowledge and risk awareness cannot be limited to information gained through retrospective accident event analysis and a reliance on systemizing or patterning current protocols according to reactive, 'root-cause' investigations. (18, 98, 101) Safety prevention and safe operation depends as much, if not more so, on what is being done successfully coordinated with operator (and system) vigilance and anticipation to monitor and manage practical drift (operator movement away, gradually – over time, from originating system processes to more locally informed and mediated processes) and maintain reliable but flexible safety processes. (18, 98, 103)

Risk engineering mirrors the conditions of CAS in that it advocates and supports adaptive, collaborative, co-evolutionary, ongoing non-linear and proactive knowledge

development and applications that include planning for surprise (98, 101) within a culture that embraces and encourages liminal communications. (98, 105) A key aspect of risk engineering is the ongoing, continual operation of the effort to achieve and support sustainability. (18, 98, 104) The difference between safety state and safety readiness is the active and progressive aspect of ‘readiness’ which includes the capacity to make adjustments not just prior to or after a disturbance, but *during* the unforeseen disruption or event. (18, 98, 101)

It may be inferred from the resilience engineering perspective developed to this point that knowledge utilization in OHS is a dynamic, responsive and dialogically generative activity that develops and achieves sustainability and reliability through ongoing adaptive and co-learning relational networks that are grounded in both the conceptual (experimental-exploratory) and practical (applied-instrumental) domains. Many of these ideas resonate throughout the examination of the RMSR which, in many ways, provides an interesting example of implementing OHS strategies according to CAS and resilience engineering conditions.



## **2.0 Scientific Contribution**

A consistent message and theme in this investigation is that negotiation strategy and practice is an undervalued and often missing linkage in the knowledge utilization continuum. Reliable information does not always motivate action or agreement.

Discovering, developing, refining and/or sharing credible, evidence-based knowledge does not necessarily result in changes to audience disposition, behaviour, mores, policies or related examples around patterns or habits of action. (43, p.160, 106) A core function of negotiation is to motivate action through the appropriate (shaped according to context) coordination and application of information.

Negotiation includes a range of strategies and processes undertaken to obtain agreement or settlement to resolve contentious issues and/or competing interests. Negotiation may take the form of cooperative or competitive interactions, but it is fundamentally a communication process directed toward problem-solving. (107-109) Negotiation circumstances are situated within particular forms of life and the strategies undertaken to resolve disputes typically draw on features, narratives and information specific to the presenting context. The greater the capacity of the negotiator to investigate and understand competing interests, motivations and/or perspectives, the more they are able to structure or give shape to a problem solving initiative and increase the range of options to reach agreement and motivate positive action. (107-109)

## 2.1 Surveying the Problem

There is general agreement across the knowledge utilization spectrum that something is missing. (11, 46, 50, 110, 111) A primary argument in this dissertation is that what missing is a hinge allowing the knowledge-to-practice door to operate more freely. Negotiation acts as such a hinge through the role it plays in evaluating and structuring the conditions for knowledge to be successfully imparted and deployed. On the view of knowledge presented in this discussion; it is situated, provisional, sometimes contested and relational. Negotiation is particularly instrumental and useful for mediating and bridging social distance. Malhotra echoes this point in his observation that knowledge transfer succeeds not by virtue of technology (computers) or documents but through personal contact and interactions between people. (112) Brams approaches the same territory from another route and notes that negotiation is crucial for navigating the range of strategic problems that occur when people communicate with one another intersubjectively and within communities. (46, 111,113) Brams' thinking accords with Bakhtin's and, later, Bohm and Shotter's views that understanding (114-116) emerges through dialogical interplay (joint expressive activity) between people. According to Dewey, knowledge and experience are emergent conditions extending from and through human interaction (inquiry, investigation and discussion) in the public sphere (9, pp. 193-194; 196; 210-211) - the same space in which negotiation occurs.

Van de Ven points out that knowledge utilization may expose or exacerbate conflicting interests among parties and that negotiation is necessary to overcome often thorny and

complex communication problems. (11, p. 234) Similarly, Polyani et al. suggest that research utilization has been overly concerned with the content and quality of messaging rather than the interactions between researchers and users of knowledge. They, like Green et al., identify social distance as an ongoing problem in the research-to-practice effort and emphasize the importance of interactive social dialogue to increase successful research-to-action applications. (111) Polyani et al., also point out that the gap between research outcomes and practical application is increasing rather than decreasing and they voice their agreement with other researchers who have expressed the need for new dialogical, pluralistic initiatives to improve work and health research-to-action evolutions. (111) A guiding premise in this study is that negotiation provides the mortar to fill the gaps between knowledge and practice by facilitating shared understanding and generating options to overcome impasse.

In the RMSR the TSAT was used as both the instrument to test rural mailboxes and as a means to support and justify the CPC request for customers to relocate their mailboxes to positions that meet TSAT criteria (denoted by a stake, flag or paint marking the new position). Initially, communication of TSAT results and related instructions to customers took the form of informational directives. The delivery of TSAT results and subsequent requests to either relocate an RMB to meet TSAT criteria or centralize mode of delivery (MOD) to CMB, GMB or PO Box locations was not well received by the public. The scientifically derived, evidence-based knowledge referenced to substantiate the safety requirement was credible; however, the form in which the knowledge was delivered resulted in difficulties, complaints and refusals. The obstacle was not necessarily the

content of the message (the explicit knowledge itself, including requested actions), the obstacle was the form in which the message was delivered. The connection between the new knowledge and practical or required outcomes was not being successfully transmitted, leading to a need to review the knowledge utilization/communications program. The argument supported throughout this research investigation is that the gap between knowledge and practice is a space in which negotiation is crucial to establish knowledge-to-action outcomes.

## **2.2 The Research Orientation**

Dewey's conception of inquiry; containing both active (experimentation) and passive (reflection) components provides researchers with wide latitude in determining what investigative methods work best for a particular inquiry. In order to capture, analyze and describe the complexity of the knowledge to practice work that links all aspects of the CPC rural mail safety review, the research enterprise utilized a grounded research methodology. (117-121)

Both William James and John Dewey shared the view that the function of research and experimentation was to create new tools or improve existing ones to help people shape their lives (and circumstances) and move forward in a world of complexity and indeterminacy. (122-125) In keeping with the view that a defining character of inquiry and investigation is praxis utility (123, 124), pragmatic research is not bound to a

particular qualitative or quantitative methodology but focuses on integrating the strengths of a range of approaches. (125)

### **2.3 Research Questions**

The research questions flow from the perspective of the RMSR as a complex adaptive system and seek to illuminate the development (and re-development) of knowledge utilization protocols and applications during the period of 2006-2013. A principal benefit of this investigation derives from identification and analysis of the transition (practice drift) from the original or originating state of the RMSR processes (work as imagined) to the ongoing operational state (work as performed) and what may be learned concerning OHS knowledge utilization from the RMSR experience.

Research question development was guided by Tilley and Pawson's conception of realistic evaluation (RE) which maintains that a change intervention system is open (unpredictable), active (collaborative & co-evolving), and sourced in and motivated by theory which is adaptive and refined over time. The authors note that the delivery of intervention programs are embedded in social systems that play a significant role in how the intervention is deployed, applied and sustained. (126) The research questions generally follow the *context-mechanism-outcome* RE frame for generating understanding concerning an implementation program or system. (126)

Three core propositions I developed based on my RMSR experience and informal and formal conversations with colleagues and the public are as follows:

1. Knowledge utilization is an activity embedded in a form of life and/or community of practice.
  
2. Processes that are developed and deployed from a conceptual perspective are often tweaked, re-interpreted or abandoned in practice.
  
3. Negotiation (rooted in attentive, anticipatory, open dialogue), as a means to bridge social distance, establish and build rapport and generate viable options to overcome difficult or unappealing circumstances is invaluable to successful knowledge utilization.

These three propositions were revisited and reaffirmed regularly throughout my experience as a member of the Canada Post RMSR and my impression is that similar experiences and opinions occurred to my colleagues. These propositions shaped and guided both my research and interview questions:

**1. What was the implementation plan?**

- (i) How were outreach strategies developed?

- (ii) How were the strategies deployed?
- (iii) What changes, if any, were made as the plan moved forward?

**2. Did the rural context influence the implementation strategy? If so, in what way(s)?**

**3. What was learned through the RMSR experience from the perspective of introducing and implementing new workplace safety knowledge and procedures?**

- (i) How were operational challenges identified & resolved?

## **3.0 Theoretical Perspectives and Approaches**

### **3.1 John Dewey's Pragmatism**

Pragmatism is an American philosophical system innovated by Charles S. Peirce, William James and John Dewey. (127) Although all three thinkers are pivotal figures in the development of pragmatist theory, this research initiative is guided by Dewey's conception of pragmatism which favours a practice and context-situated understanding of the relationship between scientific experimentation and knowledge (knowing) and the way(s) in which it may inform knowledge utilization strategies.

Dewey's pragmatic perspective views knowledge as mutable, linked to experience and context and liable to innovation and persuasion. (8, 9, 39, 125, 128, 129) For Dewey, knowledge results from practical engagement and inquiry and is not isolated from prevailing conditions or context. On this view, social scientific inquiry is a practical ongoing participation in and application of inquiry, experimentation and critical comparative analysis. (9, 128)

Dewey rejected adherence to Cartesian mind-body duality and was suspicious of traditional epistemological perspectives due to their silence concerning the role of practical activity in shaping and creating knowledge. Dewey argued that reality and knowledge of reality have practical, active, evolving characteristics that emerge through contact, interaction and manipulation with the environment. (9, 128, 129) He further believed that philosophy and science should be more concerned with refining or creating



systems or methods, through inquiry and experimentation, to solve problems that occur in and are relevant to daily life and living. Dewey's pragmatist orientation has an instrumental aspect that values action guided by science but remains anchored to the humanistic concern of improving lives and conditions of life in both the present and the future. (130, 131) Accordingly, Dewey's pragmatism possesses a naturalistic-realist slant in the sense that he believed we are born into a certain contingent and historically-shaped milieu and that we grow, learn and move forward by interacting with and exploring our current state of affairs using the tools we have and those we devise to confront emerging or existing challenges. (127, 129, 130, 132)

W.V.O. Quine supported the naturalist ontology and epistemological fallibilism perspective, explaining that it is consistent to recognize physical objects as *real* while accepting that they may be open to amelioration or re-examination. According to Quine, the facts and insights of science and discovery are held as *true* but not necessarily closed, finalized or unassailable. He argued that we are authors *and* discoverers of truth, and that a fallibilistic epistemological perspective provides room for revision, correction or replacement of theories, ideas, systems or facts that may, in the future, be revealed or shown as erroneous. Quine and Dewey's positions are not dissimilar. Both philosophers agree that within a given context we work with the tools (conceptual and functional) that are available to us and improve them as we discover or innovate better ways of proceeding. (8, 128, 133, 134)

Dewey found the Cartesian notion identifying doubt as the starting point of knowledge creation somewhat wanting. Dewey's view is that knowledge formation issues from practical or conceptual activity reaching a limit, obstacle or blockage creating a crisis of equilibrium (dysfunction or disquiet within a life-world) which requires resolution. (8, 127-131) The function of inquiry is to transform or resolve an indeterminable state of affairs to improve an outcome or unify relevant but discordant issues. (8, 127-131) Inquiry is an interactive activity in which experimentation, reflection and communication are key elements. (8, 10, 127-131, 135)

Dewey's instrumentalism provides a rich theoretical perspective from within which to explore knowledge utilization as both practices share constituent elements including; inquiry, reflection, consultation, interaction, and utility. Collaterally, Dewey's theory of inquiry is flexible and amenable to change as new or different tools (conceptual or practical) become necessary or desirable to confront problems or impasse. (8, 132)

Deweyan pragmatic social scientific inquiry is a cooperative human practice that includes both an experimental orientation consisting of interaction with and manipulation of the environment, as well as intersubjective communication and negotiation. (10, 132) If we agree with Dewey that "reality possesses practical character" (10), it can be argued that knowledge of reality possesses practical character and this idea of knowledge as an active-interactive-reflective praxis is fundamental to Dewey's conception of inquiry and epistemology. (8, 10, 128-131) Theory arises from the experience of actions in the world

(interactive and experimental) and through excursive and recursive deliberations reliable warranted assertions (arrived at through deductive, inductive and/or abductive reasoning) can be determined, communicated and applied. (10, 132, 135) Knowledge is generated through social experience and practice (132, 135, 136, 137) leading to the insight that a useful way to conduct research on knowledge utilization is via practitioner-based inquiry within a system in which knowledge utilization is central.

### **3.2 Sensitizing Concepts**

A guiding premise of all social science research, regardless of the form or style, is to improve understanding concerning conditions and interactions in, of and with our life system. (120, 121, 138) Invariably, the meaning of research data (represented as numbers or words) is influenced by researcher interpretation. (125, 132, 136, 139) In most, if not all, cases it is evident that understanding requires interaction (3, 14, 16, 120, 136) and every research initiative counts as an interaction (albeit to varying degrees) with the subject or object of inquiry or interest. In order to gain a more robust and complete picture of a researcher's (or research team) interpretation of the meaning of data, it is useful to have an account or summary of the background concepts and practices that they bring to the research initiative. (1, 140)

Sensitizing concepts are the background ideas that provide general reference points which guide and inform the research study. (1, 121, 140) Sensitizing concepts provide ways of understanding, organizing and interpreting the research problem and may be implicit or explicit aspects of the research undertaking. They reveal the starting point

of the research quest through identifying the researchers background interests and development. (1, 3, 140) Disclosure of a researcher's organizing concepts provides readers and reviewers of a research study access to the presuppositions of the researcher and the ways in which the identified concepts shape the researchers interpretation of the data. In order to address these issues for the present study, sensitizing concepts serve the dual purpose of providing a sense of bearing or orientation regarding the research problem and as a reflexivity compass directed towards achieving ongoing attention to and awareness of preconceptions and background conditions that may shape the data analysis and the summary or report of findings. The sensitizing concepts for this proposed research study include practitioner-based research, Wittgenstein's philosophy, and negotiation theory.

### **3.3 Practitioner-Based Research**

Practitioner-based research is a variant of action research closely related to Dewey's conception of inquiry and concerned with minimizing the theory to practice gap. (38, 141) A fundamental goal of action research is close interaction and involvement with research participants throughout the research process to deepen and extend understanding, culminating in greater awareness of and improvements within the research context and application. (142-144) Employing a pragmatist practitioner-based inquiry to investigate knowledge utilization issues focuses the research effort on actual, dynamic practices within a specific context and with a community of participants who are actively

involved in the circumstance or condition under investigation. (144) Immersive inquiry provides researcher access to authentic practice within the research context, the experience of which leads to awareness, reflection, discussion and experimentation concerning the refinement or redevelopment of past or existing techniques in new, novel or improved ways. (8, 132, 144)

The modern workplace is a complex, dynamic and constantly evolving environment and is increasingly structured according to interpersonal, relational skills and capacities (intellectual or cognitive capital). (144) A key ingredient for knowledge utilization research is a commitment to ongoing relationships and engagement with and within a community of practice. (46, 53, 102, 145, 146) Knowledge utilization research, in order to achieve and maintain credibility and relevance, requires interaction beyond a few visits with stakeholders and participants. As Bowen and Zwi (147) point out, effective knowledge transfer is not a singular event or application but an ongoing sustained process which develops, takes hold and deepens over time.

Practitioner-based research activities are interactive and inclusive (17, 144, 148-151) and, as a result of being situated in the context within which the research arises or is informed, have the advantage of extending from and through relationships that can sustain the research effort across a greater range of a knowledge utilization experience and investigation. (4, 5, 15, 146) A knowledge utilization research undertaking situated within an action research framework resembles less of the *push* (expert or researcher-led) - *pull* (user/practice-led) dynamic characterized in some accounts of knowledge utilization

models (41, 52, 152) and more of a shared or collective interaction (152) in which power imbalances are checked through democratic and consensus-based decision making and equitable distribution of roles and responsibilities. (111)

Practitioner-based research is closely aligned with the Deweyan account of structured inquiry. Dewey held that researcher immersion in the research context including collaboration and exchange with others involved in the practical and theoretical aspects of a matter under investigation, were essential elements of experiential inquiry. (39, 53, 153) Action and pragmatist research frameworks begin situated within the community of practice where the research investigation occurs. Challenges to successful implementation outcomes such as; low trust, inconsistent or weak relationships, lack of ripeness or support for the research undertaking, and perceived or actual asymmetric power relations (14, 46, 51, 53, 110, 146, 147, 152, 154) are less likely to be contentious issues under an action research or pragmatist framework as both operate according to pluralist, inclusionary and relational principles.

### **3.4 Wittgenstein's Philosophical Investigations**

Wittgenstein was amongst the first philosophers to recognize the importance of understanding the role and influence of language on meaning and conceptual clarity. (155, 156) He likened the contribution of philosophy to untying knots in our thinking (157, *S452*) through identifying and resolving language-based problems (particularly the

constitutive rules and relations). (156,158; *SI19, 122, 127, 133, 255*) Wittgenstein recognized that language and human practice (activity) are communal and inextricably linked, and that meaning emerges from relational communication activated through both thought *and* deed. (155, 156) These are important ideas that will be referenced, directly and indirectly, throughout this research enterprise.

Wittgenstein is widely regarded as the most important philosopher of the preceding seventy-five years. He was the only philosopher included in TIME Magazine's 1999 special issue: "The Century's Greatest Minds" (159) and author/philosopher Jim Holt identifies Wittgenstein as; "the greatest philosopher of the 20th Century" (160) while Richard Rorty and Roy Bhaskar both identify Wittgenstein as one of the most important thinkers of the past century. (161, 162) Wittgenstein was not a pragmatist and of the pragmatist philosophers, it was William James whose writings he referenced in his own lectures. (163) James' perspective intrigued Wittgenstein, and although he generally disagreed with James' logic, he greatly admired James as person. Yet, Wittgenstein's own ideas on skepticism, knowledge and certainty bear close resemblance to John Dewey's pragmatist perspective. Both Wittgenstein and Dewey's philosophies represented alternatives and challenges to the dualistic and foundationalist philosophical distinctions introduced by Descartes in the seventeenth century. (164) Descartes argued knowledge is an internal quest independent of social, political, historical, spiritual, economic or practical concerns, derived from inner inquiry and examination to reveal direct insights which cannot be reasonably doubted. (164, p. 715)

Both Wittgenstein and Dewey counter Descartes perspective noting that all confirmation or disconfirmation of a hypothesis occurs within a context and according to a particular frame of reference. (6, *S83, S105*; 9, pp.195, 212, 226) For Wittgenstein, the meaning of a word has a connection to its use (6, *S61*) and; for Dewey, knowledge and activity are intertwined. (9) Wittgenstein held that we proceed in certain ways according to what has been transferred to us through our language and activities; our form of life. Background activities, shared through language, guide our actions and conditions of knowing. (6, *S94, S105, S275*) In this sense knowledge is provisional; it evolves and develops and is subject to confirmation, revision and renewal through the ongoing activity of progress. Dewey held a remarkably similar view, noting that no experienced situation or attitude can be said to be immutable or final due to the interrelations, conditions and interactions which led to or situate the experience – all of which are also subject to change and/or revision. (9, pp.193-4, 236)

According to Wittgenstein knowledge and doubt are imbedded in language, in a sense they are two sides of a coin (6, *S354*), and it is the limit of a language that creates a limit to justification. (6, *S204*) Wittgenstein notes that language systems are not static, but dynamically change and evolve (6, *S65*) and new meanings emerge. That there are flaws in our language can be readily acknowledged, for as Wittgenstein points out, our language was not constructed according to a form of careful, systematic reasoning. (6, *S475*) Accordingly, accounts seeking to provide an unassailable definition of knowledge (which must entail retrospective features), will eventually break-down at the point where the language system cannot reach. At some point, according to Wittgenstein, to gain



insight, recognition or understanding, it is necessary to look at the practice of language (6, *S410, S457, S501*) which carries within it aggregations of refined, tested and stable information and propositions. (6, *S225*) Knowledge is carried through language and is connective (in a similar way as one part within an engine or machine is, by virtue of belonging to the machine, connected to and dependent on the operation of other parts) (6, *S142*) and adaptive (6, *S98, S99*) to the manifold ways in which communication and knowledge transact.

Dewey, in concert with Wittgenstein, does not view doubt as an insurmountable problem. For Dewey doubt and scepticism can be useful in refining and improving inquiry. (9, pp. 193-194) Wittgenstein argued that doubt presupposes certainty and only makes sense within a rule-governed system of language comprised of relatively stable rules which are generally recognized and accepted by people sharing a form of life. (155) On Wittgenstein's view the propositions which allow for the possibility of systemized language use may be considered as hinge propositions – propositions which stand at the beginning of a language system and provide the scaffold upon which subsequent language and thought may operate; the bounds of sense or backdrop against which a language system occurs. (6, 165) The background which both supports and contains a language system is also an accumulation of collective interactions and knowledge which necessarily contain practical (praxis/practice) dimensions. Knowledge, on this account, must have some degree of social character and it would seem that this is yet another point upon which Dewey and Wittgenstein are in agreement.

### 3.5 Negotiation Theory

There is no single definition that captures all aspects of what negotiation means. One way of describing it is as a multifaceted communication exchange or series of exchanges undertaken to achieve a particular outcome. Negotiation is generally a shared, interactive process delineated through each participant's willingness to engage with another or others to seek a desired outcome or resolve points of difference or disagreement. (107, 108,113)

An underlying assumption common across all negotiation circumstances is that there is a usefulness or benefit available through the communication exchange. (107, 108, 113,166)

Negotiation may be one-time event, a determinate series of meetings or an ongoing, indeterminate interaction and may involve discussions concerning a fixed or limited item or resource or manifold issues across a range of participants and possible outcomes.

Regardless of the form and breadth of the negotiation exchange, ensuing communications are not usually benign but are directed towards a particular conclusion or consequence and, in this sense, can be considered as strategic.(113, p.267) Communication strategies are varied but may be competitive (adversarial), cooperative, coercive, rational or irrational and may shift according to the context of the interaction, information disclosed (or not), power relations (asymmetrical/symmetrical), socio-psychological dispositions of the actors, and level of commitment to a desired outcome. (108, 113, 166)

Consistency amongst particular strategies or across clusters of strategies is represented through the use of techniques and methods to improve the chances that outcomes or

settlements are achieved. Examples may include; **anchoring** (determining/communicating the set-point or “bottom line” in a negotiation), **reframing** (shifting or altering the focus or terms of reference of a matter under discussion), **redescription** (recontextualizing a problem or issue using alternate wording to generate a new perspective and explore new possibilities or options), **ripeness** (measuring, managing and/or timing the appropriate moment to introduce a settlement option), and invoking **objective criteria** (appealing to a recognized independent third-party authority or evidence-based standard). (167-169) An understanding and familiarity with negotiation theory and practice is increasingly becoming essential in the areas of public policy, organizational development, workplace injury prevention and health systems. (108, 113, 166, 170-174)

Participatory action research (PAR) may arguably be the research approach that most actively engages in a non-hierarchical, transdisciplinary, interactive exchange of ideas and co-inquiry utilizing many principles which are also features of negotiation. (105, 149, 166, 172, 173, 175, 176) The origins of PAR can be traced to the growing desire, within both academic and non-academic communities, to generate practical knowledge that is useful, and can be understood and applied by the people involved in a community of practice. (105, 149, 172, 173, 175, 176)

PAR is guided by the idea that the researcher is connected to and engaged in the issues that are being investigated as well as the application of the research outcome. (105, 149, 172, 173, 175, 176) Participatory action researchers are engaged in relationships with co-

explorers, co-learners (105, 149, 172, 173, 175, 176) located within a context or community of practice and involved in investigations and outcomes that are anchored in mutual experiences and activities which are jointly constructed and administered. (105, 149, 172, 173, 175, 176) It is relatively rare to encounter specific mention or identification of negotiation theory and practice in workplace injury prevention research papers; however, the inclusion of negotiation principles and strategy is more common in PAR initiatives. (105, 149, 172, 173, 175, 176) Although the present research was not amenable to a PAR design and it not an example of action research, it is worth noting that PAR (arguably) represents a research approach which more fully invites, engages, and utilizes negotiation and communication processes than other research systems.

## **4.0 The Research Approach**

The focus of this research undertaking is experiential and grounded in activity. The research question explores the pathways and intersections of applied, functional knowledge utilized to frame, support and leverage change in a national and public workplace context. Through a practical, practitioner-based process of inquiry, the research exploration extrapolated data from within a community of knowledge workers who performed the work forming the subject of the research investigation. The results of the data analysis and interpretation contribute to and strengthen existing knowledge while also identifying additional knowledge applications that can be applied to similar future investigations or queries.

### **4.1 Research Design and Methodology**

The research method follows a pragmatic inquiry perspective situated from within a practice (practitioner)-based interactionist context and structured according to Van de Ven's organizational and social research framework: engaged scholarship. (11, 44)

Engaged scholarship is compatible with both Dewey's pragmatic social scientific inquiry and practitioner-based research in that it values pluralist and interactive participation amongst and across the range of people involved in the research context. (11, p. IV,18, 38)

Engaged scholarship seeks to interact with and support a learning community to explore research issues collaboratively with people involved in the context within which the research questions arise or are directed. (11, 44) In this way, knowledge is shared,

exchanged, vetted, and validated in a form that provides richer and deeper content than other research applications may provide. (11, 44)

Engaged scholarship research may be guided by different philosophical perspectives and Van de Ven notes that the adoption of a particular philosophy of science is a choice that should be made by each researcher through personal investigation and deliberation.

Different philosophical perspectives offer different strategies and frameworks to confront ontological and epistemological challenges, as well as providing a particular lens through which science and scientific research may be understood. (11) Van de Ven's version of engaged scholarship operates from a critical realist perspective and as already elucidated, the present research project is guided by Dewey's pragmatist account of inquiry. Both perspectives share a concern with scientific progress based on inquiry, discovery, exploration, and confirmation and both views are compatible in understanding science as unfinished and open to improvement or refinement. (8, 11, 44, 135)

Van de Ven, following Mohr, distinguishes two types of research approaches: process inquiries which seek to uncover causal relationships (explanatory/deterministic), and variance inquiries which are concerned with how particular practices or systems develop and/or change across a temporal span (descriptive/contingent). (11) The distinction drawn between the two models is not intended to be exclusive, but is meant to provide some guidance concerning the direction and focus of the inquiry.

Variance and process investigations are compatible and can be inter-related in the sense that an answer or outcome in one approach may reference and/or create linkage with the other (greater clarity is achieved by understanding both the explanatory and descriptive aspects of a problem domain). The process model design frames issues around process emergence, change and adaptability (evolutionary representation) according to temporal conditions which may be identified, measured and tracked through narrative description. (11, pp.159-160; 44) Narrative description can contain multiple perspectives, and may reference both qualitative and quantitative data allowing for a rich tapestry of research information to be communicated.

## **4.2 Access and Engagement**

Primary data collection included semi-structured interviews with participant knowledge managers and safety assessors/officers, content analysis of process materials as well as practitioner/researcher insights, observations and commentary. Research questions were developed (Appendix D) and interviews undertaken with a regional coordinator, five team leads, the communications manager and eleven safety assessors from the Canada Post Corporation Huron Rideau Rural Mail Safety Review team (Table 1). The Huron Rideau team was responsible for assessing all rural mailboxes in Ontario, which accounted for the greatest number of RMB's in one region (365, 341 in Huron Rideau and 44,121 in the Greater Toronto area). Contact with the RMSR national director and the Huron Rideau manager was made to seek permissions and consent to access, interview and engage Huron Rideau RMSR personnel. Interviews were conducted in-

person, except in cases where face-to-face interaction was not feasible; and in those cases, telephone interviews were arranged. Interactions were prefaced with an orientation concerning the nature of the research and served to orient the interlocutor to the interview context.

The interview preamble specified that there was no “right” or “wrong” response or reply and that, beyond the questions presented, there was no expectation or agenda involved in any aspect of the interview interaction or outcome. Throughout the interview process, Patton’s observation noting that interviews are interventions and may affect different people in different ways was used as a guide and reminder to maintain appropriate boundaries (avoiding judgement and/or providing counsel or advice) and balance throughout the exchanges. (121)

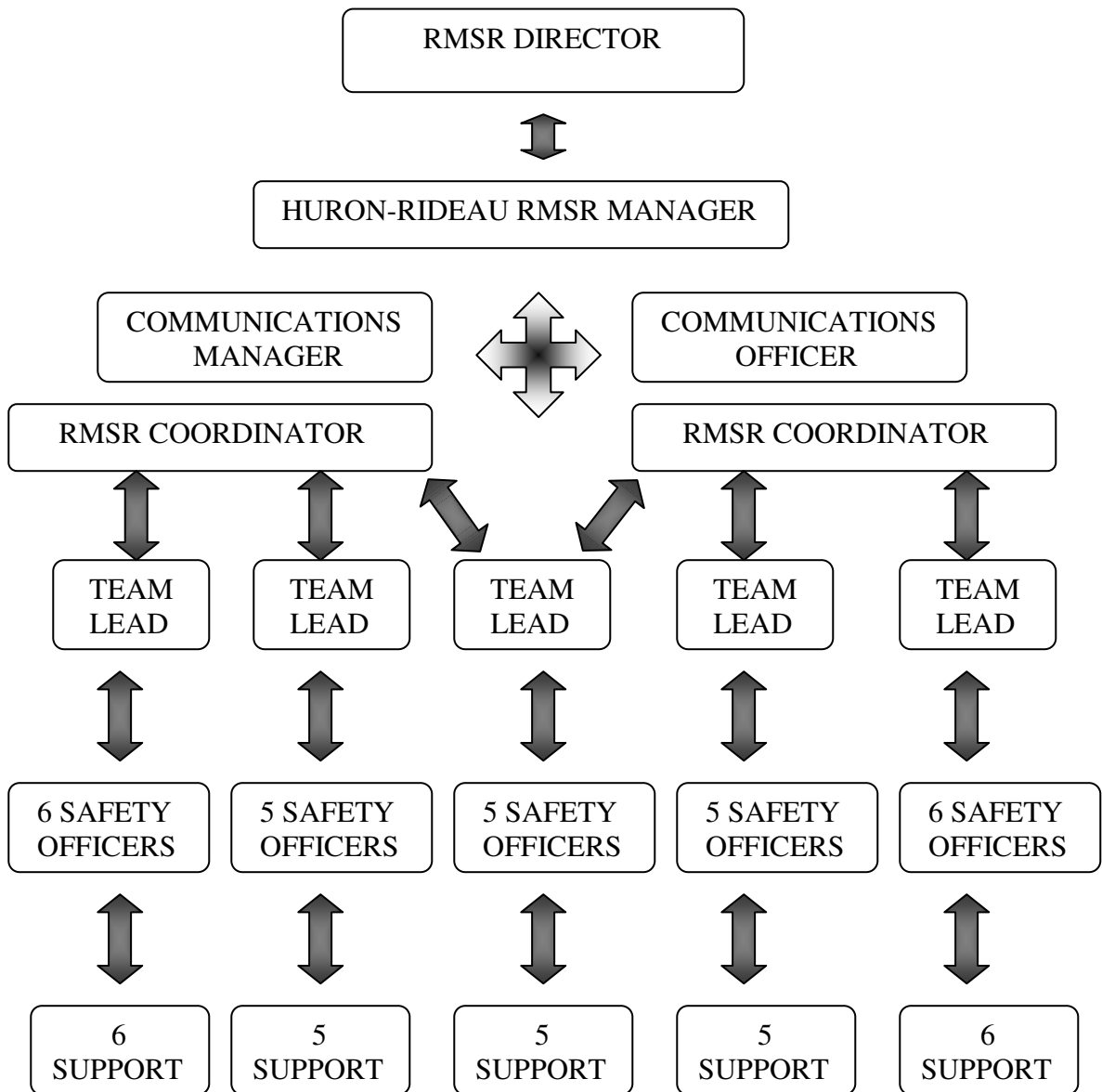
Additionally, my personal views concerning the interview content were regulated through active awareness strategies to offset the potential of unduly influencing the interview responses. This was achieved by acknowledging and disclosing, through journaling notes, my personal opinions and managing them to minimize interviewer influence and ensure that the interview record provides accurate accounts of participant experiences. (1, 3) As an interviewer, recognizing and acknowledging internalized viewpoints or assumptions, and managing them through ongoing vigilance, reflection and analysis, allows greater access to the participant experience and buffers against the interviewer imposing a structure or logic to the participant account which may not be native to their experience. (1, 3) The intent of the research was to give the research participants full voice and not to



mute their insights because they may not align with the original research interest or aim. Grounded research (and pragmatic inquiry) is concerned with emergence, following leads and exploring new ideas according to the direction of the data (1-3). My guiding and ongoing mantra was to remain open to the possibilities generated through the data.

**Table 1 - The Huron-Rideau Rural Mail Safety Review team structure:**

(Source: Internal organizational communications and researcher knowledge)



In addition to the interview data, other sources of information were used to support, cross-reference, and evaluate (in terms of consistency of content across the data spectrum) the interview responses and to add depth or greater clarity to the emerging knowledge.

Additional sources of information included: process documents (official letters, posters and media releases detailing RMSR purpose and function), training manuals and presentations, researcher field notes (in the form of emails and customer contact logs), and publicly available records and publications (newspaper reports, commentaries, and CPC website information related to the rural mail safety review) for the period between 2006 to 2013.

### **4.3 Data Analysis and Explication**

The nature of the research inquiry is qualitative and aligns well with grounded theory which is considered a solid framework from within which to operate in cases where research is oriented towards patterns of social system or process change. (3, 120, 138, 177) Grounded theory is concerned with developing theory from the ground-up, using data evaluation and description to inform and contribute to practical and conceptual knowledge. (117-119, 121, 177, 178) In grounded theory research, data is collected, sorted, organized, and examined based on emerging themes or categories with a view towards revealing core or constituent motifs or ideas. (1, 117-119, 121, 177, 178)

According to Glaser, grounded theory consists of a series of integrated conceptual hypotheses systematically developed in order to generate inductive theory concerning a particular inquiry or topic. (117, 118) It is a specifically structured, but flexible method of research (1, 3, 117, 118, 177) using a system of constant comparison between initial and subsequent data collection results to guide analysis and generate theory. (1-3, 117, 118, 177) For Glaser, theory is an emergent process (117,118) generated through substantive and theoretical data coding. Substantive coding captures categories or themes that become apparent through constant comparison of and inquiry about the collected data, while theoretical coding focuses on actions and meanings. (1, 119, 177) Consistent and ongoing researcher memoing throughout the coding processes is an essential function in generating grounded theory. It is through the researcher's memos (or notes) that connections, themes and hypotheses first take shape and can be compared and refined to generate theory. (1, 3, 117, 118)

The interview data was reviewed in its entirety and coded line-by-line with a view towards obtaining an overview of the information, noting general impressions of emerging themes and analysing the data according to W5 probes (who, what, where, why, when). (1, 119, 177) Data was also reviewed with a view towards confirming that a degree of data saturation within categories had been reached (177).

Interview transcripts were analyzed for emerging codes and organized according to actions, processes and meanings (1, 177) through ongoing interrogation of the codes and iterative, constant comparison. (1-3, 117-119, 177, 179) A collateral process of content analysis was undertaken using RMSR documents to uncover thematic patterns or

recurring themes to compare and contrast against the interview content. (121, 180, 181)

To sustain and maintain engagement with the learning community, emergent themes and recurring ideas were shared and discussed with organizational informants (those within the research context who have knowledge of the research domain) as part of the comparative method process. (1, 177) Additionally, ongoing conversations /communications concerning the research initiative were actively invited and encouraged including having my academic advisors review memo entries to ensure decisions and actions emanating from the notes demonstrated consistency. 11, 121, 180)

After the research data had been organized through the coding and memoing processes, the emergent analysis was used to generate a narrative process theory (explanation). (1, 11, 177, 182) Narrative provides structure, form and content (11, 121, 178, 180-184) to the interactions and communications with the research participants and the documents consulted through the research process. (11, 121, 180-184)

Narrative is useful for detailing connections or patterns among events and dialogues (182, 183) and for communicating ideas and concepts (utilizing knowledge) in a way that is coherent and easily integrated by an audience. (180-184) The intent is to integrate the research data, in consultation and with the participation of the organizational key informants, so that the RMSR story may be told in a way that communicates how knowledge utilization strategies were developed, shaped and applied within the presenting case, to provide insights to advance or otherwise contribute to knowledge use and practice. Engagement with the learning community throughout the research

undertaking helped to ensure that the research knowledge was representative of actual experience. (11, 121, 186)

#### **4.4 Concerning Research Credibility**

Interpretation is a feature of any research investigation. No research undertaking is value-free. All human activity is historically, socially, politically and/or spiritually situated and qualitative research explicitly acknowledges and recognizes this circumstance. (11, 120, 121, 137, 138, 185-188) In order to ensure that my interpretation as a practitioner-researcher was consistent with perspectives amongst the learning community, data was shared with organizational informants at various stages of the research analysis, thereby reducing researcher omission or error. (11, 121)

Throughout the research undertaking, I maintained a reflexivity journal to compare and contrast against the research findings and to ensure research consistency and transparency. (121) Reflexivity notes were kept distinct from other research materials and served as a source for final interpretations. Summaries of the emergent themes or ideas were recorded and revisited to review and track the content with a view towards enhancing accuracy, reliability, and sensitivity. (11, 121)

The issue of bias is something many researchers have to contend with and in my position as a practitioner-researcher; someone who was deeply embedded in the context under investigation, it is important that I confront and disclose the biases that I am aware of with diligence, openness, and transparency. The word *bias* comes to us from the French *biais* indicating; slant, angle, crosswise (against the grain) and later evolved into

prejudice or predisposition. (189) *Prejudice* originates from French and Latin usages, eventually appearing in English denoting a pre-judgement or preformed opinion. (190) Typically, deploying the words *bias*, *predisposition* or *prejudice* assigns negative connotations (191; p.280) and is not something most researchers wish to have associated with their work. There seems to be a widely held assumption that any indication or appearance of bias is detrimental; that bias or preconceived opinion cannot be legitimate or credible. (191; p.280, 282)

Yet, as a researcher who has significant experience with the subject of the research enterprise, developed the research plan, identified the concepts guiding my thinking, and has pre-existing relationships with the people who provided the interview data for the study, I have to acknowledge that *bias* is unavoidable. My bias or ‘angle’ is influenced by the life context that I am born into and my experiences as I move through life. Heidegger called this *historicality*, the history that precedes and informs the milieu into which a person is born which, in turn, influences the experiences that shapes their lives. (192) My “form of life” as Wittgenstein referred to it, informs and infuses my experience – providing points of reference, contact, and context which give shape to the way I think about the world. Recent research in the area behavioural epigenetics suggests that it is not just physical traits that can be passed on from one generation to the next, but also psychological and behavioural tendencies and predispositions (193). Experiences which are sufficiently significant or pervasive can trigger a change in the methyl groups adhering to DNA modifying gene expression (switching receptors on or off) resulting in the likelihood of corresponding behavioural or psychological expression. The alterations

which manifest as behavioural predispositions may be transmitted from one generation to the next (germline-dependent epigenetic modifications). (193, 194)

Research undertaken by David Amodio at New York University and Mahzarin Banaji at Harvard University suggests that bias colours everyone's perspective and that it is extraordinarily difficult to manage. (195-197) Banaji notes that a key step in dealing with bias is to become aware of it but this takes considerable time, practice, and introspection as bias is often unconscious and implicit. (197, 198) Education and vigilance are key resources in managing implicit (and explicit) biases.

These areas of research provide support to Heidegger's perspective, against Husserl's notion, concerning bracketing. The idea of bracketing became a key point of disagreement between Edmund Husserl (1859 – 1938) and Martin Heidegger (1889 – 1976) who were contemporaries and colleagues at the University of Freiburg. Husserl stimulated Heidegger's interest in phenomenology but Husserl's focus on descriptive phenomenology which operates by seeking to bracket out preconceived ideas in order to apprehend unencumbered experience was not supported by Heidegger. Heidegger reasoned that bracketing as an attempt to obtain an impartial view of experience was not tenable because people are shaped by their lived experience; often in ways they are not fully conscious of or aware, and their experience of and relationship with the world is not something that can or should be discounted. (192, 199)

I am, as both researcher and practitioner, inextricably intertwined with the research investigation – biases and all. This situation shares features with the idea of quantum uncertainty denoting that the act of observing influences that which is being observed or measured (139, 200) and physicist John Wheeler’s argument that a constituent element of reality is interaction and participation. (201, 202) Generally speaking, the insights generated through quantum science lead to the realization that the demarcation points between subject and object, past and present, are much less clear and not as reliably distinguishable as previously imagined.

Every researcher is, through the process of devising and developing a research plan, akin to a stage manager, selecting-in certain aspects of the presentation while selecting-out others. (90, 185) As Gergen and Gergen point out, the activities of recording and description are also forms of representation. The researcher as author of a research program communicates with a particular audience according to the rules established by the community that the researcher either already belongs to or seeks to engage. The researcher and the audience are involved in a relationship in which certain activities are encouraged while others are discouraged. (185)

There are writers and researchers who suggest that if, where, and when bias has been identified it should be removed or held aside from the research investigation (191) but this seems to me to be a disservice to the coherence of the research enterprise, to myself as a practitioner-researcher, and to the audience. Clearly a compelling case can be made that unexamined bias or predisposition leads to conjectural conclusions, but it is also the



case that bias rooted in experience and rigorously analyzed may be credible, informative, and defensible, providing valuable insight and meaning to the research context. (191, pp. 286-287) Accordingly, the management of bias through attempts to hold aside (bracket) certain thoughts or predispositions sounds like a plausible strategy in theory but less robust in practice. It seems to me to be a very tall order to tease apart experience and bias as each could look much like the other.

As anyone who has spent time meditating soon discovers, the mind is not easily quieted and efforts to resist thoughts or ideas from arising often seem to accelerate the rate at which new ones emerge. Rather than resist the surfacing of thought, it is recommended that thoughts or ideas be acknowledged and released. Active vigilance and awareness does not attempt to suppress mind activity, seeking instead to note it, accept it and let it pass. This strategy works efficiently because it increases, through practice, the ability to be vigilant and aware of unwelcome mental chatter which, in turn, allows the distance between the chatter and silence to be reduced.

Similarly, I would argue that it is more useful for a practice-based researcher to spend time becoming aware and vigilant of his or her biases without suppressing or “bracketing” them. The ability to identify, distinguish, and discuss bias is a much more active knowledge building exercise than passively suppressing or putting aside predispositions. Moving through the research evolution with awareness of bias can provide interesting points of distinction and expose points of access, colour, and contrast that may not be otherwise be available. Awareness of and reflection on bias brings

important research elements to the surface, particularly in the research analysis and data interpretation phases. (191) Moreover; as Gericke notes, the capacity for self-reflective evaluation is an attribute that makes humans unique (194) so it seems practicable to use this unique attribute to improve or enhance knowledge and understanding within a research study. The point of practice-based research and engaged scholarship is for the researcher to be connected to the research and share insights from the experience, knowledge, and relations available through being embedded in the research context. (11, 105, 121; p.22) It does not seem reasonable or desirable to bracket the attributes that led to and sustained the research effort.

In making a concerted effort to actively achieve transparency and consistency through the identification of sensitizing concepts, sharing, comparing and revising research information with the learning community and following Van de Ven's engaged scholarship as a pluralistic process, it is hoped that the audience for this proposed study will recognize that sincere, credible efforts were made to protect the integrity and authenticity of this research undertaking. (11, 121, 185-187)

#### **4.5 Research Ethics**

It is the policy of The University of Waterloo that all research involving human participants must be vetted and cleared through the Office of Research Ethics (ORE). (203) This research proposal was submitted to the University of Waterloo Office of

Research Ethics on August 16, 2013 and received ethics clearance and approval to proceed on September 25, 2013.

Additionally, the University of Waterloo requires that the Government of Canada Panel on Research Ethics Course on Research Ethics (TCPS 2 CORE) be completed prior to submitting a research proposal to the ORE. I completed the TCPS CORE on July 2, 2013 (Appendix G).

#### **4.6 Research Information Management and Security**

The credibility and integrity of the research enterprise is also determined by the way in which personal, proprietary or other forms of sensitive information is managed throughout the research process. To ensure privacy and confidentiality of the research participants, interview consent forms were distributed prior to each interview case detailing the context of the research and the conditions of engagement. No participant has been identified by name in this research dissertation. Anonymizing signifiers were used to replace names of interlocutors throughout the all data management and administration phases.

Canada Post Corporations Rural Mail Safety Review (RMSR) has been identified as the research subject; however, no information issuing from or relating to internal documents (non-public) and process metrics was specifically identified without the authorization of the appropriate authority agent (RMSR director and/or manager). (204) Research

recordings, notes, records and related information is stored on an encrypted portable drive, in the case of electronic data, while hard copy information is contained in a secure filing cabinet at an office in the care of Dr. Phil Bigelow located at the University of Waterloo. Any data identified as being confidential or of a sensitive nature will be destroyed seven years after the publication of the research dissertation.

## **5.0 Disclosures and Timelines**

### **5.1 Research Funding**

This research initiative is not financially supported by Canada Post Corporation; however, access to the Huron-Rideau RMSR team as well as process documents and system metrics has been kindly authorized by the national director for the rural mail safety review and the manager for the Huron-Rideau RMSR. The researcher and, by extension, the research, is not in receipt of financial support from any other agency - professional, academic or otherwise. No professional advancement or consideration has been offered or provided in any form as a result of this research enterprise and the researcher is not aware of any potential or actual conflicts of interest related to the study process.

### **5.2 Research Timeline**

My thesis proposal defense meeting occurred on May 16, 2013 and the proposal was accepted, with amendments on July 17, 2013. The University of Waterloo ORE application was submitted according to the specified protocols on August 16, 2013 and approved on September 25, 2013.

Access to the necessary Canada Post Corporation resources was granted. The interviews began in October of 2013 and were completed in March 2014. Interview transcription, data analysis, including thematic coding and narrative structuring, was undertaken during

the summer and fall of 2014. Composition of the dissertation began in October of 2014 with a first draft submitted in December of 2014.

## 6.0 Research Details

Data collection consisted of interviews with sixteen members of the Huron-Rideau

RMSR team, the composition and details of which are as follows:

- Three female: (including one Superintendent and one who worked as both an Adecco contractor & as a CPC employee)
- Thirteen male: (including three managers, two superintendents, and two who had acting roles as Superintendents)
- The longest interview was 160 minutes
- The shortest interview was 64 minutes
- The average interview length was 83 minutes
- Five interviews were recorded (with permission)

### 6.1 Interview Participant Profile

All participants were part of the RMSR for at least three years and were located in and responsible for different geographical locations throughout Ontario. The interview participants brought a wide range of experience and perspectives to the study. The age range of the interview participants was thirty to fifty-nine years. The majority had prior work experience in Canada Post in the areas of operations, operations support, collections and delivery, and retail. Some had worked as RSMC's prior to their involvement with the RMSR, some came from supervisory or management backgrounds and others had extensive experience and training in workplace health and safety. In other cases the participant's first experience as Canada Post employees was as members of the RMSR.

It is worth noting that while most of the respondents had some exposure to customer contact and relationship management, the majority of the prior experience was phone-based and usually instigated by the customer or client. In the RMSR, customer contact was initiated by Canada Post, in person, to communicate a workplace health and safety concern that most customers had no idea that they would ever be asked to accommodate and would require them to undertake work that they never imagined they would have to complete.

The research interviews occurred between October 2013 and March 2014, consisting of seven in-person meetings and nine interviews conducted over the phone. Phone interviews were not recorded as cell phones were used and I lacked a sound recording set-up which could effectively capture the discussions. Five of the seven face-to-face interviews were recorded with the permission of the participants while two of the in person interviews occurred at locations in which recording was not viable or practicable (lack of access to recording equipment). The interview sessions took place in Toronto, Trenton, Ottawa, and Burlington Ontario.

## **6.2 Data Management & Theory Development Process**

All interview data was captured using key-word/key-idea notes including direct quotes. (2, 205) Recorded interviews were played-back and carefully reviewed to ensure that the written notes reflected the content of the interview accurately. An initial round of transcription, interview reviews and memoing was undertaken to organize the data followed by a second round of open coding and memoing. (2, 118) A third interaction



with the data consisted of line-by-line analysis and selective coding; probing and comparing the interview content and notes to enhance sensitivity and awareness regarding existing and emerging ideas and themes. (112, 190, 191) A generative and extractive examination and review was performed to assign codes to themes. This process consisted of an iterative, interactive, constant comparative investigation to query and distill conceptual content. (2, 118, 177) A subsequent round of inquiry was undertaken to review the themes and associate them with quotations from the interview data. The identified themes and related interview quotes were discussed with key informants (two managers & three RMSR team members), after which observations & reflections on the themes were developed with a view towards determining the ‘how’ and ‘why’ meaning of the data (1, 3, 11, 12, 119, 177)

The process of ‘excavating theory from the raw data’ (3, p. 986; 118; p.550) was guided by a number of questions during the analysis of the findings including; does the theory align with the situation or context, is it recognizable to the people whose experience was elicited and documented, does it make sense, and does it work? (1, 2, 118, 186) To help determine and confirm the direction of the theory development, public and private work records and communications including customer contact sheets, emails & training materials were reviewed to confirm research theme integrity and accuracy. A list of the documents is available in Appendix H.

To confirm accuracy of the interview accounts member checks were elicited, conducted and confirmed via email from September 30, 2014 to October 13, 2014. No substantive

errors, omissions or misrepresentations were identified or reported. There has been some discussion in the literature concerning the usefulness of member checks as a verification strategy. (206) I believe there is value in providing interview accounts to the participants to not only allow them to review and confirm the content, but to add new or supporting information that occurs to them during their review of the material which may not have been noted at the time of the initial meeting. Following Charmaz, I support the idea that accuracy entails agreement (3) and sharing the interview records with the participants to ensure that the content accurately reflects their thoughts, preserves fidelity with the research context.

The interval and space between the initial interview meeting and the member check provides the opportunity to offset or diminish demand characteristic response during the interview. Demand characteristics describe a range of potential behaviours that a research subject may express during the interaction with the researcher as a result of their awareness of the research situation and what they perceive the researcher is seeking to determine. Knowing the researcher, the research context and/ or simply being involved in a study can lead people to provide information based on their anticipation or expectation of what they believe the researcher or research situation is seeking to find rather than accounts of their actual experience. (207)

Although not explicitly evident in the interview meetings, demand characteristic behaviours may have led to modification(s) of responses due to each participant knowing me personally and knowing the context of the research enterprise. Due to the nature and

geographical range of the RMSR work there were only three people who I worked with directly for a sustained period of time (three months or more). The remainder of the interview cohort consisted of people I had intermittent contact with but did not share ongoing work responsibilities. The ‘cooling-off’ period between the time of the initial interview meetings and the member check exercise of the interview content provides time and space for the participants to revisit their responses outside of the formalized interview interaction and add any updates, details or revisions that occur to them in a natural, familiar setting.

## Methods and Decision Trail

Methods/Steps	Description	Decision Trail
1. Access/Identification/Engagement	<ul style="list-style-type: none"> <li>List of potential participants</li> <li>Determined appropriate/viable access channels</li> <li>Contacts elicited &amp; confirmed</li> </ul>	<ul style="list-style-type: none"> <li>Majority of potential participants receptive</li> <li>Interviews scheduled according to participant availability</li> </ul>
2. Pre-interview preparation	<ul style="list-style-type: none"> <li>Review of field and reflection notes</li> <li>Consideration of demand characteristics</li> </ul>	<ul style="list-style-type: none"> <li>Reflection on interview style &amp; interpersonal presentation</li> <li>Create/invite an ‘open’ space – note that there is no “right” or “wrong” response</li> </ul>
3. Conduct of Interviews	<ul style="list-style-type: none"> <li>All interviews conducted in an office or similar meeting place, either in person or via phone &amp; recorded where practicable (with</li> </ul>	<ul style="list-style-type: none"> <li>Semi-structured interviews in an open dialogue format</li> <li>Interviews occurred between October 2013 &amp; March 2014</li> </ul>

	participant consent)	
4. Preliminary Analysis	<ul style="list-style-type: none"> <li>• Review of research questions &amp; sensitizing concepts</li> <li>• Interview response analysis, memoing</li> <li>• Open coding, probing &amp; constant comparison</li> </ul>	<ul style="list-style-type: none"> <li>• Determined initial codes</li> <li>• Integrated substantially similar codes</li> <li>• Noted emerging categories</li> </ul>
5. Intensive Analysis	<ul style="list-style-type: none"> <li>• Line-by-line analysis</li> <li>• Comparison of data, field notes &amp; reflective journal</li> <li>• Code to categories</li> <li>• Theme extraction</li> <li>• Constant comparative probing</li> </ul>	<ul style="list-style-type: none"> <li>• Core themes extracted (refer to <i>Appendix I</i>)</li> <li>• Comparison with public &amp; private records</li> <li>• Discussion of themes with key informants</li> </ul>
6. Theory Development	<ul style="list-style-type: none"> <li>• Key quote identification and extraction</li> <li>• Review of initial propositions, concepts</li> <li>• Constant comparative probing</li> </ul>	<ul style="list-style-type: none"> <li>• How &amp; Why probes</li> <li>• Does the theory fit the context?</li> <li>• Reviewed themes against private &amp; public notes and documents</li> </ul>
7. Engaged Scholarship, Member Checks	<ul style="list-style-type: none"> <li>• Discussions concerning research themes were help with key informants</li> <li>• Interview data content was sent via email to each participant for their review and revision (if or where needed)</li> </ul>	<ul style="list-style-type: none"> <li>• No errors or omissions were identified and no additional information was added to the initial conversation records</li> </ul>
8. Interpretive Synthesis	<ul style="list-style-type: none"> <li>• Compared and interacted with the data across all data sources</li> <li>• Sought to clarify relationships and connections</li> </ul>	<ul style="list-style-type: none"> <li>• Anchored the narrative with participant quotes</li> <li>• Used existing literature to help explain, expand, and situate research</li> </ul>

		<p>data</p> <ul style="list-style-type: none"> <li>• Linked my own practitioner experience, knowledge to the narrative</li> <li>• Remained open and curious throughout</li> </ul>
9. Promotion of Use	<ul style="list-style-type: none"> <li>• Presentations at conferences &amp; professional meetings</li> <li>• Publication(s)</li> </ul>	<ul style="list-style-type: none"> <li>• Planning to present research to the CPC Board of Governors</li> <li>• Will discuss potential publication opportunities with committee members</li> </ul>

Krefting (186), following Lincoln and Guba, notes that one strategy to strengthen research confirmability is through an independent audit of the records and decisions involved in the study development. To this end, the process notes, records, codes, themes, interpretations and reflective notes have been audited by the author's co-supervisors (Dr. Philip Bigelow and Dr. John Garcia). Morse et al (206) cite concerns with the use of audit trails to establish study rigour explaining that most audits occur at the end of the research process, at a point where errors or missteps are more difficult to determine. In the case of the present study the audit experience was not a single step, but several, at various points in time, during the evolution of the research study. It is hoped that the reader will recognize that credible, deliberate steps were taken to ensure that the researcher established and protected the integrity and confirmability of the data through multiple strategies and at continuing and various points throughout the study development.

## 7.0 Results

Charmaz notes that grounded researcher's code for "processes, actions and meanings"; breaking down the research information in order to determine and clarify relationships and connections. (3) The RMSR interviews provided rich and varied informational detail resulting in close to two hundred initial codes and hundreds of memos. Moving back and forth, inductively and deductively, between the codes and the memos led to the development of four overarching theoretical categories: *process*, *knowledge*, *communication*, and *negotiation*.

In examining, probing, and interacting with the data I found myself marvelling at the range and diversity of the respondents experiences while also being struck by how much of the content was consistent despite the different and variable work locations and team personnel. Not only was the experiential content largely homogenous in comparing the data within the interview cohort, it was consonant with my experience as both a field assessor/agent and a team lead (acting).

The categories are not exclusive or distinct and there are clear points of interaction and interrelatedness echoing Van de Ven's conception of process and variance approaches capturing both the static and dynamic features of an inquiry or investigation. 'Process' is linked to 'knowledge', 'communication', and 'negotiation' and each one of these categories is connected to and supports the other(s). To borrow a metaphor from

Wittgenstein: “And one might almost say that these foundation-walls are carried by the whole house.” (6, S248)

## **7.1 Process**

This category renders the actions and activities that shaped and re-shaped the RMSR throughout the duration of the intervention. A prevailing experience communicated in a number of interviews was a general sense of disorientation and formlessness at the beginning stages of the RMSR. Part of this perception was attributed to the *newness* and enormity of the workplace health and safety initiative as noted in this remark: “We had to rethink traditional policies & procedures based on work in the field that had never been done before.” Others explained that there was no reference point or guide and no pre-existing process to follow so the bulk of the RMSR strategy and procedure had to be “built from the ground up”. The lack of clear and established processes early in the RMSR made work in the field challenging and, at times, frustrating for assessment and outreach agents as new questions issuing from the work experience were being generated faster than answers to existing questions.

### **7.1.1 Coordination and Consistent Practice**

Coordination and consistency of information was an ongoing problem during the early part of the RMSR and part of this problem was attributable to clarifications around risk management concerns which tended to be time consuming, involving numerous authorities both within and outside of Canada Post. The diversity of geography, the large

volume of rural mailboxes that needed to be tested, the number of teams required to perform traffic safety assessments and communicate details of the outcome to customers, along with the number of stakeholders seeking explanation, compounded the difficulty in providing stable and reliable messaging. The refrain, “we learned as we went” was shared in a couple of interviews and the spirit of that point was repeated using different phrasing in many other accounts.

Along with a general feeling throughout the data that the early experience of the RMSR lacked reliable and consistent procedures, it was also communicated that leadership roles and responsibilities were unclear. The RMSR group consisted of Canada Post employees as well as contract personnel from the Adecco agency. The Adecco agents generally performed the same work as the Canada Post employees but they had their own internal hierarchy including a manager, coordinator, and team leads. They also had their own training and employee review systems.

The engagement of contract employees allowed for staffing and coordination flexibility especially in the beginning of the RMSR when it was not completely clear how many people would be required to carry out the assessment and outreach tasks. At that time there were more Adecco associates working on the RMSR than CPC employees. The difficulty that was identified in a few of the interview accounts concerned ambiguity around leadership and authority which was related to the two distinct employee groups. Different people from different parts of Ontario were hired onto the RMSR at different times. As a result, orientation to the job was initially informal followed by more



formalized training when a group training session was organized and scheduled. It could be the case, as it was in my experience, that a new CPC employee would ride along with Adecco personnel who had been on the RMSR for a greater duration to learn how the work was performed.

My first day on the RMSR was November 5, 2007 and consisted of travelling from Belleville to London, Ontario to meet the RMSR managers and team members and to begin learning about the review and outreach program. I began work on the same day as another CPC colleague and we were both introduced to two Adecco associates who were to act as our mentors and guides and show us the operation. We spent the rest of the week travelling with the Adecco team, watching them and asking questions about the work. Based on this introduction to the job, it seemed to me that the Adecco agents had a good deal of control over and expertise regarding the work, which led to ambiguity around leadership and procedural authority roles. It was not made clear who was responsible for the developing processes or which answers or perspectives were authoritative.

This difficulty was also expressed by customers who related accounts of being contacted by Adecco teams who appeared to be “summer students”. Consequently, these customers did not take the interaction with the agents seriously once they determined that they were not Canada Post employees. It did not help the situation that neither the Adecco nor CPC agents were provided with uniforms that may have helped establish ‘official’ status. On a couple of occasions in different regions, customers asked me why Canada Post would send people who were not employees of the company out to express concerns about the

safety of rural mail delivery. Other colleagues reported having the same issue being brought forward by customers and noted that it moved the initial conversation with customers in a more challenging direction.

Nothing resembling the RMSR had ever been done before at CPC and this was an aspect of the work that was identified in a number of the interviews: “In the beginning we were all learning; RMSR processes were still forming and were developed through trial and error.” The fundamental target; a review of all roadside mailboxes from a health and safety viewpoint, and timeline (five years) were clearly identified but no pre-existing framework or project plan was available to execute the implementation. Plans, protocols, and procedures had to be created and refined while the operation was underway.

The unfamiliar and unprecedented nature of the intervention and the accompanying lack of process structure and systemization were not only regional challenges, but ones that organizational leaders at head office (Ottawa) had to face. Because work was underway regionally, the need for procedural guidance, consent, and authorization was a pressing and ongoing issue that required timely action. Teams in the field were being confronted with situations that were new or unique and would seek counsel and direction from the managers who, in turn, would have to seek approval from Ottawa. The delays in providing direction and information to the people who needed it to perform their work was an ongoing source of discontent in the first few years of the RMSR: “The confusion and sometimes frustration with working on a completely new project without developed processes stands out in my memory.”

The primary instrument to test rural mailbox delivery safety status was the TSAT. However, the TSAT was not the instrument that was used in the beginning. The first evaluation tool was one developed by CPC in consultation with the National Research Council of Canada (NRC), but the design lacked sufficient substantive detail for the range of conditions and patterns associated with roadside delivery requirements. As a couple of participants noted, a tool was needed that was robust enough to sufficiently account for a variety of road conditions, rural mailbox placement, and driver behaviours throughout Canada. In order to develop such a tool, CPC sought external expertise. Despite taking the step of engaging experts in the areas of traffic safety engineering and technologies, health and safety risk management, and systems psychology the development of the TSAT required a number of evolutions based on user (field) feedback and concerns to adequately address the conditions that the assessors were confronting. In the words of one of the respondents: “The TSAT was intended to provide black and white findings but we saw the grey.”

### **7.1.2 Messaging Reliability**

In addition to the gaps and loose ends around procedural processes, there was confusion and inconsistencies around communications with customers and stakeholders. Different teams and different regional groups provided information in disparate ways and had irregular systems of record-keeping concerning their work. In the early stages of the RMSR various teams would be performing aspects of the RMSR work in a variety of offices without an ongoing connection to the postal installation or the local community.

The local offices had no specific resource person to respond to their or customer questions or concerns and, at times, would receive contradictory advice and direction from what an earlier team had communicated. This issue is expressed in the following comment: “The message was easy; the message was safety. That we were good on, but what we were not so good at [prior to 2010] was how we were delivering the message and by having different people going back and forth [to the offices] it looked like we were not organized; the perception was that we were not organized.”

### **7.1.3 Process and Change**

The term *process* is defined in different ways according to the context in which it is used but generally the word denotes; “a systematic series of actions directed to some end”, and “a continuous action, operation, or series of changes taking place in a definite manner” (208) The launch of the RMSR could certainly be described as a series of actions or activities directed to an end but based on the information shared through the interviews and my own experience in the field during the early days of the work effort the *systematic* nature of the work was indeterminate and evolving. A definition of *process* that more closely aligns with the experience of both myself and my colleagues who were part of the project at the beginning is: “a natural phenomenon marked by gradual changes that lead toward a particular result” (209) Removing the word “natural” from the definition and adding “rapid” along with “gradual” to read; “a phenomenon marked by both rapid and gradual changes that lead to a particular result” provides a more exacting description of the process experience of the RMSR.

*Process* is characterized by *change* and the need for change is what led to the Government directive stipulating that Canada Post needed to review all roadside delivery mailboxes to comply with applicable health and safety regulations. What is clear in the interviews is that every aspect of the RMSR changed, evolved, improved, and stabilized over time to the extent that one respondent who joined the RMSR team during the latter part of 2010 noted: “There was lots of pre-planning and preparation – the processes were very well structured and integrated, more comprehensive than other work systems I have been involved with – the work made sense and ran smoothly.” Change was driven by a series of needs, many of which were signaled and identified through field experience and because the nature of the change contained a public component, it needed to occur more quickly than is usually the case in bureaucratic organizations.

## **7.2 Knowledge**

*“Anything that may be called knowledge, or a known object, marks a question answered, a difficulty disposed of, a confusion cleared up, an inconsistency reduced to coherence, a perplexity mastered.” (9, pp. 226-227)*

Canada Post has a long organizational history concerning occupational health and safety and extensive policies and procedures relating to the maintenance and assessment of safe work operations. However, the existing policies did not comprehensively identify or account for actual or potential risks related to the delivery of mail to rural roadside mailboxes. As a result, there were few tools or guidelines available to the rural mail safety initiative to use in achieving its mandate.

### **7.2.1 Rural Mail Delivery Safety Knowledge**

The point was conveyed by a number of respondents that it was necessary to develop the instruments and create the knowledge base around rural delivery safety from the ground up. At end of 2006 and into early 2007 there were numerous safety related case files generated by RSMC's that needed to be investigated and resolved. The initial instrument to measure risk related to roadside mail delivery co-developed with the NRC did not adequately take into account the range of actual and potential challenges confronted by rural delivery agents. Additionally, the CPC-NRC tool metrics did not provide assessors and customers with sufficient detail to determine if alternate delivery configurations could preserve roadside delivery access and convenience while also meeting safety criteria.

A viable assessment tool needed to ascertain which delivery positions exposed a high risk profile based on a rationale identifying acceptable versus unacceptable thresholds related to traffic exposures. The knowledge generated through the assessments provided the basis for determining roadside locations that met acceptable safety thresholds and provided assessors and customers reasonable options to preserve rural mail delivery while maintaining health and safety requirements. Knowledge around tool development evolved based on the context and circumstances of its use.

The CPC-NRC tool was designed around a "nominal safety" methodology which is concerned with determining whether a design feature is congruent with design standards stipulated in official engineering guides or policies (in this case an example would be the

Transportation Association of Canada Geometric Design Guide for Canadian Roads). The drawback in utilizing a nominal safety approach in the case of rural mail delivery is that the approach is based on *known* accident/collision history and daily traffic volumes and those types of predictive metrics were not available for a high percentage of the rural roads that RSMC's travel. (210) Once it was determined that a different approach was needed, iTRANS Consulting Inc. (along with Human Factors North and Cotton Law), was retained to review the situation. Based on surveying the context of rural mail delivery and the tasks involved, as well as taking into account the way in which other drivers respond to stopped and merging RSMC vehicles, it was determined that a "driver behaviour approach" provided the most efficient safety predictive model. The Traffic Safety Assessment Tool was created to capture these risk dimensions and further revised at different times based on information generated from field applications.

The data obtained by the TSAT determined whether or not further steps in the assessment process would be required. If an assessment on a rural mailbox met the traffic safety criteria, the data would be recorded, entered into a database, and shared with the local office, regional management team, and head office. In the case of assessments that did not meet TSAT criteria, the information capture and disclosure process would include a customer outreach component. Knowledge manifested through the application of the TSAT needed to be communicated to customers (as well as other stakeholders) in those cases where a change to the existing delivery position was required to meet health and safety requirements.

### **7.2.2 Outreach Knowledge Development**

In the same way that the TSAT and other RMSR processes were developed based on the knowledge available at the time and refined as new knowledge emerged, the customer outreach endeavour was something that took time to refine and systemize. The newness of the undertaking and the unique circumstances around the outreach requirement made preparation and training for this part of the job necessarily open-ended. There was no way to inventory and share strategies for the range of potential customer responses to the messaging and requirements that the RMSR agents were presenting. As one participant explains: “The knowledge we used was new so we were always growing, learning, adapting with the knowledge – our experience informed the knowledge and was integrated into later processes.”

Although there was some basic training provided relating to the customer interaction experience and agents were provided with a rudimentary script to use as a guide for the face-to-face meetings, almost all of the participants commented on the ‘sink-or-swim’ aspect of this part of the work: “Customer responses crossed a spectrum of helpful to resistant and were always unpredictable.” Sharing the TSAT data and the health and safety message generally led to requests for clarification and further explanation but the particularly difficult part of the interaction was explaining that it was the customer’s responsibility to perform the work and absorb any related costs (in those cases where an adjustment to the existing RMB or its location would meet TSAT criteria). The knowledge we were sharing was unexpected, contentious, and impositional. It quickly became clear that different ways of imparting the message meliorated customer reaction



and response: “The way that the RMSR information was presented to customers made a very big difference to the outcome.” In my case I had no experience with customer outreach either via phone or in person so a significant percentage of the knowledge and strategy related to customer contact that I developed was through observing and sharing information with partners I worked with and colleagues that I encountered, at hotels, meetings, and conferences. The utilization of informal networks for learning and sharing knowledge was reported regularly in the interviews: “I picked-up different techniques from different people, working with different partners and added them to my toolbox.”

Every respondent noted that they used the information gleaned from prior interactions to improve and shape subsequent contacts but there were very clear differences reported in the data concerning the knowledge they used to initiate customer conversations. Some agents preferred to lead with TSAT metrics and rationale while others favoured focusing on relational examples and connections to introduce and leverage the health and safety message. Some felt more comfortable presenting themselves in an “official” capacity and closely followed the customer contact script while others shared the TSAT results through an informal, improvisational presentation. During the knowledge generation part of the process (the traffic safety assessments), agents followed a stepwise, prescriptive methodology which typically provided predictable and consistent results. The knowledge utilization part of the process (customer and stakeholder outreach) introduced distinct challenges because interactions with people, especially where no prior relationship exists, are less predictable, less consistent, and more dynamic. In the words of one respondent: “The TSAT was based on science, while customer contact is more of an art.”

The knowledge that was being communicated was, in every case, based on the TSAT. The fundamental issue was health and safety. The analysis that determined whether or not changes had to be made to delivery positions was realized through application of the TSAT. Health and safety was the concern, the TSAT was the audit instrument and the data needed to be shared and understood by particular audiences who were tasked with making adjustments to satisfy safety criteria. However, simply stating the results of a TSAT and describing what steps are available to the customer to maintain RMB delivery did not necessarily resolve the matter. Many customers required, and in some cases demanded, to know more, including the background, context, political, and legislative aspects leading to and/or governing the RMSR. As one agent noted: “This role also had features of being a teacher (educator), coach, as well as being a subject matter expert on rural delivery health and safety so the range of the job was very different from others I have experienced in that we had to be prepared to ‘wear many hats’”. During the TSAT phase only ‘one hat’ was needed, but to utilize, operationalize the knowledge, agents had to be prepared to respond to different perceptions, dispositions, emotions, and forms of opposition.

An important point brought forward in the interviews was: “It was important to have credible, consistent information in the hands of our teams so that their communication to customers, colleagues and stakeholders was the same.” On the one hand it was important to have stable, homogenous knowledge to provide to all interested parties, but each

interaction, each audience, has different needs so although the information needed to be standardized, the presentation of the information required flexibility and personalization.

### **7.2.3. Engaging Local Knowledge**

One of the ways to calibrate the RMSR knowledge to make it more significant for the audience; the customers, was to co-opt local knowledge sources. Area postmasters, supervisors, managers, and RSMC's could provide important details about the local community including advising of contentious customers, unleashed dogs, alternate road names, delivery positions of concern and related issues. One respondent remarked: "I found it was important to interact with the RSMC's, get to know them and use their knowledge. They know what and where the problems are." The RSMC's and local postal officials had a good idea of who would be receptive to the messaging and who would resist. They often had personal relationships with the people in the community and could intercede on our behalf to encourage cooperation and/or discourage intransigence.

An example reported from the interviews describes a situation where a local RSMC approached an agent to ask if he could do an assessment for a new customer who wished to install a rural mailbox in front of a recently constructed home. The agent agreed to the request and flagged a location that met TSAT criteria. Later, once the RMSR work had been completed in the area, the RSMC asked the review team if they had any customers who had not complied with relocation requirements. The team had a few people who had not moved their RMBs and the RSMC explained that she would talk to them personally and ask them to complete the required work. As a result of her assistance and her

personal relationship with her customers, every customer in the area cooperated with the review conditions.

Interestingly, not everyone expressed accessing RSMC input or advice. It was reported in the data that some offices didn't extend a spirit of cooperation and were not very receptive to the RMSR work. A couple of agents experienced working in communities where RSMCs provided messaging to their customers that diminished the legitimacy of the RMSR leading to adversarial customer relations. Others noted experiencing neutral interactions with local offices and local RSMCs signified by information exchanges that were perfunctory but without insight, context or depth. Some agents commented that local office perception and reception may have been influenced by union propaganda, resistance to having "outsiders" in their office, a lack of clear understanding concerning the RMSR purpose and intent or a combination of any or all of these reasons.

What is clear in the data is that some offices/communities were easier to work in than others and that the tone set by the area post office extended to the local community. As this dynamic became better understood by teams in the field, it became evident that the more knowledge that was provided, the more questions that were invited and answered during the office opening presentations, the more likely that the local office and RSMCs would support RMSR efforts. The open sharing of knowledge along with encouraging dialogue tends to invite participation and reciprocation.

#### **7.2.4 Personal Contact**

One of the key points that resonates throughout the data was the importance of in-person outreach; face-to-face conversations and personal follow-up concerning questions and concerns: “The personal contact was the advantage to educating [customers/stakeholders] and imparting information.” It was noted in many of the interviews that even in cases where a customer was particularly resistant to the communication concerning their TSAT results, they appreciated the fact that we met with them personally.

The kind and type of knowledge sought by each customer was different and variable and personal on-site contact helped to clarify assessment questions because agents could both explain and show how the TSAT applied in each particular case. The value of physical participation; walking with the customer, showing how the TSAT results were generated, asking for assistance to find alternate RMB locations, was something that was reported in many of the interviews. In the words of a respondent: “I found that the combination of both the verbal and visual explanation was very helpful.” The physical dimension of the knowledge utilization in the RMSR was not explicitly identified in early training or guidance documentation but was something that emerged as being very important to the information sharing process.

#### **7.2.5 Government Relations**

Another example of active, physical forms of knowledge utilization in the RMSR was the Parliamentary ride-alongs as reported by a couple of the team leads who participated in the demonstrations. The ride-alongs provided an opportunity for MP’s, MPP’s and other

political leaders and stakeholders to observe and experience a range of traffic related safety issues regularly encountered by RSMC's and the ways in which the RMSR identified and responded to those issues. This orientation became more frequent and more important as negative news reports and customer complaints about the rural safety review reached local, regional and national politicians. In the words of one team lead:

“I was involved in a number of ride-alongs to show politicians and other officials the nature of our work. By taking them to roadside RMB's where safety concerns had been raised, they were able to see for themselves the need for the RMSR. On one ride-along, I had the Minister of Transport in the vehicle and he had expressed a predisposition to recommending the closure of the RMSR, but after we showed him what the RSMC's faced on a daily basis, he remarked; ‘I can't fight you on this.’”

To hear an explanation or report of an assessment is one thing, but to physically experience the circumstances that, in this case, resulted in the creation of new knowledge, helps situate and sustain understanding. Another team lead expressed: “The MP/Board of Directors, Parliamentary Officials ride-alongs were instrumental in showing officials, stakeholders, and critics the value and necessity of the RMSR work.” The ride-alongs also provided a forum in which RMSR officials could hear directly from political representatives about the issues and concerns that were most pressing and concerning to their constituent base. Subsequently, changes were made to processes and procedures to address the identified concerns thereby reducing the number of customer calls to elected representatives.

### **7.2.6 Knowledge Consolidation Meetings**

Knowledge creation and utilization in the RMSR was fundamentally an iterative process as noted in these interview excerpts: “The knowledge we used was new so we were always growing, learning, adapting with the knowledge – our experience informed the knowledge and was integrated into later processes.”, and; “Adaptations to existing processes were initiated due to improvements, changes in knowledge through work applications.” Knowledge development and application was generated through multiple pathways, including formal and informal channels. An important way in which these knowledge sources were collected from across the region and incorporated into future practice was through the yearly RMSR conferences.

The conferences allowed regional team members to gather in one place for a few days to learn, communicate, and develop new (and/or sharpen existing) skill-sets. The annual forum provided an occasion and venue to consolidate knowledge and provide agents access to colleagues to share strategies and insights that could be useful for future work, as noted by this respondent: “The yearly conferences provided great value in providing an opportunity for the entire team to get together to share information and learn and develop together.” The conferences provided a supportive environment to ask questions and practice different strategies prior to using them in the field. One team lead commented: “Learning requires openness, so we spent a lot of time encouraging people to remain flexible and open to new or different ideas.”, and this insight was actively promoted, applied, and actualized through the conference experience. It was evident in the majority of the interviews that the conference not only enhanced team cohesion, but strengthened

process connective tissues and messaging content and consistency. In the words of one participant: “I believe the team conferences were critical to our ongoing success – they were great for team morale, team building and networking, for sharing experiences and for education to help maximize operational and process efficiency.” From a purely knowledge utilization and consolidation perspective, the value of the annual conferences should not be overlooked or understated.

### **7.3 Communication**

*“Science is not engineering; its task, rather, is to explain.” (138, p.87)*

The essence of the RMSR work involved testing a network of rural mailboxes using a scientifically constructed instrument (TSAT) and explaining the outcome. The TSAT provided results that were generally clear and uncomplicated but as I, along with my colleagues discovered, the explanation, the communication required to share the TSAT outcomes was far more involved and demanding than simply relaying statistics and directions. As one respondent noted; “Communicating the health and safety message to customers became as important as the TSAT itself.” The TSAT results and workplace safety message worked best when they were presented together, one supporting the other.

For anyone in the field, it quickly became clear that simply stating the results of the rural assessment safety tool was not very effective and tended to raise the ire of customers rather than gaining their understanding and cooperation. Fundamentally, the workplace safety communication was about numbers; road speed, distance to intersections, front and



rear time-gaps, and traffic volume. However; the explanation, from the customers and other stakeholder's perspectives, needed to include some or all of the following elements: context, history, law, geography, winter weather, public health (and/or specific regional topics that might arise during the meeting). The TSAT produced results that were stable and reliable, but the communications concerning the TSAT results were very rarely routine or predictable.

### **7.3.1 Communication Approaches and Adaptations**

The unpredictable nature of customer outreach meant that any script or guide was limited in providing tips or strategies that would work in every case. In the words of a participant; "Human reactions and emotions are not easy to build processes around." I tried different approaches at different times in order to find a technique or style that worked well across a range of interactions. The interview data confirms that this was a common experience across the RMSR group - especially using and contrasting 'authoritarian' and 'collaborative' presentations to see which had greater effect. Ultimately, as one respondent noted; "Black or white approaches didn't work well, filters needed to be determined and applied based on each interaction." Communication strategy was an evolving and iterative process that needed to be adjusted to fit the context. An participant expressed the point this way: "There were certain things that absolutely had to get said, but I definitely went by what kind of feedback I was getting from the customer." My own field experience followed this same trajectory. Each customer contact informed the approach for the next interaction. Over time a repertoire of replies to common questions or concerns was formed and based on the customer's disposition, I was able to

anticipate and apply the strategy that seemed to fit the presenting situation. In the words of a colleague: “The experience of customer contact helped you to refine your approach. Through the [customer contact] experience you learned certain cues and timings – knowing when to pull back and not get drawn into an argument.” Recognizing and interpreting verbal and non-verbal “cues and timings” are essential components for effective communications.

### **7.3.2 Non-verbal Cues and Emotion**

The in-person contacts provided an opportunity to be more responsive to the customer’s disposition based on their body-language. In many cases, even before any words had been exchanged, the way in which a customer presented themselves provided indications to their attitude and disposition. The non-verbal clues allowed agents to adjust their own body-language to attenuate customer reactions. This point is explained in the data: “Paying attention to body language and facial expressions was important. I tried to avoid frowns or negative signals like arms folded across the chest. I tried to keep my own body language open; taking off my sunglasses when talking to customers, maintaining good eye contact - all of which helped to keep customer interactions positive, civil.”

One of the more striking aspects of the RMSR work was how strongly people were attached to their rural mailbox and roadside delivery, as noted by this participant: “The emotional attachment to their [customers] RMB surprised me.” The emotional dimension involved in the customer contact experience led to a need to pay attention to phrasing, intonation, and word selection in order to minimize reactive responses. A respondent

explains; “I changed my wording in communicating with customers based on what worked well. I tried to use wording that was not provoking or negative (eliminated words such as ‘fail’, ‘directive’, ‘unsafe’ and similar).” This idea extended to words that seemed to be neutral but could elicit a strong reaction as noted in this observation: “Even using the word *traffic* could be problematic because rural people don’t think that ‘traffic’ applies to them.” In concert with the information provided in the interviews, I found through my own experience with customer contact that being sensitive to how certain words could provoke an unintended response was critical to each interaction. I tried to eliminate wording that could be construed as demanding, negative or closed to signal to the customer my willingness to listen to their concerns and work with them rather than telling them what to do.

### **7.3.3 Civility and Rapport**

Field experience revealed that an important aspect to personal communication involved attentiveness to the presentation; the verbal and non-verbal approach of the initial meeting which set the tone for the interaction. The decision at the beginning of the RMSR was to communicate with customers face-to-face and this process makes sense for a number of reasons, the most fundamental being that a large percentage of communication depends on perception. Recent research in the area of psychology confirms the point that: “If you want to make a good impression, it is critical that it is done in person.” (211), and; “Before people decide what they think of your message, they decide what they think of *you*. [italics in original]” (212).

The research data consistently shows that customer contact required flexibility and adaptation based on the customer's disposition and/or response to the information being provided. Different outreach teams had different default communication styles but it was clear that each communication had to be responsive to the customer's needs as explained by this agent:

“Yes, I found that repeating the same information to each customer tended to put them in a defensive position so I tried to personalize the message, make it more specific to them, build rapport and start with a positive comment to orient the interaction. Personalizing the message was very beneficial because of the connection you could build with the customer almost immediately.”

In every interview, the importance of establishing rapport was identified as a key factor in building a relationship with a customer. As one participant noted; “Using small-talk to establish rapport was very important.” It helped the customer to form a positive impression of the agent thereby making them more receptive to the messaging.

This idea is visually represented in the Arts and Entertainment network television program *Bates Motel*. In the second season, during the eighth episode there is a compelling and instructive conversation between two adversarial characters in the series; *Nick Ford* (Michael O’Neill) & *Dylan Massett* (Max Thieriot) which nicely captures the fundamental importance of building rapport through small-talk. The scene occurs 29 minutes into the episode at a meeting in a bar between Nick and Dylan:

**Dylan Massett** (Enters the lounge and takes a seat across from Nick. With a look of contempt on his face and speaking flatly): “OK, here I am – talk.”

**Nick Ford** (regarding Dylan wryly): “For future reference, Dylan; in business as in life in general, pleasantries are an important part of how people communicate. It helps us to find common ground.”

This short scene illustrates that communication is multidimensional and even the most trivial articulations set the stage for subsequent exchanges. The etymological derivations of the word *rapport* denote: “reference, relation, relationship”. (213) ‘Finding common ground’ or a familiar reference point allows people to speak to one another from within a shared space. In the words of a colleague: “I found that a good approach was to notice something that could be commented on around or about the customer’s property to break-the-ice and once rapport was established go into the details of the RMSR.”

### **7.3.4 The Rural Setting**

The effort to establish rapport and initiate a good impression also provided a means to reduce tensions amongst the more individualistic rural customers. Generally speaking, rural citizens prefer a degree of independence and are accustomed to dealing with their own affairs. This impression is voiced in the data: “I would say that the rural psychology presented challenges. People who live in rural areas tend to be in those areas to be away from government interference or authority so those types of people were generally very resistant to what our teams were asking them to do.” It was not uncommon to be travelling on rural roads to meet with a customer and see signs posted on buildings, fences, gates, and billboards like these examples:



Although we were not, strictly speaking, government representatives and the outreach teams did not wear uniforms, it was the case that agents displayed identification badges and the vehicles used by the teams were adorned by a flashing amber light and Canada Post signage. It did not take much time for customer's to ascertain that we were 'outsiders' and once our status as assessors and agents of Canada Post was established the

general association was that the customer contact agents were 'government'. As a result we were often received with suspicion and apprehension.

Many agents reported having to contend with a noticeable rural geo-social mindset and the idea that geography may influence the personality of people who live within a particular area has been noted in recent research literature: "As in the case of social influence, features of the physical environment could affect the personalities of individuals within a given region." (214) Concepts around rurality and sense of place are complex and still evolving (215, 216) but there seems to be general agreement that physical surroundings can influence perceptions, behaviour and emotions. (215-217) According to research by Anton and Lawrence, rural residents report stronger place attachment and are more connected to their home and environment than urban dwellers (216), which may explain heightened emotions concerning conversations about change.

The majority of respondents expressed that communicating with rural customers differed from speaking with suburban homeowners and that the conversations were typically longer due to the need for more detailed information. In the words of a participant: "Change is generally less well-received in rural settings due to the established roots of people who live in those areas. They seem to have more attachment to their properties and their mailbox." It may also be the case that the need for change occurs less often in rural areas so people seeking to understand the rationale behind the change require more detailed and extensive explanation. In order to pre-empt concerns around change, a useful strategy was to reference the need for change in the conversation: "I was keen on getting

the message across that we understood the difficulty around dealing with change but also that there were important reasons for the change.” Identifying the reason for change by explaining the increase and effects of traffic related incidences helped customers understand the need for the RMSR.

### **7.3.5 The Role of Time**

One of the essential ingredients for successful interactions identified in the interviews which may be underestimated in other organizational systems is *time*. Providing outreach teams with the capacity to manage the time they spent with customers worked well to ensure that messaging was appropriately calibrated to customer needs. Time informs experience and understanding; every interaction has its own rhythm that needs to be discerned and managed. Time also allows for enhanced personalization of contact, shaping the message to the customer’s particular situation & taking into account variables which may not be immediately available or apparent. One respondent explained: “The best approach was to listen to the customer, engage them in the process, if they went off topic (for example; complained about other aspects of CPC), listen to them but bring them back to the RMSR issue – give and take is important in any communication.” By allowing the customer contact agents to manage their own schedules, they were able to spend more time with customers who required more detailed explanation.

I, along with many of my colleagues, found that investing extra time at the front end of the interaction reduced the likelihood that I would have to revisit the customer or that the customer would contact their local MP, MPP or other external officials. Outreach on this



scale had not been undertaken by CPC prior to the RMSR, so for many customers it was the first time they had personal contact with a Canada Post representative. Although we were contacting them to discuss a specific health and safety concern, it was not uncommon for people to raise other issues or topics relating to Canada Post which increased the duration of the conversations. Additionally, as one participant noted; “...many customers were focused on past conditions and not the present conditions that we were dealing with.” In order to explain the history and context of the RMSR and the way in which present traffic profiles affected the rural delivery network, flexibility around time allowances was required.

Without the investment of time, customers would not have been provided sufficient information to motivate them to cooperate with the workplace safety initiative. It was useful to develop strategies around managing the duration of a customer communications as described by a colleague: “It was important to balance the personal aspect of the contact and the ‘official’ aspect – you didn’t want it to become too much of a personal conversation otherwise you could be at the door for quite some time.” Finding the appropriate symmetry between engaging in small-talk, providing RMSR information, and responding to questions and concerns, was an aspect of communications that relied on judgement and insight gained from the experience of prior customer meetings and interactions.

TSAT data was invariable but the communications around the TSAT content was dynamic, experimental, and improvisational. Appropriate time was needed to learn and

develop practical skill and to consolidate knowledge. The RMSR communications were informed and shaped by the interplay with customers and developed through iterations of conversations. This point is noted in the data: “Strategies were refined, perfected based on interactions and I would use the information from each interaction to improve the way I delivered information...You had to learn how to adapt the communication to meet the situation.” The storehouse of knowledge provided by the outreach effort was integrated into processes which informed subsequent communications, providing consistency and structure to the outreach effort.

### **7.3.6 Outreach Record Keeping**

An essential component to communications reflected in the data is ensuring the capture of accurate accounts of customer meeting content and outcomes. As with other aspects of the RMSR, the reporting system for customer contact was something that developed and evolved over time. As the need for informational detail increased in order to respond to customer and stakeholder questions and concerns, the value of having clear and intelligible records for reference in cases of contention or disagreement became evident. This point is noted by an participant: “As we moved forward with the RMSR work our record-keeping documentation improved as did our customer relationship management (CRM) strategy...” The CRM process could extend to external officials so it became important to make notes concerning each customer interaction indicating who, where, date/time, what options were provided, and the disposition of the conversation. This part of the outreach evolution helped to establish and maintain due diligence and consistency concerning the customer relationship process.

### **7.3.7 Team Camaraderie and Support**

Communications with customers and stakeholders was a defining feature of the RMSR undertaking but the ongoing interactions, support, advice, and discussions between and amongst team members was noted throughout the interviews as significant and refreshing. One respondent shared this thought: “In the RMSR even when things didn’t work well, the issue was resolved through dialogue and teamwork. There really was excellent communication across the team - the conference presentations, the role-plays were example of this.” Candid, genuine and trustworthy communications within the team were every bit as important as communications with customers and stakeholders.

In other interviews, the camaraderie and cohesion of the RMSR team was identified as being pivotal to being able to deliver and maintain robust quality across all aspects of the work. This sentiment was noted in a few of the interviews: “We were lucky to have such a great group of people who looked out for one another, helped each other out... We could talk openly and our input was genuinely appreciated so you were able to feel like a valued member of the team.” The ability to communicate openly and honestly about different aspects of the work and ask questions without fear of adverse rejoinder or backlash was something that was not part of prior work experiences according to the data. In one interview the point was made that being part of the RMSR provided: “More of a sense of trust than in other work environments.” It would be fair to infer that the trust established and extended within the RMSR group provided confidence and stability to the customer contact teams who often had to deal with unpredictable and emotionally charged situations.

## 7.4 Negotiation

*“Creativity, experience and sound intuition are at least as important to successful negotiation as any amount of analysis.” (102, p.2)*

In the continued interest of disclosure and transparency I believe it is prudent to identify my background in negotiation studies. The topic of my Master’s thesis at Queen’s university was “Negotiation and the Framing of Agreement” and my law studies at Osgoode Hall Law School of York University included programs and practicums on negotiation and mediation. If my academic background were to be characterized in terms of a menu, negotiation would be my main course. As a result, the ensuing account of negotiation and its application within the RMSR is significantly informed by my academic background but within a context that is practical and applied.

The RMSR provided an excellent setting within which to experiment with and develop negotiation skills. I have participated in various academic negotiation training exercises and I have been involved in countless labour-management meetings, discussions, presentations and proceedings but in all those cases certain standard protocols and procedures governed the communication arena. You knew who you were dealing with and what the situation required. In the RMSR, every customer contact involved meeting and speaking with new people. Each interaction began with uncertainty; we had no prior knowledge concerning the customers and they knew nothing about us. Additionally, we were communicating information that they did not expect to receive and asking them to do something that they likely never thought they would have to do. It took a good deal of

patience, durability, and adaptability to begin every interaction knowing that the information you were sharing was generally unwelcome and unappealing. I think every agent involved in the RMSR outreach would agree with this respondents comment; “I think a great lesson in this experience was developing ways to find resolution in challenging circumstances, I think we all became much better at problem solving.” The unpredictable nature of the customer outreach phase of the RMSR meant that negotiation became the fundamental practice and praxis. It was a skill-set that changed, improved, and became more refined through the iterative experience of customer contact, lending support to Bertram Spector’s observation: “Negotiation is not something to be simply memorized and then applied. It is part art and part science and needs to be experienced.” (218, p.2)

In all of the interviews conducted for this study and in countless hours of conversation with colleagues throughout my five years as part of the RMSR, the importance of negotiation and negotiation strategies surfaced repeatedly. Different people, different teams used different strategies but there were certain identifiable features across the board. I have interpreted and arranged these strategies according to my understanding of negotiation practice.

Negotiation can be described as a collective or collection of communication processes directed towards a strategic purpose or outcome. Negotiation and communication are closely intertwined as noted in this assessment: “Negotiations are a vehicle of communication and stakeholder management.” (166, p.2) Applying these points to the RMSR leads to the contention that stakeholder and customer outreach consists of the

range of activities undertaken to reach a settlement or agreement. This idea is brought forward in this interview extract: “My position was that we are not there to simply state facts but to work with the customer to reach an understanding.”

Forging understanding regarding the RMSR required providing information supporting the meaning and purpose of the workplace safety initiative. Norwegian philosopher Dagmir Follesdal describes meaning as “the joint product of all the evidence that is available to those who communicate.” (201, p.62) and a significant part of the outreach effort involved providing a persuasive rationale to customers to gain their understanding and motivate their participation. Typically, the focus pertained to three types of knowledge; *why* (detailing history and context), *how* (the TSAT application), and *what* (the steps required to meet the assessment conditions). These categories could open or lead to other areas of inquiry but most sub-categories linked back to the *why, how, what* axis.

The intent of the customer contact effort was to communicate the RMSR messaging, inform customers of the TSAT outcome and gain their cooperation and participation in meeting safety criteria. The personal communication contained an informational element and a negotiation component. The informational (explanatory and descriptive) aspect centred on *why* and *how* whereas the *what* element tended to require negotiation. G. Richard Shell explains: “The goal of all negotiations is to secure commitment, not merely agreement.” (107, p. 196) An important, and perhaps the most challenging, part of

customer contact was eliciting commitment from the customer to action the change required to meet TSAT criteria.

The initial time-frame to accommodate a requirement to make a change to the position of a rural mailbox in order to meet safety criteria was fifteen days. At the end of the fifteen day period, the team responsible for the area would audit the routes to confirm who had cooperated and who had not. For any customers who had not cooperated and had not contacted the team to seek an extension, a five day notice would be provided. Another audit would be undertaken after the five day expiry date and if the customer had not made the necessary adjustment or other arrangements (opted for a centralized delivery in a CMB or a mail compartment in the local post office), mail delivery would cease to the roadside RMB and default to general delivery status (held at the local post office). Required adjustments could be relatively small (moving the RMB back on the existing post) or more onerous (moving the entire RMB a few feet to a few hundred feet, clustering with a neighbour, removing shrubs to increase sight lines or related variations and permutations).

Regardless of the change required to meet TSAT requirements, discussion was involved and generally some form of negotiation would be needed to motivate cooperation and commitment. Based on my own customer contact experience working directly (at different times and for varying durations) with twelve partners and indirectly (as a team lead) with ten others, along with my analysis of the data, there were certain negotiation

strategies that were in play at some point in nearly every customer or stakeholder interaction.

#### **7.4.1 Active Listening, Reframing, and Redescription**

Active listening, reframing, and redescription are closely related but there are some distinguishing nuances between the concepts. Active listening involves engagement in a conversation demonstrated by restating what the speaker is saying or by acknowledging, confirming, or inquiring about specific thoughts or ideas shared during the communication. Engagement in the conversation is signalled by actively showing the interlocutor that their words are being heard, considered, and understood. Active and responsive listening helps to establish a positive connection between the parties involved in a dialogue or negotiation and sets the tone for subsequent interactions. G. Richard Shell notes: “Establishing rapport at the onset of negotiations is a distinct, separate part of the information exchange process. Everyone, no matter how simple or sophisticated, likes to be acknowledged on a personal level. The more genuine this personal acknowledgement is, the more effective it will be.” (107, p.139) This same point is identified in the data: “The personal touch makes things run more smoothly”, and; “In my view the best strategy was to be genuine...listen to the customer and express an understanding of their point of view....” Active listening is not limited to the actual exchange of words but includes attentiveness to the space between an utterance and response. The pause between words as well as between statement and reply includes and involves the speaker and listener. In those intervals thoughts and ideas are being generated, considered, and determined. Understanding the tempo or flow of the dialogue,



including the gaps, and according appropriate space is important to establishing connection and rapport. (17, 105, 219)

Reframing can take the form of selecting out provocative language (in the RMSR 'fail' or 'unacceptable' and related words were examples of terminology that could provoke negative or defensive response) to introduce thoughts or ideas and/or reorienting an issue under discussion through the integration of acquired knowledge to emphasize or create new meaning. (167) Paying attention to both verbal and non-verbal signals may reveal areas where shared meaning is available as noted in this respondents observation: "Being attentive to body language, both mine and theirs, was important – how they were standing, how they were looking at you provided clues and cues on shaping the contact." I found that the more the customer spoke after hearing the reasons that led us to contact them, the more I was able to link the information they provided to the dialogue to underpin or support the RMSR rationale.

An example that comes to mind is a customer who lived adjacent to a busy highway. She was not initially receptive to the idea of relocating the position of her RMB because, as she assuredly stated, it had been in place for a number of years without incidence. She went on to explain that prior to the current location, her mailbox had been located on the other side of the highway for many years and she never had a problem with that positioning. I listened closely and once she was done, I asked; "Would you cross that road nowadays if the mailbox was still on the other side?" She looked at me wide-eyed and exclaimed: "Of course not, there is too much traffic and everyone is speeding to get

to their cottages!” I said; “That is exactly the reason we are here.” Needless to say, she saw the value in the RMSR effort more clearly after our exchange.

Reframing conversational content to integrate or reference the cues, signals, and information provided by the interlocutor increases the feasibility of establishing rapport and achieving shared understanding and agreement. Katherine Hale notes: “People choose language that helps them define a situation and thus provide a pattern for action.” (167, p.148) From a negotiation perspective reframing the content of an exchange by selecting and/ or adapting language to minimize conflict and contention moves the dialogue towards agreement and shared meaning. (167, 220, p.168; 221, p. 344) As one participant explained; “You had to learn to adapt the communication to meet the situation.” A similar point is shared by Hale: “The negotiator or mediator must develop the skills needed to analyze the language frames he or she uses, as well as the frames participants use; these skills are necessary to successfully diffuse unproductive frames and translate them into more generative, dynamic frames.” (167, p. 149) An awareness of and ability to defuse inflammatory language alongside an ability to integrate an interlocutor’s perspective and reframe it to forge shared understanding is a skillset referenced throughout the interview reports.

Redescription concerns leaving unhelpful or entrenched vocabularies behind and describing issues with new language; reworking an issue or problem from a fresh, explorative perspective. (222) It involves identifying when a conversation and points of reference are increasing confusion and frustration and locking the parties into positional, defensive and closed communications. Redescription seeks to apply new ways of

thinking about and describing a problem that does not reference or utilize terminology or ideas that have been identified as unhelpful. In this way fresh communication and collaboration becomes feasible, free of the baggage and associations of ingrained vocabularies where new possibilities, new options are more likely to emerge.

There are some similarities between redescription and generative metaphors. Both applications are concerned with stimulating new thought and creating fresh perspectives. Redescription seeks to achieve this through introducing a new vocabulary while generative metaphors focus on introducing a new "...steering function for future actions and perceptions." (223, p. 223) through presenting an existing concept or problem in a different, less contentious, form (outside of the cognitive frame that is generating difficulties). (223) Both redescription and generative metaphors are concerned with deploying new ways of thinking in order to resolve or overcome stalemate and divisive intransigence. Barrett and Cooperrider explain: "Generative metaphor, then, is an invitation to see anew, to facilitate the learning of new knowledge, to create new scenarios of future action, and to overcome areas of rigidity." (223, p. 224).

Redescription is most often applied in cases where new or different vocabularies are required to create a clean break from deeply embedded linguistic frames.

In the RMSR the TSAT results were what lead us to the customers door but in a series of interviews it was noted that focusing on the TSAT data and numbers tended to invite challenge, debate and confusion so it was important to be able to leave that vocabulary aside and begin with a different way proceeding. A respondent explains it this way: "I

tended to use the expert info at first but it seemed to confuse some customers so I stopped bringing it up unless requested to provide more detail” and; “I tried not to overwhelm customers with numbers and data – in the beginning I would tend to provide too much of this kind of information and it sometimes put customers on the defensive which is not conducive to cooperation.” Although many participants reported that referring to the TSAT numbers during the customer conversation caused problems, others noted that citing the TSAT data and focusing on it kept conversations on track and made the interaction more time efficient. According to my personal experience, I preferred to use the TSAT data as support information and generally only cited the assessment data if the customer inquired about that part of the process. However, in concert with the interview reports, I would use the TSAT (quantitative) vocabulary in cases where the historical (qualitative) conversation was not finding traction.

#### **7.4.2 Anchoring**

Anchoring refers to communicating the reservation point, boundary, or ‘bottom line’ in a negotiation and it may be disclosed or undisclosed depending on the presenting situation. (166, p. 8) If agreement or acceptance has not been achieved, the bottom line marks the point beyond which further discussion becomes unproductive or futile. In the RMSR the TSAT represented the CPC set point. The assessment information required action(s) to be undertaken to resolve the workplace safety concern. In most cases during the RMSR outreach the anchor was identified and referenced early in the conversation and revisited throughout the dialogue. Multiple options were generally available to meet the conditions

of the anchor (the TSAT outcome) but in every case an adjustment to delivery position or mode of delivery needed to be actioned. One of the points that resonated across multiple interviews was that having more options available increased the likelihood of cooperation. The message remained consistent, but by having more than one way to accommodate the need for change, customers had a say in the matter, a sense of control over the situation. Being attentive to the context and to customers concerns signalled a willingness to work *with* them. It was useful to find a balance between asserting the TSAT requirements and collaborating with customers to find suitable relocation areas (that met criteria). This idea is noted in an interview: “A major lesson learned was the importance of good, clear communication in all aspects of the work – being open to new ideas or developments but also staying focused on the TSAT results.” Adhering to the anchor while also remaining flexible concerning options around ‘the bottom line’ allowed for greater cooperation in resolving the challenge and more satisfaction with the outcome.

### **7.4.3 Ripeness**

Ripeness in the negotiation literature typically refers to the appropriate or right (ripe) time wherein there is a clear willingness or readiness to participate constructively in seeking agreement or resolution. Ripeness is about finding the moment where disagreement, hostility, misunderstanding and/or mistrust give way to the possibility of reaching an accord. (107, 168, 224). There is no map or guide to show when the ‘right’ time is, but there are conditions and stages where signals for ripe moments are more likely. One of the most common stages is the stalemate stage where both parties have exhausted their

negotiation strategies but no change in their circumstance has occurred. Another condition leading to a ripe moment is when new or different information becomes available providing alternate settlement options. In every interaction, every dialogue there is a rhythm tapped out through words but also pauses, silences (awkward & purposeful), sounds to indicate surprise, frustration, happiness and other emotions and through paying attention to the verbal & non-verbal ebb and flow and sensitivity relating to these intervals it is possible to identify 'ripe' spaces that are more optimal for securing acceptance, agreement, and commitment.

Ripe moments during customer contact tended to arise after the initial conversation notifying customers of the TSAT results and after they had reacted to the RMB relocation request. Offering to work with and assist the customer in finding an appropriate relocation position that preserved their roadside mail delivery generally turned the interaction into a more positive experience. This idea is explained by a participant: "Being collaborative throughout the interaction helped to reduce hostility, the collaborative approach worked well. It worked better for the customer and worked better for me." Extending an offer of assistance helped to soften hardened perspectives and invited reciprocation per the norm of reciprocity; the general social rule that favour or consideration is returned in kind. (225, pp. 599-600) A significant part of successful customer contact centered on timing, using experience and intuition to determine the appropriate way to present the RMSR information. One participant put it this way:

"You can polish your approach as well as you can; however, right up to the second you knock on their door, you have no idea what kind of day the customer is having so,

personally, whenever I did my customer contact, I tried to put myself in the customers shoes because I know how frustrated I get sometimes when people come to the door out-of-the-blue.”

In some cases there is no ‘ripe’ moment and it becomes clear that the best thing to do is leave the matter for another day and/or have a different team revisit the customer. As one respondent noted; “In dealing with the public, you can’t please everyone.” Sending a different team or having a team lead speak with a customer who was particularly upset or difficult generally moved the situation forward in a positive way.

#### **7.4.4 Objective Criteria**

The idea of “appealing to objective criteria” has become a familiar topic in negotiation studies since being identified and described in Fisher & Ury’s seminal work “Getting to Yes” in 1981. The aim in referencing objective criteria is to move past argumentation or disagreement concerning the matter at hand in order to resolve contention and disagreement. It is thought that by introducing independently determined fact or evidence to a dispute any issues that may have been challenged on subjective or self-interested grounds can be measured against and agreed upon according to an objective standard.

(226) It became clear through the RMSR work that it was worthwhile to ensure that the person or persons involved in the conversation at the door have decision making authority when introducing or referencing objective criteria. I found, as did other colleagues I spoke with, that if the TSAT results were communicated to someone other than the homeowner (a relative, worker, babysitter) the subsequent translation of that information through the intermediary would often be incomplete, inaccurate and/ or incorrect and could result in new negotiation challenges.

The appeal to objective criteria is related to but somewhat different than an appeal to authority which relies on the deference to expertise (social position and/or expert standing) to promote cooperation (225, p.596-597). The presentation of authority and the appeal to objective criteria share similar aims (deference and/or acceptance) but the appeal to objective criteria is the softer of the two approaches and does not (necessarily) invite or exploit power asymmetry. (107, pp. 52-54)

In the RMSR coercion on the basis of power or authority did not typically factor into negotiations with customers. We did not wear “official” uniforms and did not assign citations or penalties relating to our work. Our role was to communicate the workplace health and safety risks faced by RSMC’s, explain that Canada Post had a legal responsibility to protect the safety of its workers, and advise customers of the assessment process and the options relating to the health and safety requirements. Any *power* attached to the outreach effort was knowledge-based and the point of customer and stakeholder outreach was to share and facilitate the knowledge acquired concerning rural mail delivery safety.

Rural mailbox safety assessments did, in some cases, require adjustments to the existing mode of delivery to ensure that Canada Post complied with the law. Customers and stakeholders were made aware of the factors that led to the need for relocation or adjustment to RMB delivery and were free to determine the options that worked best for them. In cases where a customer chose to do nothing after being notified that their RMB



did not meet TSAT criteria, mail delivery would cease to the roadside receptacle and their mail would be available for pick-up at their local post office. The final disposition of the safety review could be *inconvenient* for the customer but alignment with safety legislation had to be achieved. In most cases, a range of options was available to meet the safety criteria while still maintaining convenient access to mail delivery.

The argument could be made, following Foucault, that power extends and is exercised from multiple points (227) and that knowledge and power are inextricably intertwined. A broad definition of power referenced by Adler and Silverstein is: “the ability to act or produce an effect.” (228), and it was the case that the point of the RMSR was to produce an effect. Knowledge utilization in the RMSR possessed an instrumental quality directed towards improving/standardizing workplace health and safety and complying with the law.

Power, on this reading, was not concentrated in or controlled by a single entity but was widely distributed across multiple stakeholder groups (government, judiciary, union, corporation, community members). The messaging provided to customers concerning the RMSR was not a one-time, final communication but was open-ended in that the customers always had access to additional channels for call-back, questions, complaints or concerns both within Canada Post and external contacts (Mayor or other municipal official, MPP, MP, Employment and Social Development Canada, and the press). Adler and Silverstein further explain that negotiation circumstances characterized by power symmetry are more likely to result in settlement in comparison to cases where power is

asymmetrical. (228) The RMSR outreach effort was developed to share information, explain the safety concern, and generate collaboration and options to meet legal workplace safety requirements. The effort was to create as much knowledge symmetry as possible and secure cooperation based on shared understanding.

Interestingly, the interview data references instances where some customers reported feeling intimidated being approached by a team comprised of two males. At the other end of the spectrum teams comprised of two females reported difficulties with customers who did not take them seriously, challenged their credibility or simply refused to speak with them. This experience may extend from traditional gender role assignments in rural communities which emphasised male dominance and authority while relegating females to domestic and support roles. (229) Although these examples of traditional gender perspectives may be changing as the reach of globalization and technological innovation encroaches on rural spaces (230), incidences of resistance towards accepting female officials remained an issue. As a result of these experiences, adjustments to teams were made so that, as much as possible, they were of mixed gender.

In the RMSR the TSAT counted as objective criteria but, as noted in earlier sections, the appeal to the science-based evidence was not always well-received by customers. One participant explained: “I used third party [TSAT developers] info from time-to-time only based on the customer’s needs. Using it tended to open up more cans of worms than it closed so why go this way and risk losing control of the messaging?” As with other

aspects of the customer contact experience the appeal to objective criteria had to be assiduously timed and calibrated to the presenting context.

## 8.0 Discussion

*“And here we come on the difficulty of ‘all is in flux’. Perhaps that is the very point at which to start”* (231, p.8e).

### 8.1 – Implementation Ruminations

There is agreement throughout the interviews that the RMSR started more as an action than a plan. Barry Cross and Kathryn Brohman note that; “Projects, at their core, represent the implementation of strategy and the execution of company vision and direction.” (232, p.xi) The RMSR was deployed within a project framework insofar as there was a directive stipulating what needed to be done, a time-line, and a team developed to perform the work. According to the information provided through the research interviews, the RMSR did not begin according to a series of specified steps such as *agenda, analysis, formulation, implementation, and evaluation* common to typical policy execution. (166, p.4) Instead, due to the novel and uncommon nature of the intervention exercise, it would be more appropriate to describe the beginning of the RMSR in terms of *emergence* and *orienteering* - becoming familiar with unfamiliar ground and creating the plan after an orienteering phase. This idea is related in the words of this respondent: “The RMSR processes were built from nothing. In the beginning we largely worked with estimates around the work that needed to be undertaken and we changed and re-developed those estimates based on field work and field feedback.” Other participants point to the ‘trial and error’ nature of the workplace safety review which shares similarity with Tulchinsky and Varavikova’s observation that public health evolved in the same way. (32)

The first step prior to creating a strategy or plan is to determine where you are. John Shotter explains that orientational challenges have;

“...to do with discovering how to ‘go out’ towards an initially indeterminate state of affairs in our surroundings with certain expectations and anticipations at the ready, so to speak, appropriate to our finding our ‘way about’ and to ‘going on’ within them without (mis)leading ourselves into taking inappropriate next steps.” (233)

Cross and Brohman explain that what distinguishes projects from processes is that processes are developed through iterative steps based on what is known while “newness” and uncertainty are common features of budding enterprises. (232, p.29) Inevitably, newness and uncertainty give way to unanticipated challenges while also providing unworked ground upon which fresh ideas may be tried and tested.

The RMSR strategies (particularly field-based applications) and *ways of going on* were born of exigent conditions and experimentation. As a couple of respondents noted, nothing like the RMSR had been done by Canada Post before so existing organizational knowledge was more vague and provisional than prescriptive. As there was no pre-existing guide or template to follow, the early stages of the RMSR took on a “directed activity” (9, p. 123) *modus operandi* to find out what worked well. A participant explains: “We had the ability to develop and refine processes in a way that is not usually the case in the organization and this is probably because this kind of work had never been done before.” The kind of active experimentation used to determine and stabilize processes was something that was both necessary and encouraged by the team leads and managers, who were also involved in trial and error iterations relating to the RMSR work. Osterman

notes that in work contexts marked by; "...conditions of variety, ambiguity, and stress, Lowy, Kelleher, and Finestone (1986) found that the most effective managers were those who were open to information, acknowledged the need to learn on the job, and were constantly seeking ways in which existing practices might be improved." (234, p. 140)

The regional and local team leaders realized and understood that flexibility and adaptability were important to develop and advance credible (field tested) knowledge and skill. This perspective was manifested through providing field agents the freedom to examine problems they encountered and create alternate strategies to overcome complications.

Undoubtedly, there were tensions between Head Office in Ottawa and the regional teams concerning information, authority, tools, training and related issues but when it came down to the fundamental nature of the work there seemed to be general agreement that doing something was better than doing nothing. The form in which the RMSR work was done and the way in which processes were informed by and aligned with experience mirrored Dewey's point that: "...knowing is literally something which we do; that analysis is ultimately physical and active; that meanings in their logical quality are standpoints, attitudes, and methods of behaving towards facts, and that active experimentation is essential to verification." (235, p. 332)

A consistent finding in the data was that through experimentation and adaptive learning, details could be added to strengthen and stabilize procedures which, in turn, allowed training systems to be developed in order to consolidate and communicate successful

strategies within the team; the community of practice. Many of the respondents who were involved with RMSR project at or near the beginning commented on how being part of a new, uncertain, loosely structured enterprise led to feelings of apprehension, exhilaration, and sometimes frustration but as one respondent commented; “[the job] was more challenging and more rewarding than other roles.” The loose structure of the RMSR, especially in the beginning, allowed for role exploration and increased participation in and contribution towards the project growth and development. The sense of discovery and experimentation also provides a sense of engagement in and ownership over the work leading to increased satisfaction with the job despite frustrations and inconsistencies resulting from unchartered and uncertain endeavour. This point is confirmed in this participant observation: “The structure of the work was clearly different. You could operate more-or-less as your own boss. You had freedom to structure your workday and make decisions about what was important on any given day. You were able to direct your own work. The variety of work and freedom to organize your work was very rewarding.” The ‘loose structure’ provided space to learn, innovate, make mistakes, and refine and improve work applications and every participant expressed satisfaction with their RMSR experience.

## **8.2 Lessons from Implementation Practice**

The research data shows that the implementation of new workplace safety knowledge and procedures relied on adaptive, experience-based, field-integrated procedures based on feedback from stakeholders and customers, to stabilize and systemize RMSR processes. The need to achieve consistency in messaging and visibility became an essential concern

as the RMSR work began to take shape and newness and uncertainty became less prominent conditions. This point is captured in this respondent's comment: "Our processes improved due to having to address customer concerns in a more organized way. [Achieving] consistent messaging, consistent team presence and accountability... [meant] that we became much better at our processes going forward." The value of internalizing and externalizing consistency in RMSR processes stabilized the work and the work experience, creating greater support systems (training, measurement, reporting) to enhance and validate the work. Cross and Brohman explain:

"Consistency can be as simple as developing a common vocabulary....Consistency enables effective communication between project teams and leadership – it makes knowledge sharing and decision making more efficient. Consistency is also important for visibility; common key project performance indicators make it easier for leadership to effectively monitor project performance and assess when project teams need support and guidance" (232, p. 44)

The importance and prominence of consistency in the application of RMSR messaging and procedures was something that I was certainly aware of going into this research arena but the degree to which the project sustainability depended on it was greater than I had anticipated. Consistency is forged through iterative practice, experiment, and experience; finding out what works and continuing to apply successful strategies in subsequent interactions or activities. A difficult task in a large project such as the RMSR is to coordinate and consolidate top-down and ground-up experience and knowledge to make it available and relevant to team members and through them, to customers and stakeholders. According to both my own experience and the experience related through



the interviews, communication and negotiation were essential to meeting the consistency and coordination challenges.

Following Osterman's point that; "Reflective practice asks not only that we develop a conscious awareness of the craft of practice, but also that we develop an ability to articulate that knowledge." (234, p. 138), I have spent considerable time ruminating about and reflecting on the most appropriate way to characterize the RMSR according to my experiences with the workplace safety intervention and the reports of my colleague's experiences as expressed in their interviews. Consistent with the Greenhalgh et al. conception of knowledge utilization as: "The study of how individuals and teams acquire, construct, synthesise, share, and apply knowledge" (236), knowledge dynamics have been identified and explored in this study noting and describing the importance of experiment, adaptability, formal and informal dissemination channels, internal and external communications and negotiation. The RMSR experience was an organic one in which emergence and resilience featured strongly, and fits seamlessly the observation that:

"The knowledge that underpins the adoption, dissemination, and implementation of a complex innovation within an organization is not objective or given. Rather, it is socially constructed and frequently contested and must be continually negotiated among members of the organization or system." (110, p.606)

In the case of the RMSR the safety intervention was new not only to the organizational members but to the public customers who Canada Post services. The knowledge concerning RMSR activities was continually contested, reviewed, revised, and reframed

throughout the duration of the review. But as experience in applying the TSAT and communicating with customers, stakeholders (and colleagues) evolved and became more familiar, the internal and external negotiations became more streamlined; clearly demonstrating, as Dewey noted, that both knowledge and experience possess a fundamentally social character. (128, 129, 131)

### **8.3 The Influence of the Rural Context**

There is ample evidence in the data that the rural and public context created some unique and unanticipated challenges to both the TSAT and customer outreach components of the RMSR. One participant noted that the: “Vast geography presented logistical issues”, while another explained; “...the condition of the roads, the hills and curves, trees and brush all made it difficult to find good relocation positions. Winter issues also seemed to be more of a concern in the rural areas.” These physical challenges along with the challenges associated with the rural mindset required more intensive communications and negotiation with customers and stakeholders. We were sharing new knowledge (new to us and new to the public), applied in a unique context (on rural roadways in a rural landscape) and I think it would have been naïve to suppose that the information we were sharing would pass uncontested. Challenges to the safety messaging and to the TSAT findings helped us to enhance and refine our outreach process by revealing gaps, weakness, and/ or inconsistencies in our information. Contesting the knowledge we were communicating helped us to anticipate subsequent similar rejoinders and better prepare for upcoming interactions.

## **8.4 The RMSR as an Adaptive Project Organization**

The connection between knowledge and context in the RMSR shows an adaptive, integrative, open, and reciprocal arrangement and shares many of the same features as complex adaptive systems. Based on my own experience as an agent and team lead with the RMSR, immersion in and analysis of the research data, surveys of private and public documents concerning the RMSR, and the information presented to this point in my account, I have come to understand the RMSR as an example of an adaptive project organization. Cross and Brohman describe the features that constitute an adaptive project organization:

“An adaptive project organization is one where a network of empowered individuals know where they are going and are given the tools they need to get there. It is an environment that embraces uncertainty, where individuals trust each other to provide open and honest feedback, and are able to recover quickly from crisis change, and failure. Furthermore, it is a place where leaders and project teams learn from experience.” (232, p. 155)

I do not intend to suggest that the RMSR began with a vision or intent to launch as an adaptive project system. It did not. However, the data, as I understand and interpret it, shows consistency with the same elements that mark adaptive project organizations. The RMSR consisted of a network of empowered team members who had a defined direction and were provided with tools to achieve the plan. At times, new tools needed to be created, existing instruments needed to be redeveloped, refined and/or updated, and some were replaced by others but the raw materials and fundamental mechanisms were in place.

As noted throughout the interviews, the RMSR started as a project immersed in uncertainty; at times cursed by uncertainty, but used the variability to create, test, and improve application and communication strategies. Cross and Brohman observe; “In rapid change project environments, adaptive life cycles are the only option.” (232, p.76) and rapid change, particularly in the outreach component of the work was a familiar experience in the RMSR as expressed by this respondent: “...at CPC change generally does not occur quickly but in the RMSR change could occur daily.”

### **8.5 Trust and Rapport in Knowledge Utilization**

Cross and Brohman point out that in variable and unpredictable project environments, genuine trust, communication, and feedback within the team is essential to navigating system turbulence. The importance of this kind of frank, open communication and feedback within the RMSR is referenced in multiple interviews but this quote explains the experience well: “Compared to other work systems I have been part of, the RMSR group worked collaboratively rather than competitively. Everyone shared information openly whereas I have been in other areas where information was withheld or simply not shared with others.” The collaborative sharing of information and feedback amongst and between all team members ensured that everyone learned and benefited from one another’s experience (both positive and negative). As expressed in the data, the importance of the yearly conferences to share insights, learn new strategies, and experiment with different ideas in a safe environment was invaluable.

My own experience suggests that there was not unanimous agreement on this point.

I recall at one early conference I was speaking with the Director at the time and he was not of the opinion that the costs related to holding the conference demonstrated value. He did allow that other people seemed to think the conference was useful. I think the difference in perspectives relates to the *work as imagined* and *work as performed* distinction. The people who performed the work knew the value of meeting together to share insights, learn new strategies, and innovate improved ways to utilize knowledge but this kind of value is not easily represented on a balance sheet. Emad Rizkalla provides some insight into this problem:

“Frankly, I think the training industry and practitioners of training and corporate development have struggled to prove ROI [return on investment]. Our industry teaches real skills, but sometimes those skills are "soft," and sometimes it takes time for those newly acquired skills to affect the bottom line. Improvements derived from training and development are not easy to track point for point.” (237)

From a knowledge utilization and employee morale perspective, it was clear in the data that the annual conferences were important to learning and development as well as performance. This point is confirmed by recent management research:

“Organizational efforts for training and development nurture knowledge and expertise among employees and generate their commitment to learning (López, Peón, & Ordás, 2006; Noe et al., 2010). Organizational learning is a central process for innovation, which promotes the absorption and utilization of external knowledge and integrates internal knowledge by allowing effective transfer and application of knowledge among organizational members (Chen & Huang, 2009; Subramony, Krause, Norton, & Burns, 2008). (238, p.395)

It is a credit to the management team of the RMSR that despite the costs associated with organizing a yearly conference, and some opinion casting the effort in a negative light, the “soft” value and knowledge utilization benefits were recognized and viewed as yielding tangible organizational practice and team building efficiencies.

## 9.0 Implications

*“Out of intense complexities, intense simplicities emerge.” – Winston Churchill*

From the perspective of the directive that initiated the RMSR and the requirements issuing from that directive, the rural mail safety review successfully achieved its objectives, although outside of the initial five year time-line. At the close of the RMSR in late 2013, 408,247 rural mailboxes had been reviewed for workplace safety reasons in the Central Region (formerly Huron-Rideau) and 94% of customer's were able to maintain roadside mail delivery at either existing or modified positions. (239) The Huron Rideau (*Central Region*) group that I was a member of and is the focus of this research study was the largest team of the RMSR and reviewed nearly half of all rural mailboxes in the country.

The health and safety assessments and customer and stakeholder outreach were applied to a workplace which included thousands of independent work locations on public roadways across the vast and variable geography of Canada. The innovations that were developed as a result of the rural safety initiative were not limited to the TSAT and customer-stakeholder communications but included RSMC roof-mounted vehicle signage and flashing amber lights to increase on-road visibility (the same signage and light were used by the RMSR teams), and reflective safety clothing and vests for work outside of vehicles. The RMSR helped enhance traffic-related public health by initiating increased visibility of RSMC vehicles, raising awareness and increasing understanding of the need for rural delivery workplace safety through the outreach process, and through the

identification of delivery positions that decrease the risk of traffic incidents involving rural delivery agents.

It could be argued that the RMSR was successful because it began as political directive and was funded through an external budget. Greenhalgh et al explain: “A policy ‘push’ occurring at the early stage of implementation of an innovation initiative can increase its chances of success, perhaps most crucially by making available a dedicated funding stream” (110, p.610) The RMSR was initiated with a budget attached and it is very likely that without the external budget the workplace safety review would have taken shape differently. That being said, although the RMSR was not funded directly through organizational coffers, similar reporting and accountability systems to those that the organization uses to track financial expenditures were applied and required. Additionally, because of the public and political profile of the RMSR work it could be argued that the fiscal controls, metrics and oversight were *more onerous* to ensure accountability and transparency throughout the RMSR lifespan. Clearly, having access to an external budget dedicated to supporting an implementation or project increases viability and sustainability but it does not, in and of itself, guarantee success.

According to the the interview data obtained in this research investigation, the conditions for success in the RMSR depended on the following:



1. Orientation is a necessary precursor to planning and becomes the means through which direction is determined in situations where no pre-existing strategy, guide or map is available;
2. Knowledge (*knowing*) was developed and utilized through experiment, exploration and adaptation;
3. Iterative and integrative internal (within the community of practice) and external (with customers and stakeholders) communications;
4. The use of negotiation to build rapport, create linkages, and overcome obstacles;
5. A consistent message delivered through adaptive and flexible strategies.

These conditions are likely to feature in any successful implementation enterprise and can be depicted and summarized in the following way:

<b>Orientation:</b>	<ul style="list-style-type: none"> <li>• Survey the Context</li> <li>• Identify Potential or Actual Markers and Milestones</li> <li>• Remain open to new or changing information</li> <li>• Reposition when or where necessary</li> </ul>
<b>Strategy:</b>	<ul style="list-style-type: none"> <li>• Codify recursive and excursive experience into processes</li> <li>• Plan for unexpected or unanticipated conditions and contingencies</li> <li>• Value and maintain ongoing engagement with stakeholders, colleagues, and client's</li> </ul>
<b>Knowledge:</b>	<ul style="list-style-type: none"> <li>• Ongoing development and refinement through experiment and exploration</li> <li>• Adaptive and responsive to local context</li> <li>• Evidence-based but linked to presenting context</li> </ul>

<b>Negotiation:</b>	<ul style="list-style-type: none"> <li>• A suite of strategies to establish and maintain rapport and connection, including;</li> <li>• Active listening and reframing</li> <li>• Anchoring</li> <li>• Redescription</li> <li>• Timing and Ripe Moments</li> <li>• Linking to Objective Criteria</li> </ul>
<b>Communication:</b>	<ul style="list-style-type: none"> <li>• Flexible and adaptive</li> <li>• Nuanced and sensitive to context-specific dynamics</li> <li>• Multi-channel but consistent messaging</li> <li>• Use of iterative feedback systems to inform/improve subsequent interactions</li> </ul>

Forms and varieties of knowledge utilization and communications have been topics in countless research investigations in numerous fields of study (40-46, 51, 54, 90-92, 94-95, 110, 146, 152-154, 188, 236) but negotiation, although referenced in passing in a number of the research papers I consulted, does not appear to be an area of note or sustained attention in the knowledge utilization and implementation literatures. It may be that negotiation is assumed by or subsumed under *communication* but on the account offered here, it is a distinctive part of the communications landscape, with its own significant literature, which may add a great deal of value to knowledge utilization efforts in whatever form they are deployed. Based on my experience and the information provided through the interviews, negotiation was essential throughout the RMSR to overcome obstacles, resolve interpersonal or informational problems or misunderstandings and generally to create and sustain relational connections. According to the results generated through this study, future knowledge utilization and

implementation research could benefit from further investigation of and experimentation with the negotiation strategies identified and applied in the Rural Mail Safety Review.

The idea that: “Personal contact at all levels was the key thing”, resonates throughout the data. The data confirms that face-to-face contact is invaluable to knowledge utilization applications and negotiation skills help to navigate the uncertain, unpredictable nature of personal communications particularly in cases where no prior relationship exists. The data concerning the experience of communications and outreach in the RMSR agrees with John Wheeler’s assessment that; “*Communication* [italics in the original] is the essential idea.” (201, p.62) and Alan Middleton’s observation; “In modern business, it is becoming all about the relationship.” (240) The coordination and application of knowledge utilization and adaptive communications is a complex undertaking comprised of any number of anticipated and unanticipated reactions, interactions and confounders that extend from the context or setting in which an implementation or project operates. (110, 236) Essentially, a project or implementation needs to account for the fluid dynamics of relational networks and ensure that communication and knowledge systems are elastic and adaptable to changing or emergent conditions. If I understand negotiation theorists correctly, this is why many of them describe negotiation as an art and a science. (107, 108, 218) The RMSR experience confirms the idea that negotiation, as a specialized sub-species of communication operates in the same sort of way as engine lubricant; it helps manifold components to work together smoothly, enabling the efficient operation of the entire system.

## 10.0 Strengths and Limitations

*“The work of the philosopher consists in assembling reminders for a particular purpose.”* – Ludwig Wittgenstein (158)

This study investigates a large and unique workplace health and safety review and intervention with connections to public health issues that would not have otherwise been studied. My involvement in the RMSR provided me access and insight regarding the evolution of both the internal and external processes from the beginning of the review odyssey. The five years I spent performing RMSR work contributed to a certain level of insight that would not be available to an investigator who did not experience the unpredictable, uncertain, but fluid and fascinating aspects of working in the kind of adaptive project system that the RMSR represents.

### 10.1 Practitioner Inquiry

I, as many of my colleagues reported, came to understand a great deal more about myself and others through both the work experience and through this research study. Shotter captures a sense of the way in which being a practitioner-researcher differs from more typical research situations:

“Rather than resulting in nameable, objective ‘things’ out in the world, in objective knowledge, the results of practice-situated inquiries come to be registered in, and to accumulate in, our embodied capacities and sensitivities. As Bateson (1979) puts it (see Shotter, 2010a), they contribute to a practitioner becoming better “calibrated” in “the setting of his nerves and muscles” (p.211) which, in practical terms, means that the practitioner can come to act automatically and spontaneously, i.e., without conscious deliberation by anticipating the direction of a client’s next steps, i.e., the ‘point’ of their actions or utterances, before their actual expression of them.” (233, p.11)

The iterations of applying the TSAT resulted in my ability to look at a rural mailbox just about anywhere and, with a decent level of accuracy, know whether or not it would meet TSAT criteria. Similarly, through thousands of interactions with customers at their door, along the roadside, in post offices and other locations, I can often anticipate the response to the RMSR messaging before words are exchanged based on their body language and facial cues. A number of my colleagues have expressed acquiring the same abilities. We have an orientation to and familiarity with the landscape.

The experience of performing a task, skill or work improves and/or is refined over time; knowing becomes embodied, signals, cues, and characteristics are more rapidly observed and integrated into a communication or application. Shotter explains: "...practitioner inquiry is concerned with *details* [italics in original] in our surroundings that are crucial to the performance of our actions." (233) A strength of this research investigation is identification and discussion of the 'details' that agents integrated into their work based on context, interpersonal interactions with colleagues, customers, and stakeholders and through experiment in developing and utilizing new, emergent knowledge. My immersion in and connection to the work and ongoing reflection concerning aspects of the work that resonate strongly for me based on my experience, coupled with the interview data provided by my colleagues, provides a rich and varied insider description of the RMSR.

## 10.2 Orientation and Landmarks

The idea has been, through the research, to provide some insight concerning knowledge utilization and establish a kind of research experience *Inukshuk*, a wayfarer's marker denoting a credible path:

“Thinking systemically is to think as a ‘participant part’ within the very systems we think of ourselves as investigating... understandings of this kind need to be lived within the context of a practice before they can be described, and their descriptions need to be voiced within that practice – as, in fact, a dynamic stability within that ongoing flow of activity – if they are to come to function as ‘orienting landmarks’, so to speak, in the landscapes of possibility we encounter in our relational practices.” (233, p. 15)

My experience with the RMSR began as an *orientation* and I have presented a series of reasons why, according to my review and understanding, the RMSR as an enterprise found its footing through an orienteering phase. This research presents some of the landmarks along the way that served to shape and sustain the project mission. I am confident that the descriptions of and reflections concerning the RMSR journey resonate with and are familiar to my colleagues. Krefting, referencing Sandelowski, explains; “...a qualitative study is credible when it presents such accurate descriptions or interpretation of human experience that people who also share that experiences would immediately recognize the descriptions.” (186, p. 214) I have actively sought to integrate into the research discourse as much of the verbatim comments and ideas revealed in the interviews as practicable to maintain connection to the data. In this way the concepts shared by participants appears alongside my researcher interpretations and extrapolations.

In preparing this research account it became increasingly clear to me that my experience in the RMSR and the experience my colleagues conveyed was an example of *concrecence*, we grew together in the shared work effort. Additionally, our work was also an example of reflective practice in the sense characterized by Osterman: “As the articulation of craft-knowledge, reflective practice further enhances professional growth and development by facilitating dialogue among practitioners. This dialogue, in turn, establishes a basis for understanding, caring, and cooperation in the workplace.” (234, p. 159) Our skills and abilities were elevated through many points of collaborative contact and connection, in ways that may not have been possible in a different, less collegial and supportive context. Krefling also notes that ‘intimate familiarity’ with the research context may uncover aspects of experience that might have remained hidden or elusive in research situations where intense participation is not a feature. (186, p.217) I am not certain that this research example has uncovered anything hidden but I do believe that it credibly represents the experience and perspectives of the community of practice.

### **10.3 Frameworks and Replication**

Carol Weiss notes that: “Social science knowledge is not apt to be so compelling or authoritative as to drive inevitably toward implementation. Social science knowledge does not readily lend itself to conversion into replicable technologies, either material or social.” (106, p. 427) I think the concern with ‘replicable technologies’ is an ongoing one for scientists and researchers. I have not presented a prescriptive design or exemplar developed to generate the same or similar results akin to those achieved through the RMSR. There are numerous existing knowledge utilization models. Nelius Boshoff

describes a number of them in his presentation; “Knowledge Utilization: Key Authors and Models” (241) and many other accounts and surveys are available in the literature either generally or according to specific domains. (45, 46, 51, 91, 92, 94, 110, 146)

The RMSR experience is illustrative of the paradox identified by Greenhalgh et al that implementation (knowledge utilization) models are not able to identify and account for the myriad interactions, contingencies, and contextual nuances that are in play in every implementation, intervention, or innovation. (110) Their observation coheres with recent research undertaken by Field et al which concluded that: “Conventional views support the use of theories, models and conceptual frameworks to underpin the process of change, yet in practice, their application seems more limited.” (242) Field et al examined the use of the Graham et al *Knowledge to Action Framework* proposed in 2006 (41), explaining that it is one of the most referenced knowledge translation frameworks in the citation search engine databases they consulted (Google Scholar, Scopus, and Web of Science). Yet, according to their research the use of the framework, across a variety of settings, was random and arbitrary with not a single reported instance of the framework being used in its entirety. (242)

The RMSR did not emerge from, reference or otherwise utilize an implementation framework or plan but, according to the trajectory described in this study, it turns out to share features identified in the Consolidated Framework for Implementation Research (CFIR) developed by Damschroder et al. (243) The RMSR can be reasonably situated within the CFIR as it was designed to accommodate complex, adaptive, transitional,



multi-level and multi-faceted intervention systems. The Damschroder et al., preferred definition of implementation: “Implementation, by its very nature, is a social process that is intertwined with the context in which it takes place.” (243), represents exactly the experience of the RMSR.

The CFIR identifies five core domains that are common across a wide range of implementation and intervention initiatives: intervention characteristics, outer setting, inner setting, characteristics of the individuals involved and the process of implementation. (243) Each domain takes into account aspects of the intervention experience that are likely to emerge including; complexity and adaptation (intervention characteristics), socio-economic, political and stakeholder influence (outer setting), organizational culture, structure and politics (inner setting), interpersonal, intergroup and organizational dynamics (individuals involved in the implementation process) and change systems, planning and execution (implementation processes).

Although the CFIR was not used in the RMSR to plan or organize the workplace health and safety intervention process, it remains a useful framework to reference in gaining an understanding of the aspects of the manifold activities and challenges that tend to be common to implementation science initiatives. The authors of the CFIR describe it as guide and roadmap (243) and one of the more evident omissions of the RMSR was reference to a guide or roadmap to give shape to the intervention effort and potentially minimize or avoid implementation challenges. Highlighting this omission and identifying

a credible framework that accounts for issues encountered in the RMSR and common to other implementation undertakings should count as a research outcome strength.

My impression is that the RMSR research confirms the Polyani et al insight that it is both important and useful to view knowledge utilization as a complex, fluid, reciprocal, and dynamic process where the interactions between researchers and information users is as important as the data or content. (111, p.110) It seems unlikely that any model or framework could comprehensively enumerate and capture the range of gradations, the influence and interplay of relational capital, and myriad iterative components that characterize complex, multi-stakeholder change interventions or implementations. However, there is certainly value in having access to a guide identifying and describing core and common implementation stages when planning and organizing intervention activities.

Clearly, as one colleague commented: “The safety intervention was long overdue and we needed to bring/apply modern standards to the old practice of rural delivery.” The modern standard (which itself was required due to change within an existing context) was generated through the application of scientific knowledge but the utilization of the knowledge; applying, understanding, and communicating the rationale behind the standard, required interactions between people; interactions which require adaptability, flexibility, and responsiveness rather than scripted, static, or rote formulas. It may be a *weakness* that the information examined in this study has not been depicted or presented in a chart, model or graph. Conversely, it may be a *strength* that the KU strategies

identified and discussed in this research investigation identify contextual and relational confounders and uncertainties, while also describing ways to shape and refine *knowing* to appeal to and resonate with an interlocutor or intended audience. I leave these determinations in the hands of the reader to decide.

## 11.0 Conclusion

*"The aspects of things that are most important for us are hidden because of their simplicity and familiarity. (One is unable to notice something—because it is always before one's eyes)" (158; S129)*

The ideas that have been discussed throughout this research investigation are not new, but may be easily overlooked or forgotten. Knowledge utilization without attentive, adaptive, credible, and consistent communication is unlikely to take root and flourish. Yet, the importance of establishing and maintaining rapport and connection with an interlocutor or audience is not typically a primary focus of knowledge utilization efforts. According to my experience and understanding, the importance of interpersonal communications tends to be taken for granted or it may be that there is a presumption that everyone possesses the ability to communicate effectively so it is not necessary to hone and refine relational skills.

During the period of time that I was involved with the RMSR and doing my Ph.D. course work, I was asked to speak at a yearly knowledge sharing forum presented by a large insurance company for management representatives of healthcare facilities represented by the insurance firm. I spoke on the topic of emotional dimensions of employee health, emphasizing the importance of relationship and workplace civility.

The feedback concerning my discussion, although generally favourable, included remarks noting that my message was not new and that the audience had heard similar information in other talks. I stayed and listened to some of the other presentations throughout the day and I was interested to hear a couple of audience members remark that one of their

biggest gripes was that when employees were away from work due to illness or injury they would provide information freely and in a timely manner to their personal primary care professional but not to their workplace managers. To me, the problem was an easy one to diagnose; the workers likely had greater rapport with their primary care professional than their manager or supervisor resulting in a greater comfort level in sharing information with one over the other. I had, earlier in the day, spent twenty minutes talking about how important credible, attentive interpersonal communication was in creating and maintaining a positive workplace, but my message, seemingly because it was too simple, too familiar, was overlooked.

Professionally, as in life, we need to be continually reminded of what matters and why. Canada Post needed to be reminded that the health and safety of rural and suburban mail carriers needed to be assessed and protected in the same way as other employee groups. Rural delivery customers needed to be made aware of the dangers faced by rural delivery personnel and reminded that safety oftentimes trumps tradition and convenience. One participant explained; “I felt that it was well worth doing this work – we helped the public to understand that rural Canada has changed and that something needed to be done to protect the health and safety of the rural delivery employees.” While another remarked; “I think that change of this kind was long overdue and customers needed to understand that RSMCs have to stop along the road hundreds of times per day to meet their service commitments and that their risk of road accident or incident has increased over the past hundred years.” The RMSR was warranted, overdue and utilized an objectively and collaboratively developed tool to assess rural delivery risk but those elements were, for

many customers, not enough to motivate action. What was needed, in addition to the aforementioned elements, was an *explanation*, a rationale based on communication, rapport, and collaborative understanding. Credibility does not just depend on expertise, evidence, and/or authenticity but the way in which information is presented, communicated; “Credibility is a product of long-term evidence and commonly shared experience that a source is competent, fair, flexible to new demands, and consistent in its task performance and communication efforts.” (244, p. 180). Communication and negotiation rely heavily on credibility and following Shotter’s observation that; “Personal credibility, getting behind your arguments, plays an important part in creating a convincing discourse in the humanities and social sciences.” (233, p. 13), it is my hope that I have been able to present a convincing discourse while providing some useful reminders concerning familiar ideas.

**Craig Ervine, December 2014**

## **Appendix**

### **Appendix A – List of Acronyms:**

- CAS: Complex Adaptive Systems
- CFIR: Consolidated Framework for Implementation Research
- CHSRF: Canadian Health Services Research Foundation
- CPC: Canada Post Corporation
- CUPW: Canadian Union of Postal Workers
- CMB: Community Mail Box
- CRM: Customer Relationship Management
- ESDC: Employment and Social Development Canada
- GMB: Group Mail Box
- KE: Knowledge Exchange
- KT: Knowledge Translation
- KU: Knowledge Utilization
- KTE: Knowledge Translation & Exchange
- MOD: Mode of Delivery
- MP: Member of Parliament (Federal)
- MPP: Member of Provincial Parliament
- NRC: National Research Council
- OHS: Occupational Health and Safety
- ORE: Office of Research Ethics (University of Waterloo)
- PAR: Participatory Action Research
- PO Box: Postal Office Lock Box

RE: Realistic Evaluation

RMB: Rural Mail Box

RSMC: Rural Suburban Mail Carrier/Courier

TSAT: Traffic Safety Assessment Tool



## Appendix B – Rural Mail Safety Customer Communication:

### SAFETY MATTERS

Canada Post is committed to the safety of its employees, its customers and the motoring public



As part of our ongoing commitment to the safety of our employees, our customers and the motoring public, Canada Post is conducting comprehensive safety reviews of all rural mailboxes across the country. *That's 843,000 mailboxes.* It's a big job, but it's certainly worth the safety of our employees who deliver the mail and the customers who pick it up.

#### ▶ RURAL MAIL DELIVERY

Our rural mail carriers stop their vehicles at a mailbox, deposit the mail, and merge back into traffic. This sequence occurs often hundreds of times, every day, on each delivery route. While rural mailboxes have been fixtures on the Canadian landscape for decades, growing traffic on many of the roads has made mail delivery more hazardous. Also, like other employers in the country, Canada Post has raised the bar for workplace safety standards.

#### ▶ ASSESSING RURAL MAILBOX SAFETY

We asked an independent panel of traffic-safety experts to develop a consistent process and a detailed set of criteria for assessing rural mailboxes. The safety assessment measures a number of factors such as the volume, type and speed of traffic, and how close passing cars get before their drivers see the mail-carrier vehicle stopped at the mailbox. This set of criteria will be applied to all rural mailboxes in Canada. We'll inform you before the assessments begin in your area.

#### ▶ DELIVERY OPTIONS

If your mailbox meets the safety criteria, delivery will continue as usual. If it doesn't, a Canada Post representative will visit you to discuss what changes can be made to your mailbox to meet the safety criteria, or other delivery options. We're committed to maintaining rural mailbox delivery. We'll consider changing your delivery only as a last resort. If a change is required, we'll offer you a number of delivery options. These include a secure Community Mailbox conveniently located near you, where you can send and receive mail. You can also opt for a free postal box if this service is available in your area.

#### ▶ SERVICE AND SAFETY

We're committed to delivering the highest standards of service possible to all Canadians. Following the Westray Coal Mine disaster in Nova Scotia in 1992, the Criminal Code was amended by Bill C-45 to make employers criminally liable for failing to address safety issues. As an employer and corporate citizen, Canada Post, like all Canadian companies, has a responsibility to ensure the safety of its employees and its customers. Canada Post will keep residents and community leaders fully informed throughout the assessment process, and will continue to provide local mail delivery to all customers using appropriate means, without interruption.

[www.canadapost.ca](http://www.canadapost.ca)



For more information, please call 1-866-501-1669 or visit Canada Post online at [www.canadapost.ca/ruralmail](http://www.canadapost.ca/ruralmail).  
TTY 1-800-267-2797

## Appendix C: Traffic Safety Assessment Tool (TSAT) Guide:

Canada Post engaged the services of an expert panel to develop a tool that would assess the traffic of rural suburban mail carrier's (RSMC) delivery routes. The result of the combined work of the multi-disciplinary team is a traffic safety assessment tool, or TSAT, that can be applied to individual rural and suburban mailboxes (RMB).

### The panel of safety experts

**iTRANS Consulting**, a North American professional engineering consulting firm serving clients across Canada, the United States and internationally in the areas of transportation planning, transportation systems, and transportation safety.

**Human Factors North**, a Canadian consulting firm providing ergonomics expertise to design work and workplaces based on human characteristics. HFN brings expertise in traffic safety, interface design and occupational ergonomics.

**Cotton Law**, a legal specialist and advisory firm in the area of occupational health, safety and the environment.

### The approach

The approach adopted was a driver behaviour approach. This approach assesses the driving tasks of an RSMC, and their requirements, as well as the driving tasks of other drivers who encounter a stopped or merging mail carrier vehicle in typical traffic and road conditions. The approach determines whether time available for drivers to carry out their driving tasks encompasses the needs of the majority of drivers.

The road conditions considered in the traffic safety assessment tool include two- and four-lane roads, with and without shoulder width sufficient for stopping the mail carrier's vehicle, at the mailbox, whether completely off, or in, the path of another vehicle traveling in the same direction as the mail carrier.

### What the tool assesses

The tool assesses whether there is sufficient sight distance for other drivers, traveling at typical speeds on the particular road, to respond appropriately to a stopped mail carrier's vehicle. Drivers need time to perceive the situation ahead, make a decision on how to react to it, and start and complete the action selected.

The tool also assesses the ability of the mail carrier to merge safely back into traffic. RSMCs need to see far enough behind so that they can select a reasonable gap between passing vehicles to merge back into traffic.

The assessment also includes the number of vehicles using the road for two and four-lane roads, when the RSMC vehicle is stopped on or off the road. Research has found that when drivers need to wait for long periods of time due to high traffic volumes to get a gap to merge back into traffic, they tend to accept shorter and less safe gaps. Traffic volume measurements are taken between 9:30 a.m. and 3:30 p.m., the time an RSMC is usually on the road delivering, which also takes rush hours out of the equation.

In addition, the tool assesses whether the location of the mail box meets the present legal restrictions, such as its distance from an intersection.

## How the tool works and what it measures

### *Posted speed limit*

#### *Number of lanes and where the RSMC vehicle stops to deliver the mail*

As a first step, some basic data related to the RMB are recorded including:

- Whether any legal restrictions exist at the RMB location. Legal restrictions could include, for example, an RMB located within a “No Stopping” zone or located within 20 meters of a major intersection or railway crossing.
- The number of lanes on the road.
- The position of the RSMC vehicle when it is stopped to deliver the mail – whether the vehicle is completely off the road or partially on the road.

### *Traffic volume at the RMB*

Traffic volume is the total number of vehicles (of any kind including cars, trucks and motorcycles) that pass the RMB over a 15-minute period.

- For two-lane roads, vehicles are counted in both directions. For four-lane roads, only vehicles in the two lanes on the same side of the road as the RMB are counted.
- Traffic volume is counted between 9:30 a.m. and 3:30 p.m.

#### *For two-lane roads:*

- When the RSMC vehicle can pull completely off the road when delivering the mail and the total vehicle count in the 15-minute period is greater than 130, it is potentially unsafe for the mail carrier to deliver at the RMB.
- When the RSMC vehicle is partially on the road when delivering mail and the total vehicle count in the 15-minute period is greater than 40, it is potentially unsafe for the mail carrier to deliver at the RMB.

#### *For four-lane roads:*

- When the RSMC vehicle can pull completely off the road when delivering the mail and the total vehicle count in the 15-minute period is greater than 130, it is potentially unsafe for the mail carrier to deliver at the RMB.
- When the RSMC vehicle is partially on the road when delivering the mail and the total vehicle count in the 15-minute period is greater than 80, it is potentially unsafe for the mail carrier to deliver at the RMB.

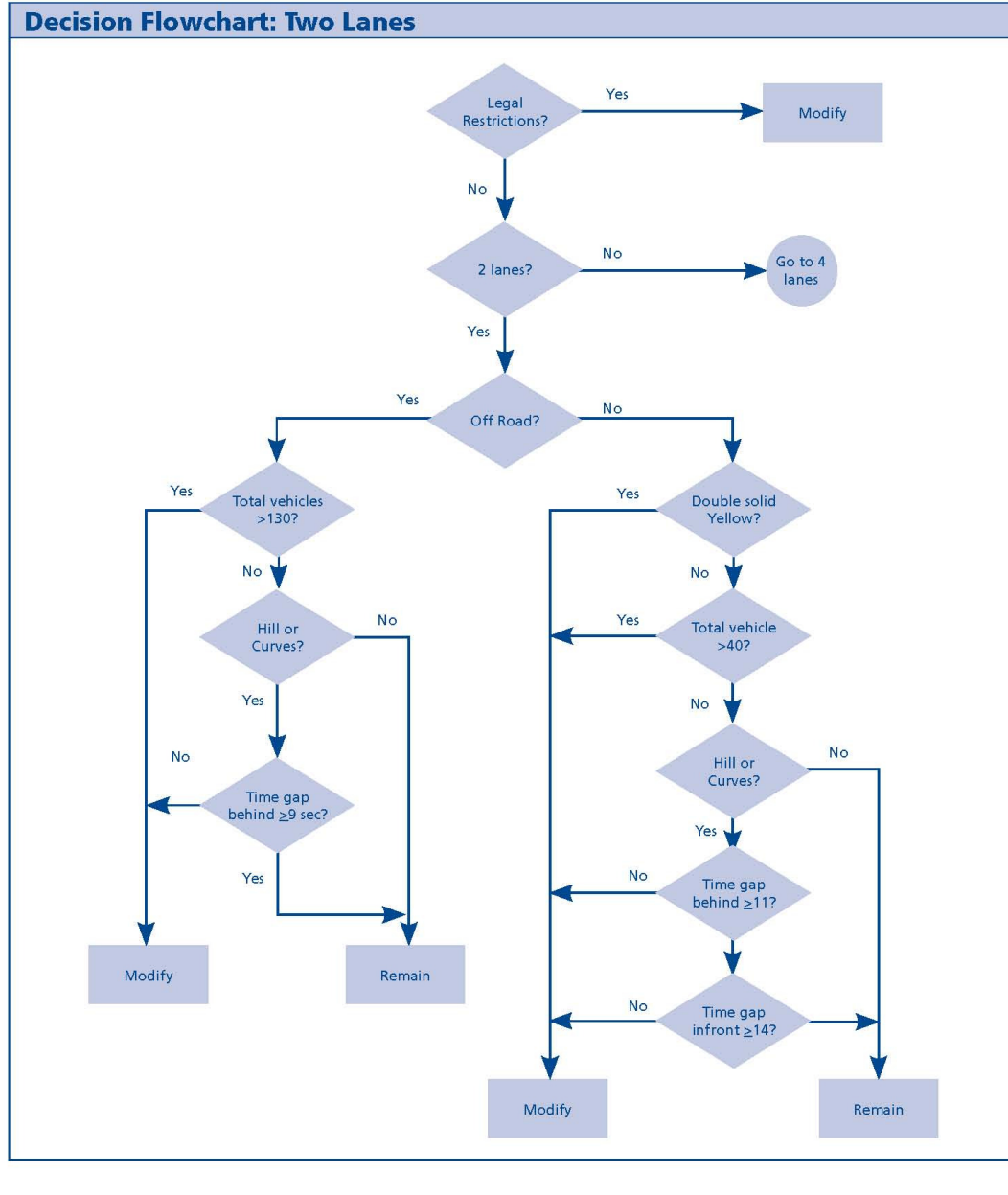
### *Time gap measurement*

When the RSMC vehicle is parked off the road, a time gap measurement is taken behind the parked vehicle. Scientific studies indicate that 9 seconds is a reasonable time gap for merging in traffic.

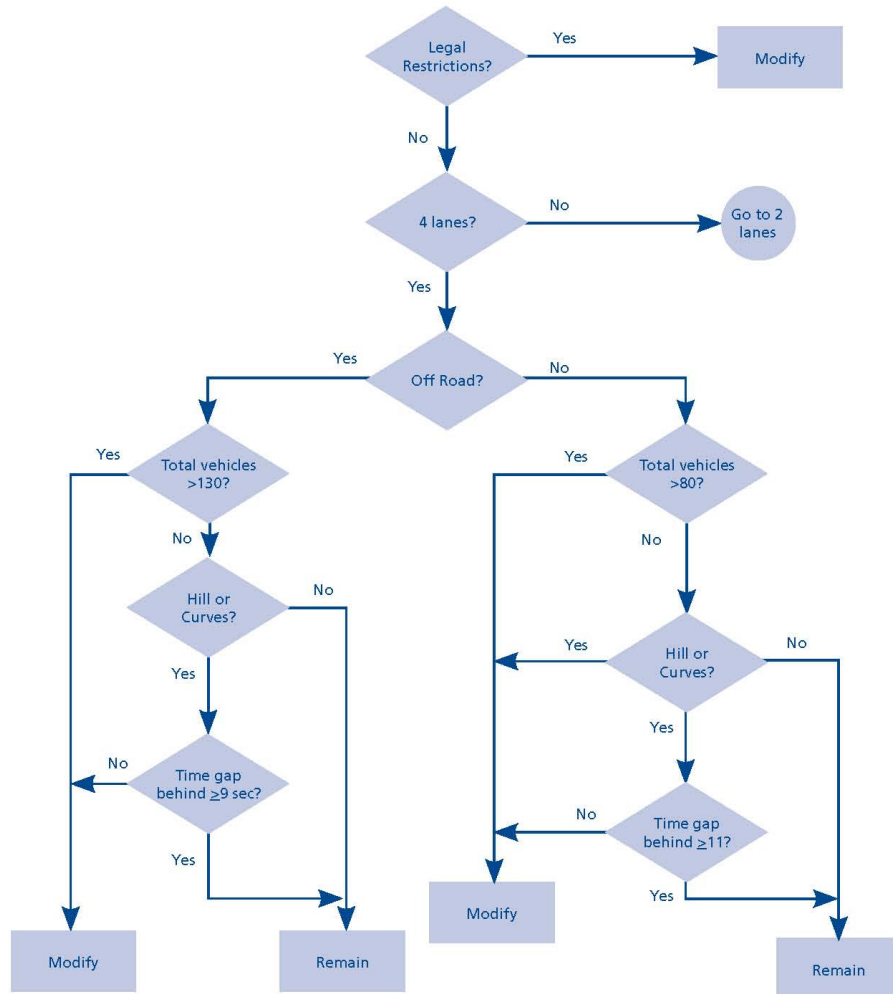
When the RSMC is parked on or partially on the road, a time gap measurement is taken whenever the RMB is within about 300 meters of a hill or curve that obstructs the view of oncoming vehicles. The time gap is the time it takes for an oncoming vehicle to pass the RMB once the vehicle comes into view. Scientific studies indicate that a sight distance equivalent to 11 seconds allow a driver to see and react to an unexpected vehicle stopped on the side of the road, and a sight distance of 14 seconds beyond the RSMC vehicle stopped on the side of the road allow a driver to complete a pass.

Decision Flow Charts

The criteria provide a process that guides assessors in their decision to whether a RMB is to be moved or remain in its current location.



**Decision Flowchart: Four Lanes**



## Appendix D - Interview Guide:

The primary questions are followed by the secondary questions (in italics) to probe more deeply and urge greater communication on the originating point. In the event that a response does not provide sufficient detail, I will draw on my own experience concerning the question to seek more information or reference other responses to keep the discussion moving forward. (189, P.28) The idea is to prompt conversations that go beyond rudimentary disclosure/information, capture multiple viewpoints and stimulate the emergence of data categories. (113,115,189)

1. Describe your experience working on the RMSR? *What aspects of your experience are the most vivid or memorable? Why do these aspects stand out for you?*
2. What information and understanding (knowledge) did you regularly use to carry-out your work? Did these ideas or approaches change over time? *Examples?*
3. I would like you to tell me about your job and how you did it. What processes or approaches did you regularly use and find the most useful? Were there processes or approaches that you tried but did not find were as useful?
4. Describe how you approached, communicated and worked with customers? Did it change over time? *Did you use or reference expert or third-party evidence as part of the safety rationale? What became your preferred or default communication strategy?*
5. According to your experience, did the rural setting influence the way in which RMSR work was undertaken? *Did the rural nature of your work create any obstacles for you? If so, how did you resolve the challenges? Examples?*
6. How has your experience as part of the RMSR been different from other organizational roles you have occupied?
7. Thinking broadly across your experience with the RMSR what was the most important feature or lesson of this workplace health & safety implementation? *Why?*

## **Appendix E – Interview Consent Information (In Person):**

October XX, 2013

Thank you [participant name] for agreeing to meet with me in person. I am here today to interview you regarding a research study examining knowledge transfer and utilization in the Canada Post Rural Mail Safety Review. The study is being conducted by me [Craig Ervine] under the supervision of Professors Phil Bigelow and John Garcia of the School of Public Health and Health Systems at the University of Waterloo. Prior to beginning, I would like to explain some important information related to the study with you.

**Consent Review:** It is important that I remind you that your participation is completely voluntary; however, given your unique role with the rural mail safety review, your perspective is extremely valuable to this research. You may decline to answer any of the interview questions or withdraw from the study at any time. With your permission, the interview will be recorded to facilitate collection of information, and later transcribed for analyses. All information you provide is considered confidential. Your name will not appear in any publication resulting from this study; however, with your permission anonymous quotations may be used.

Do you agree to have your comments audio-recorded?

Participant agrees  Participant does not agree

Do you agree to the use of anonymous quotations from the interview in the research report?

Participant agrees  Participant does not agree

Do you have any questions before we begin the interview?

## **Audio Recording Consent Form:**

Name:

By signing this consent form, you are not waiving your legal rights or releasing the investigator or involved institution from their legal and professional responsibilities.

I have had the opportunity to ask questions related to this study, to receive satisfactory answers to my questions. I am aware and I have been informed that I may withdraw from the study without penalty at any time by advising the researchers of my decision.

I am aware that the interview will be audio recorded to ensure an accurate account of my responses. I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous unless I have otherwise indicated, in writing, that my name may be used.

This project has been reviewed by, and received ethics clearance through, the Office of Research Ethics at the University of Waterloo. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Director, Office of Research Ethics at 519-888-4567 ext. 36005 or [ssykes@uwaterloo.ca](mailto:ssykes@uwaterloo.ca).

With full knowledge of all preceding information, I agree, of my own free will, to participate in this study.

YES - I agree to have my interview audio recorded.

NO - I do not agree to have my interview audio recorded.

Printed Participant Name: \_\_\_\_\_



Participant Signature: \_\_\_\_\_

Printed Witness Name: \_\_\_\_\_

Witness Signature: \_\_\_\_\_

## **Appendix F – Interview Consent Information (Telephone):**

October XX, 2013

Thank you [participant name] for agreeing to speak with me today. I am calling to interview you regarding a research study examining knowledge transfer and utilization in the Canada Post Rural Mail Safety Review. The study is being conducted by me [Craig Ervine] under the supervision of Professors Phil Bigelow and John Garcia of the School of Public Health and Health Systems at the University of Waterloo. Prior to beginning, I would like to explain some important information related to the study with you.

**Consent Review:** It is important that I remind you that your participation is completely voluntary; however, given your unique role with the rural mail safety review, your perspective is extremely valuable to this research. You may decline to answer any of the interview questions or withdraw from the study at any time. With your permission, the interview will be recorded to facilitate collection of information, and later transcribed for analyses. All information you provide is considered confidential. Your name will not appear in any publication resulting from this study; however, with your permission anonymous quotations may be used.

Do you agree to have your comments audio-recorded?

Participant agrees  Participant does not agree

Do you have any questions before we begin the interview?

## Appendix G – TCPS CORE Certificate



## **Appendix H – List of Documents Consulted & Reviewed:**

Note: The documents listed in **red font** are internal documents.

RSMC National Joint Health & Safety Committee Meeting Minutes: March 23, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: April 10, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: April 18, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: April 24, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: May 31, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: June 20, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: July 5, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: July 18, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: August 2, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: September 22, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: October 13, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: November 2, 2006

RSMC National Joint Health & Safety Committee Meeting Minutes: December 8, 2006

CUPW “Stepping Out of the Legal Framework: Organizing Rural Route Carriers”,  
Deborah Bourque and Geoff Bickerton. Accessed online:

[http://www.crimt.org/2eSite\\_renouveau/Samedi\\_PDF/Bourque\\_Bickerton.pdf](http://www.crimt.org/2eSite_renouveau/Samedi_PDF/Bourque_Bickerton.pdf)

Also available here: <http://www.labouraction.ca/stories.htm>

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## **Appendix I – Core Themes:**

**KNOWLEDGE:** practical, practice, applied, experience, expert, criteria, data, metrics, discover(y,ing),evidence, proof, investigate (ion), legitimacy, content, understanding, learning, perception, science (scientific), information, credible/reliable, interpretation, authentic, trust, common-sense, tradition, standardize/consolidate, relevance, education, challenge, engagement, background, context, change, obstacle(s), audit, review, static/dynamic, culture, belief, consistency

**COMMUNICATION:** language, semantics, intonation, empathy, content, context, messaging, consistency, explaining, educating, approach, improvisation, flexibility, script, non-verbal (body language), instinct (gut-feeling), show & tell, perception, dialogue, small talk, rapport, humour, feedback, audience, good cop-bad cop, examples, interpretation, genuine, respect, filter, educate, coach, delivery/presentation, cooperate, relationship, care/caring, attention/attentive, response, support, confidence, open, clarity/accuracy, emotion, education, challenge, engagement, change, connection, obstacle(s), gender, relationship, culture, fatigue, diffuse, collegiality, consistency

**NEGOTIATION:** time/timing, motivation, context, technique, perspective, emotion, resilience, adaptability, strategy, tactics, pressure, perception, discussion, agreement, resolution (resolve), coordination, information, stakeholders, listen, expectation, predictability, interpretation, respect, trust, instinct, strategy, cooperate, relate, confidence, creativity, emotion, education, challenge, engagement, change, obstacle(s), consideration, relationship, culture, fatigue, identity, camaraderie, consistency, luck

**PROCESS:** Leadership, commitment, coordination, feedback, adaptation, improvement, development, government, head office, stakeholders, policy, planning, direction, directive, National Research Council, focus, data, metrics, training, technology, create, build, newness, strategy, responsiveness, consultation, support, control, education, manage, challenge, engagement, context, customer/public response, geography, change, obstacle(s), authority (power), purpose, due diligence, structure (vertical/horizontal), travel, weather, conference, responsibility, rules, criteria, variety, user-friendly, contractor, “noise”, political influence, autonomy, consistency, morale



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