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Understanding Perceptions of Senior Managers' Safety Commitment

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Abstract

The present study utilizes qualitative methodology to investigate how employees perceive senior managers' commitment to safety. Fourteen participant interviews were conducted at two job sites of a national transit organization. Results suggest that a variety of sender, message, and receiver characteristics interact to impact perception formation. Participants' descriptions of senior manager safety commitment included behaviours demonstrating engaged safety leadership, consistent safety leadership, the allocation of finances to safety, and implementation of policies and procedures that reflect a value for safety. Descriptions of a lack of safety commitment included behaviours reflecting unengaged safety leadership, inconsistent safety leadership, a neglect to allocate resources to safety, and implementation of policies and procedures that counteract the prioritization of safety. This study also investigated how employees discern the authenticity of senior manager safety commitment behaviours. Furthermore, the strongest indicators of safety commitment and lack of safety commitment are examined. Suggestions for practice and future research are discussed.

November 23, 2015

Section 1: Introduction

"What you do speaks so loud, I cannot hear what you say."

-Ralph Waldo Emerson, 1875

1.1 Rationale for the Present Investigation

Safety is an integral part of organizational functioning, particularly for organizations in high-hazard industries. The financial and human costs associated with safety outcomes place safety as a top priority for most companies. Statistics from the Association of Workers' Compensation Boards of Canada indicated that across all industries, a total of 241,934 time-loss injuries and 902 fatalities were reported in 2013 (AWCBC, 2013a; AWCBC, 2013b). Moreover, in 2013 the cost of lost-time claims in Canada was over 5.5 billion dollars (AWCBC, 2013c). Understandably, these statistics are greatest in high-risk industries, including health and social service, manufacturing, and construction (AWCBC, 2013a). The significant loss attributed to organizational accidents has stimulated continuous research, development, and improvement to mitigate risk and improve safety.

Examinations of major disasters have identified organizational management as a crucial factor in shaping safety outcomes (e.g., Chernobyl; INSAG, 1998; Piper Alpha; Paté-Cornell, 1993; Deepwater Horizon; Presidents Report, 2011). Managers' attitudes and behaviour regarding safety have been established to influence employee perceptions of manager safety commitment, in turn shaping employees' attitudes and safety behaviour (Neal & Griffin, 2004). The notion of employee perceptions of manager safety

commitment and organizational safety practice has been largely defined as safety climate, and is popularly used in research and practice as an indication of the success of organizational safety functioning (Zohar, 2014).

Large-scale meta-analytic investigations have identified safety climate as an antecedent of organizational safety outcomes. Christian, Bradley, Wallace, and Burke's (2009) meta-analysis of 90 studies examined person and situation-based antecedents of various safety outcomes. Person-based antecedents included personality, job attitude, motivation for safety and safety knowledge; whereas situation-based antecedents involved situation-related factors, such as safety climate (e.g., management commitment, safety systems, work pressures) and leadership. Results indicated that perceived manager commitment to safety significantly predicted enhanced safety performance and fewer accidents. Perceived manager commitment was supported to directly impact employees' safety knowledge and safety motivation, in turn shaping employees' safety performance. Clarke (2013) lends support to the previous finding that employee perceptions of management behaviour impact safety functioning. Clarke's (2013) meta-analysis indicated that safety climate partially mediated the relationships of transformational leadership on safety participation and transactional leadership on safety compliance. This investigation highlights the positive influence of transformational and transactional leadership behaviours on safety outcomes.

The aforementioned meta-analyses elucidate the role of leader behaviour in impacting employee perceptions and subsequently, organizational safety outcomes. Recently, the importance of perceptions of senior management in organizational safety research has been recognized (Flin, 2003; Zohar & Luria, 2005; Presidents Report, 2011;

Zohar, 2014). Zohar (2014) suggests that the ability to improve safety outcomes is contingent on perceptions of sincere management commitment, and that these perceptions may differ for each level of management. In a review of the distinctive effects of supervisors, site managers, and senior managers on safety climate, Flin (2003) highlighted the importance of considering each level of management when assessing safety climate. In her review, Flin (2003) reasoned that senior manager's safety commitment is demonstrated through allocation of resources, most importantly manager's time, followed by money, and people. The frequency by which senior managers emphasize safety was also identified, including their attention and direct interest in safety processes as well as communicating the importance of safety to staff (Flin, 2003). Additional research has attempted to uncover more specific senior manager safety commitment behaviours (e.g., Fruhen, Mearns, Flin, & Kirwan, 2013; Fruhen, Mearns, Flin, & Kirwan, 2014a; Fruhen, Mearns, Flin, & Kirwan, 2014b); however, these approaches adopt a narrow scope, focusing solely on senior managers' self-reports of demonstrated commitment behaviour. Moreover, although recognized for their substantial contribution to organizational functioning (e.g., financial outcomes), senior managers have been largely neglected from empirical research regarding safety outcomes (Flin, 2003; Fruhen, et al., 2013; Fruhen et al., 2014a; Fruhen, et al., 2014b).

It is evident from the literature that management behaviour and decision-making has a powerful impact on employee perceptions of organizational safety, subsequently impacting employee safety practices. These findings provide rationale for the present study's investigation of employee perceptions of senior manager safety commitment. Investigating how employees form perceptions of senior management's safety

commitment will improve understanding of safety climate, fostering our ability to improve organizational safety functioning.

1.2 Research Aim and Questions

The present study attempts to address the paucity of knowledge regarding how employees form perceptions of senior managers' safety commitment. This study aims to shed light on the process of perception formation through qualitative research, a methodology supported to provide rich and in-depth information (Richards & Morse, 2012). This research will provide insight on what senior manager safety commitment looks like to employees, including how perceptions are formed and how employees discern authenticity of senior manager safety commitment. Furthermore, to the best of the researcher's knowledge, this study is the first to develop a conceptual framework elucidating this process of perception formation. This framework draws on social psychology and economics literature to conceptualize how employees receive and interpret information from senior management and is used to guide the study's research questions and data analysis.

The overarching research question of this study is: through what processes do senior managers influence employee perceptions of safety commitment? Based on the previously discussed theoretical and empirical research, the following investigative questions are proposed:

1. What does senior manager safety commitment look like to employees?

    a. What management behaviours reflect a lack of safety commitment?

    b. How do employees discern if management are authentic (versus unauthentic) in their safety commitment behaviour?

2. What management behaviour most strongly signals safety commitment?

    a. What management behaviour most strongly signals a lack of safety commitment?

3. What characteristics of route processing antecedents influence perception formation?

    a. What defines a high quality message (signal)?

        i. What makes a message strong, persuasive, and valid?

        ii. What descriptive aspects of a message are associated with greater quality?

    b. In what way are employees motivated to analyze messages of safety commitment (e.g., accuracy versus impression motivation)?

Section 2: Literature Review

The following subsections aim to identify the process of leader influence and perception formation by drawing on four literatures: (1) literature on organizational safety (2) leadership literature (3) economics literature on signaling theory and (4) persuasion literature on models of information processing. This review begins by defining the constructs safety climate, safety culture, and manager safety commitment, followed by an examination of work in the area of senior management's safety commitment. Next, the process of leadership influence is examined through a review of influence tactics and leadership styles. Finally, the process of perception formation is discussed by reviewing literature on signaling theory and information-processing models. The section closes with a summary identifying the gap in the literature the present study addresses and aggregating the reviewed literature to produce a conceptual framework of perception formation.

2.1 Safety Climate, Safety Culture & Management Safety Commitment

In the present study, safety climate is operationalized as a group-level construct, representing employee's shared perceptions, and defined by Zohar (2003) as: "shared perceptions with regard to safety policies, procedures and practices" (p.143). It is important to note that the term safety climate is distinct from safety culture. Safety culture is a more complex and multifaceted construct, representing shared values and beliefs regarding safety (Guldenmund, 2010). Safety climate (i.e., perceptions of manager commitment) is often assessed and used as an indication of an organization's underlying safety culture (Guldenmund, 2010). Safety climate, however, is one facet of culture and,

thus, should not be assessed or represented as an organization's state of culture. The more tangible construct of safety climate facilitates assessment, and measures have been linked to numerous safety outcomes, including accidents (e.g., Nahrgang, Morgeson, & Hofmann, 2011; Neal & Griffin, 2006), injury (e.g., Beus, Payne, Bergman, & Arthur, 2010; Nahrgang, et al., 2011; O'Toole, 2002), and motivation to engage in safe practices (e.g., Neal & Griffin, 2006).

Intricately related to safety climate and safety culture is the concept of manager safety commitment. Manager commitment to safety is formally defined as "the extent to which management is perceived to place a high priority on safety, and communicate and act on safety issues effectively" (Neal & Griffin, 2004, p. 27). Research demonstrates that manager commitment behaviour may be the most critical element in influencing employee safety behaviours (Beus, et al., 2010; Christian et al., 2009). In addition to improving safety outcomes, manager safety commitment has been shown to improve non-safety related outcomes including job satisfaction, organizational commitment, and job-related performance, while reducing negative outcomes such as employee withdrawal behaviours (Michael, Evans, Jansen, & Haight, 2005). It is apparent that management safety commitment behaviours are integral to organizational functioning; however, much remains to be investigated concerning different levels of management and their unique influence on impression formation.

2.2 Senior Management

In their investigation of organizational safety climate, Zohar and Luria (2005) established that variation in climate exists among different departments of an organization, suggesting that intervention models should assume a multi-level

perspective. Adding to this, in a review of safety climate literature, Zohar (2010)

identified the necessity to develop level-specific subscales of a climate measure, as

employees develop level-specific climate perceptions. Furthermore, literature

investigating the role of senior management in organizations has highlighted that this

level of functioning has a unique impact on employee actions. Clarke (1999) investigated

perceptions of train drivers, supervisors, and senior managers regarding the importance of

25 railway factors. The author's investigation also had each level provide estimates of the

rating of the other levels. Results demonstrated that frontline employees (e.g., drivers)

perceived local managers and supervisors as more concerned about safety than senior

managers, indicating differences in perceptions of management levels. The following

sections explore recent literature on senior manager safety commitment, identifying the

importance of senior managers and theoretical reasoning for how perceptions of their

commitment behaviour are formed.

The importance of senior management in shaping culture has grown in response

to the Deep-Water Horizon accident in 2010. A report produced in response to the

accident identified that an organization's Chief Executive Officer (C.E.O) and board of

directors must create a safe culture whereby all employees feel responsible and motivated

to prevent accidents (President's Report, 2011). In response to this document,

publications have begun to investigate senior management commitment behaviour,

including how this position shapes safety culture, and how managers promote safety

commitment.

Culture is a learned phenomenon communicated by leaders; employees must

successfully perceive leader behaviours in order to learn relevant information (Schein,

2004). However, there is paucity of information surrounding senior leaders in organizational safety literature (Flin, 2003). Consistent with Flin's (2003) notion that senior leader safety commitment is a reflection of executive's resource management, Zohar (2014) surmised that leaders' commitment is largely perceived as investment in hazard control or risk management. Thus, the greater the investment of time and resources to reduce potential hazards and threats to safety, the greater the reflection of commitment, and consequently, stronger climate.

Fruhen et al. (2013) interviewed eight senior managers' from two air traffic management organizations in Europe regarding their interpretations of safety culture. Results from content analysis demonstrated that for both organizations, senior managers most often described safety culture as a "just culture," that is, an organization with trust and open communication between working members. A reporting culture was also popularly described, reflecting employee openness in reporting information. Lexical analysis revealed high frequency of the words "people" and "safety" reflecting a perception that an organization's safety culture is contingent on the management of its members.

In a similar research study, Fruhen and colleagues (2014a) interviewed sixty senior managers (C.E.Os, direct reports to C.E.Os, and board members) from European and North American air traffic management organizations. Senior managers were interviewed and asked the open-ended question: "From your point of view in what ways can you show your commitment to safety?" (p. 35). Results suggested that problem-solving, specifically the number of issues considered, information sources used, generation of ideas, and social competence involved, reflected senior leader commitment

to safety. Senior managers also reported that personal involvement in safety matters, influence on organizational attributes, and communication about safety, demonstrated safety commitment. Additionally, perceiving and understanding employees intentions and emotions were deemed a reflection of commitment.

In another two-part study, Fruhen et al. (2014b) investigated the personal attributes of senior managers that most influence safety outcomes. In part one, 76 senior managers (direct reports to C.E.Os) completed a questionnaire about characteristics ideal for a C.E.O's influence on safety. Part two involved interviews with 9 senior managers to better define characteristics defined in part one. Combined results indicated six attributes demonstrating commitment to safety: (1) social competence (understanding others emotions and ability to persuade others), (2) safety knowledge (theoretical and practical understanding of safety issues, knowledge of facts and information), (3) motivation (goal motivation via context appropriate promotion or prevention focus; see Crowe & Higgins, 1997), (4) problem-solving (understanding the problem, generating ideas and planning the implementation of ideas), (5) personality, and (6) interpersonal leadership skills (transactional, transformational, and authentic leadership characteristics). These attributes were defined as senior managers' safety intelligence, defined as their understanding of safety issues and relevant policies regarding safety.

The aforementioned research suggests a variety of senior manager commitment behaviours that positively influence an organization's climate, and consequently, safety outcomes. It remains unknown, however, if frontline employees perceive these behaviours as a reflection of safety commitment. To ensure that the previously established senior manager commitment behaviours influence climate, it must be

understood if, and how, employees form these perceptions. The following sections

provide theoretical evidence to investigate the processes of leader influence and

perception formation.

2.3 Leader Influence

2.3.1 Primary and Secondary Mechanisms

Schein (2004) contends that leaders channel influence through two vehicles:

primary embedding mechanisms and secondary articulation and reinforcement

mechanisms. Primary mechanisms are more directly observable and attributable to an

individual. These include what leaders pay attention to, measure, and control; how

leaders teach and coach others; how leaders react to crises and critical incidents; how

leaders allocate resources and rewards, and how leaders recruit, promote, and

excommunicate workers (Schein, 2004). Secondary mechanisms are less directly

observable or attributable to a specific leader. They include organizational design,

structure, systems and procedure, rites and rituals of the organization, physical design of

the organization, stories about important events and people, and formal statements of

organizational philosophy, creeds, and charters (Schein, 2004). This philosophy

highlights the numerous sources and mediums through which employees are informed

about management's safety commitment.

2.3.2 Influence Tactics

The notion of leader influence tactics has been established to explain how leaders

guide employee behaviour (Kipnis, Schmidt, & Wilkinson, 1980). Kipnis and Schmidt

(1985) identified different styles of leadership influence, described as soft, rational, or

hard. Soft influence behaviour is associated with involving employees in decision-making processes and arousing enthusiasm for participation. This form of influence is closely associated with transformational and authentic leadership styles, as soft influence is focused on transforming employee value systems to be aligned with leaders' own. Rational tactics involve more persuasive leader behaviour and include offering reward for desired conduct and using factual arguments to foster agreement and garner desired behaviour (Kipnis & Schmidt, 1985). Transactional leadership is associated with use of rational tactics, as it focuses on promotion of rule compliance. Finally, hard influence tactics are defined by commanding acts (e.g., threat or pressure to comply) and are associated with authoritarian leadership (Kipnis & Schmidt, 1985).

More recently, Higgins, Judge, and Ferris (2003) conducted a meta-analysis of influence tactics and work outcomes and identified influence tactics representative of soft, hard, or rational influence styles. The authors concluded that seven tactics were largely accepted as leader's influencing behaviour: (1) assertiveness (using a forceful manner), (2) ingratiation (using likeability or friendliness), (3) rationality (using logical arguments), (4) exchange (bargaining), (5) upward appeals (using superiors to ensure sanction), (6) coalitions (rallying others to persuade a target), and (7) self-promotion (creating an appearance of competence). The identification of these tactics provides understanding of influence behaviour, and recognizes tactics management engage in when trying to lead followers.

In relation to organizational safety outcomes, Clarke and Ward (2006) found a significant relationship between employee's safety participation and leader tactical styles of coalition, rational persuasion, inspirational appeals, and consultation. Furthermore,

safety climate mediated (inspirational appeals tactic) or partially mediated (rational

persuasion and consultation tactics) influence styles with the exception of coalition,

highlighting the powerful persuasion of soft style tactical influence. The next section

explores a theoretical explanation for this influence processing using social exchange

theory.

2.3.3 Social Exchange and Authentic Leadership

Safety leadership theory posits that employees learn from and form impressions of

leaders through a process of social exchange (Hofmann & Morgeson, 1999). For

example, transformational leaders exhibit care for employee welfare, inspire and motivate

subordinates to adopt a similar mind frame (e.g., value for safety), and intellectually

stimulate employees to take risks and engage in creativity (Clarke, 2013). Through these

processes, subordinates personally identify with the leader and socially identify with their

workgroup (Clarke, 2013). Bass and Steidlmeier (1999) defined authentic

transformational leadership as leadership grounded in moral foundations. Specifically,

leaders who are authentic in their interaction with subordinates demonstrate idealized

influence, inspirational motivation, intellectual stimulation, and individualized

consideration. Bass and Steidlmeier (1999) suggest that employees discern authentic

versus unauthentic behaviour through a leader's moral character and concern for others,

the ethical values embedded in a leader's standards, and the morality of a leader's choices

and actions that involve others.

Growing from the notion of authentic transformational leadership, authentic

leadership has been established as an independent style of leadership that is similar to, but

separate from, transformational leadership (Tonkin, 2013). Transformational leadership is

largely defined by behavioural characteristics, whereas authentic leadership is characterized by the personal characteristics of the leader (Avolio & Gardner, 2005). For example, a recent investigation of authentic leadership suggests the construct is comprised of four components: (1) self-awareness (awareness for one's strengths and weaknesses and how one is viewed as a leader), (2) balanced processing (considering multiple perspectives), (3) relational transparency (presenting one's real self), and (4) internalized moral perspective (behaviour is guided by one's morals and values; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008). Authentic leaders are suggested to have a strong sense of self that guides them in actions and decision-making (Avolio & Gardner, 2005). Moreover, it is thought that followers identify with authentic leaders and their values, subsequently adopting these values as their own (Avolio & Gardner, 2005).

It is important to distinguish authentic leadership from ethical leadership, a recently developed leadership style characterized by leaders who are honest, trustworthy, and engage in moral management promoting and maintaining ethical behaviour (Brown & Treviño, 2006). Ethical leadership primarily differs from authentic leadership in that it incorporates a transactional focus on moral management (reward and discipline) to ensure followers act in an ethical manner (Brown & Treviño, 2006). Comparatively, authentic leadership influences followers by leading by example; followers adopt values that are thought to be in line with authentic leader's values (Avolio & Gardner, 2005). As well, this form of leadership is characterized by being true to oneself and engaging in self-awareness (Aviolio & Gardner, 2005) aspects not representative of ethical leadership (Brown & Treviño, 2006). Thus, as described in leader influence, authentic leadership

utilizes more soft influence tactics and is thus more transformative and long lasting in its influence.

Eid, Mearns, Larsson, Laberg, & Johnsen (2012) propose a theoretical model linking authentic leadership and psychological capital to safety climate and safety outcomes. The authors contend that leaders with a strong safety focus positively shape perceptions of safety climate. Furthermore, it is suggested that authentic leadership influences subordinates' psychological capital (hope, resilience, optimism, and self-efficacy), and that psychological capital mediates the relationship between safety climate and observable safety outcomes. Although this model has not been empirically tested, it lends support to the notion that authentic leader behaviour shapes employee safety perceptions, subsequently influencing employee safety behaviour.

To best understand how perceptions of senior management's safety commitment are formed, one must understand the leadership processes that are best supported to garner influence. Thus, identifying the actions employees perceive to be indicators of senior manager safety commitment will shed light on how individuals discern authenticity of senior managers, and subsequently, how employee behaviours are shaped. Zohar (2010) provides a more detailed theoretical conceptualization of the way perceptions of safety commitment are formed from leaders' authentic behaviour through his description of consistency between enacted and espoused values.

2.4 Understanding Perception Formation

2.4.1 Consistency in Enacted and Espoused Values

Zohar (2010) emphasized the importance of consistency between leaders' enacted and espoused values in employee perceptions of leader safety commitment. Enacted policies are messages indicating a value for safety that are visible by employees; espoused values are the underlying, authentic value for safety that leader's hold. As such, employees must determine if a signal of safety commitment (enacted value) is representative of (consistent with) that leader's espoused value. As Zohar (2010) describes, determining the consistency of these values is a challenging task that occurs over time and across varying situations. Employees must analyze the words and actions of managers and compare their priorities across contexts to determine alignment. When alignment is experienced, employees perceive managers as authentically committed to safety. This process may be better achieved in forming perceptions of supervisor safety commitment, as exposure of enacted values in different contexts are more easily observed. Determining this alignment in upper management, however, is likely more difficult to achieve. Zohar (2010) contends that perceptions of senior management are formed through relevant organizational policies, procedures and practices, yet, it is difficult to envision how employees conclude consistency between senior management's espoused versus enacted values through perception of organizational policy or other indirect processes. To better explicate the process of leader influence and perception formation, signaling theory and information-processing models will now be discussed.

2.4.2 Signaling Theory

First described in economics literature, signaling theory contends that information between two parties is relayed via a signal that must be interpreted by the receiving party (Spence, 2002). Signals are used by messengers when information asymmetry exists, or when different people know different things (Connelly, Certo, Ireland, & Reutzel, 2011). For example, Zhang and Wiersema (2009) used signaling theory to investigate if attributes of a firm's C.E.O impact how investors respond to C.E.O certification and consequently, the firm's financial statements. Firm's financial statements are not viewable by investors and this study investigated if investors would use observable attributes of the C.E.O (e.g., C.E.O with more external directorships) as an indication of the C.E.O's certification, and by proxy, the firms financial worth. Results showed support for this notion, indicating that investors made inferences about firms' financial worth by way of C.E.O attributes.

Recently, signaling theory has been applied in management literature to elucidate information processes between leaders and subordinates (Connelly et al., 2011). There has been an emergence in the use of signaling theory to describe top management team characteristics, including C.E.Os (Connelly et al., 2011); however, this literature review did not find signaling theory to be applied in the context of management commitment to safety. Similar to the aforementioned example of investor speculation of firm quality by way of C.E.O attributes, the principle of signaling theory can be applied to leader safety commitment and how employees infer quality of commitment through observations of behaviour and features of the organization.

Connelly and colleague's (2011) review described characteristics that impact the transmission and reception of a signal. The authors described four characteristics that impact signal interpretation: (1) signaler characteristics, (2) signal characteristics, (3) receiver characteristics, and (4) feedback/environment. The following sections are a brief summary of Connelly and colleague's (2011) descriptions and apply these concepts to senior manager safety commitment:

1) *Signaler Characteristics*

Signaler characteristics represent aspects of the signal sender that impact the receiving of a message and include honesty and reliability. Honesty is described as "the extent to which the signaler actually has the unobservable quality being signaled" (p. 52) or in the case of senior manager safety commitment, the extent to which senior management truly values safety. Reliability is associated with "the combination of a signal's honesty and fit" (p. 52), akin to the credibility of a manager, or the extent to which senior management is perceived to value safety in the way they truly do (i.e., high reliability represents alignment between Zohar's (2010) enacted and espoused values).

2) *Signal characteristics*

Signal characteristics are defined by signal cost, observability, fit (quality), frequency, and consistency. Signal cost is described as costs associated with sending a signal. For example, in the context of senior management, signal cost may represent the extent of resources used in promotion of safety (cost of time, finances, or manpower). Observability (intensity, strength, clarity, visibility

of a signal) represents the extent to which individuals can notice the signal. This includes how well employees can observe a signal of commitment by senior management. Fit includes how well the signal correlates with the unobservable characteristic. In the context of senior manager safety commitment, this includes how well the signal reflects the manager's value of safety commitment. This characteristic is differentiated from honesty in that fit is a feature of the signal, where as honesty is a characteristic of the signaler. Frequency includes the number of times the signal is transmitted (how often particular messages of safety commitment are perceived) and consistency is defined as "agreement between signals from one source" (p. 52). Consistency in the context of safety commitment would include the agreement between different signals of senior leader commitment perceived by employees.

3) *Receiver characteristics*

Receiver characteristics include receiver attention and interpretation. Receiver attention relates to how well recipients look for and pay attention to incoming signals. For example, how attentive employees are to messages of senior leader safety commitment. Receiver interpretation includes characteristics of the recipient that may distort or influence how the signal is perceived. This may include employee's background experiences and ability to draw comparisons when interpreting incoming signals of senior manager's safety commitment.

4) *Feedback/Environment Characteristics*

Characteristics of the feedback or environment that may influence signaling process include countersignals (feedback) or distortion. Countersignals

include responsive signaling by the receiver used to improve interpretation of the signal (e.g., an employee verifying the meaning of a manager's statement). Distortion includes potential characteristics in the environment that may distort the receiving and interpretation of a signal. In the context of senior manager safety commitment, this includes organizational attributes through which signals are sent. Senior management may use e-mail to administer memos promoting their commitment to safety, however, if employees do not have access to computers (e.g., computer is broken at the worksite), the environment has impeded the success of this signal. Distortion may also apply to characteristics outside of the organization, such as how the media portrays senior management behaviour.

Applying the notion of signaling to senior managers in an organizational safety context, a signal should indicate a manager's authentic commitment to safety. Incorporating Zohar's (2010) notion of enacted and espoused values, senior managers who are consistent in demonstration of commitment behaviour are perceived as high quality by way of this signal. Managers who are not genuine in their safety commitment would likely find demonstrating commitment behaviour consistently too costly and would prioritize production over this value, demonstrating a lack of commitment on various occasions (lack of consistency). As such, informational signals allow individuals to form impressions about the consistency of a leader's behaviour over time and context, revealing their enacted and espoused values, and thus, their dedication to safety. The aforementioned literature supports that signals of safety commitment may be directly observed or inferred through indirect sources, such as stories by colleagues, or from the

work environment (Connelly et al., 2011; Flin, 2003; Schein, 2004; Zohar, 2010). In summary, these findings support that signals of safety commitment come from one of three channels of influence: leader decisions, leader behaviours, and other informants (see Table 1).

The process through which information is managed has been shown to impact perception formation and the longevity of beliefs. As such, this study reviews information-processing models from literature on persuasion to help to explicate the cognitive processes involved in the interpretation of signals. The alignment of an information process model and signaling theory is subsequently discussed, establishing a conceptual framework for the proposed study.

Table 1

Channels of Senior Management Influence

Channel	Description	Examples
Leader decisions	Senior leader decisions that produce observable outcomes reflecting safety commitment	Allocation of resources (time, money, people), response to safety events, how safety practice is rewarded, written statements about safety
Leader behaviours	Senior leader actions that are directly observable and reflect safety commitment	Wearing safety equipment, abiding by safety rules/policies, statements about safety
Other Informants	Senior leader decision-making or behaviour reflecting safety commitment that is relayed by an indirect source	Stories from colleagues, friends, supervisors, article in a magazine or newspaper, union discussion, recognition by industry peers (e.g., safety award), news story

2.4.3 Models of Information-Processing

In the context of senior leader safety commitment, individuals must analyze and process information to discern if managers are authentic in their commitment to safety (e.g., scrutinizing the consistency between leaders' enacted and espoused values). Identifying the information that individuals analyze in forming perceptions of senior leader safety commitment provides the first step in understanding how these messages are processed and their impact on perceptions. In addition to the aforementioned signaling theory, research in the social psychology literature has produced dual-processing models to explain information processing in persuasion contexts. The premise of dual-processing models of persuasion is that individuals are motivated to hold valid attitudes (i.e., are motivated to maintain accurate information). These models contend that the extent of effort one uses to analyze message content (i.e., elaboration) can have a lasting impact on attitude formation (Chaiken, 1987; Petty & Cacioppo, 1986).

Dual-processing models have been adapted for use in understanding information processing in a variety of contexts involving person perception and the evaluation of evidence (Chaiken, Liberman, & Eagly, 1989). For example, risk perception (e.g., Ryu & Kim, 2014), workplace conflict (e.g., Douglas, Kiewitz, Martinko, Harvey, Kim, & Chun, 2008), and online consumer behaviour (e.g., Sher, & Lee, 2009) have used dual-processing models to explore the functioning of information processing.

Two of the most popular dual-processing approaches include the Elaboration Likelihood Model (ELM; Petty, & Cacioppo, 1986) and the Heuristic-Systematic Model (HSM; Chaiken, 1987). These models share many similarities and suggest that information processing occurs through one of two processes to form judgements: (1) low

cognitive effort (relying on heuristic cues) or (2) high cognitive effort (analyzing

information content). The processing strategy an individual uses to interpret information

can greatly impact what individuals take away from the message (Chaiken, 1987; Petty &

Cacioppo, 1986). Messages evoking greater cognitive processing inspire attitudes that are

resistant to change, whereas relying on more superficial cues promotes weaker attitude

development (Eagly & Chaiken, 1993). The defining difference between the two models

of processing is that HSM has been further developed to account for interactive effects

between processing routes (Larson, 2012). The ELM functions under the assumption that

processing routes are distinct and act inversely (as one engages in high cognitive

processing, peripheral route processing diminishes), while the HSM contends that one

may engage in both routes of processing (using superficial cues while also scrutinizing

the information content of a message; Larson, 2012).

2.4.4 Heuristic-Systematic Model

The HSM contends that information processing occurs through two mechanisms:

(1) heuristic processing and (2) systematic processing (Chaiken, 1987). Heuristic route

processing involves relying on heuristic cues, such as status of the message sender (e.g.,

an expert), to evaluate information. Use of judgement-relevant heuristics depends on the

availability, accessibility, and applicability of cue-relevant information (Todorov,

Chaiken, & Henderson, 2002). Cue information must be available (stored knowledge),

accessible (recallable knowledge), and applicable (knowledge is relevant to the perceived

message; Todorov et al., 2002). For example, a consumer deciding to buy a new cell-

phone may choose a brand that is popularly purchased by other individuals. Conversely,

systematic processing involves greater cognitive managing, whereby individuals analyze

the content of messages to determine the validity of the message and form an opinion (Todorov et al., 2002). For example, a consumer may compare the function of a variety of cell-phone brands prior to purchase. Much like in the ELM, the likelihood to engage in systematic versus heuristic processing depends on individuals' motivation and ability to analyze the message (Chaiken, 1987). Individuals who are highly motivated (i.e., find the message highly relevant) and able (i.e., are knowledgeable in the area) are much more likely to engage in systematic processing (Chaiken, 1987). Motivation of information processing was first proposed to be in the form of accuracy seeking; individuals are driven to maintain an objectively true representation of reality, thus analyzing the validity of presented information (Chaiken, Giner-Sorolla, & Chen, 1996). More recent developments in the model, however, have incorporated impression motivation (motivation to hold attitudes viewed favourably in an interpersonal context) and defense motivation (motivation to hold attitudes congruent with existing self-definitional attitudes) to explain reasoning for information processing (Chaiken et al., 1996).

In line with Zohar's (2010) notion of employees' efforts to discern alignment between manager's enacted and espoused values, employees are likely motivated to discern if signals of senior management's priority for safety (enacted values) reflect authentic commitment (espoused values). Therefore, accuracy-seeking motivation best applies in this context, as individuals are likely motivated to analyze information in the process of ensuring validity (i.e., that a manager is genuine in his or her commitment). Impression motivation may also apply in this context when information is shared among working members. Individuals may be motivated to analyze information in a manner that aligns perceptions with the greater social group. For example, if an individual is

motivated by a sense of belonging to his or her workgroup, he or she may be motivated to maintain an attitude consistent with the colleagues in that group.

2.4.4.1 Sufficiency Principle

The HSM assumes that individuals are motivated to process information in the least effortful way, referred to as economy-minded information processing (Todorov et al., 2002). However, this processing is attenuated when message receivers are highly motivated to analyze information (Todorov et al., 2002). The balance between utilizing minimal effort while satisfying motivational concern is referred to as the *sufficiency principle* (Chaiken, Liberman, & Eagly, 1989). Thus, in the context of processing indicators of senior leader commitment, individuals are likely motivated to engage in systematic processing of a message if heuristic cues do not provide sufficient evidence to determine commitment. This principle highlights the importance of sender, message, and receiver characteristics, as these features likely combine to influence the route of information processing and perception formation.

2.4.5 Antecedents of Heuristic versus Systematic Processing

There has been significant investigation concerning the antecedents of information processing in various contexts, and research has shown a complex and intricate relationship among antecedent variables (e.g., Griffin, Neuwirth, Giese, & Dunwoody, 2002). Understanding the mechanisms that encourage systematic versus heuristic route processing allows individuals to engage in persuasion or information sharing tactics that foster more longstanding attitude change. The following sections explore these antecedents.

2.4.5.1 Source Characteristics

In the context of persuasion and risk perception research, information involving the message sender, message content, and receiver of the message are supported to influence the route of processing. The credibility, trust (e.g., Trumbo & McComas, 2003), likeability, and expertise (e.g., Chaiken & Eagly, 1983) of the sender have been investigated in relation to information route processing. Petty and Cacioppo (1986) define source credibility as the extent to which an information source is perceived to be believable, competent, and trustworthy. Credibility is therefore inextricably linked with authenticity; individuals who perceive a leader as authentic must also infer characteristics of credibility (e.g., believable and trustworthy). ELM suggests that credibility influences processing of information whereby when individuals have low involvement (low message relevance) high credibility stimulates use of heuristic cue (peripheral) processing (e.g., relying on the expert; Petty, Cacioppo, & Goldman, 1981). Petty et al.'s (1981) study also suggests that when information is highly relevant and individuals are able to analyze message content (i.e., have sufficient prior knowledge), the cue of credibility is less influential in information processing, as individuals are more focused on message content. Petty et al. (1981) note, however, that in the context of high ability and motivation to scrutinize a message, strength of the argument will be the greatest influence in attitude change, but high credibility works to enhance this process.

Research has also explored the impact of multiple source characteristics on individual perceptions. Ziegler, Diehl, and Ruther (2002) found that different combinations of source characteristics impacted the amount that individuals' scrutinized message content. Argument quality is supported to influence attitudes when inconsistent

source characteristics were perceived (e.g., a high quality argument led to more agreement when the source was an expert but disliked, or a novice but liked). The inconsistency in source characteristics is supported to motivate the recipient, fuelling an analytic mode of processing to mitigate the discrepancy (Ziegler et al., 2002). Thus, differences in perceived sender characteristics may stimulate different route processing and, subsequently, differences in the changes of perceptions.

2.4.5.2 Message Quality

In the persuasion literature, message quality is typically referred to as the strength of an argument or an argument's ability to persuade attitude change. For example, Bhattacherjee and Sandford (2006) define argument quality as "…the persuasive strength of arguments embedded in an informational message" (p. 811). Thus, a high quality message will be one that is perceived as strong, persuasive, and valid and convinces the receiver of the relayed message.

Quality of a message may also be described in terms of clarity, accuracy, vividness, convenience, and other descriptive aspects of message content (Chaiken, 1980; Petty et al., 1981). Research on attitude formation has found that differences in these features can contribute to alternate information route processing (Chaiken & Eagly, 1983). As such, it is supported that both descriptive (clarity, medium/richness, salience) and more broadly considered aspects of message quality (i.e., strength, persuasiveness, and validity) contribute to information processing and perception formation.

2.4.5.3 Receiver Characteristics

Individuals' motivation and ability to analyze message content have been long

supported as determinants of route processing (Chaiken, 1987; Petty & Cacioppo, 1986;

Todorov et al., 2002). In their review of HSM literature, Todorov and colleagues (2002)

note that variables affecting one's ability to process information include distraction,

message repetition, time pressure, communication modality, and knowledge and

expertise. As well, the authors surmise that motivation impacts an individual's

engagement in route-processing, including an individual's need for cognition, perceived

importance of a task, message relevance, accountability for one's attitudes, and exposure

to unexpected message content. These variables exemplify the complex nature of attitude

formation and the variety of influences that can impact this process.

2.5 Aligning Signaling Theory and the HSM

The aforementioned sections provide descriptions of signaling theory and

information processing models. Considerable alignment exists between these models in

that they both attempt to elucidate the complex process of information transfer and

interpretation. In describing the process of influence, both theories identify sender,

message, and receiver characteristics that can impact the interpretation of a message.

Regarding sender characteristics, signaling theory and the HSM suggest that honesty

(authenticity of value for safety) and credibility (convincingness of underlying value

through the signal that is sent) are primary mechanisms influencing perception. Message

characteristics are also aligned between these schools of thought whereby the quality of a

message is characterized as its strength or fit (how well the message convinces the

receiver of the leaders underlying value for safety). Additionally, these theories suggest

that descriptive aspects of signals can impact perception formation, such as clarity,

vividness, frequency, and consistency. Receiver characteristics identify the importance of

recipient's ability and motivation to receive a signal. Signaling defines receiver

characteristics as attention and interpretation, while the HSM describes the characteristics

ability and motivation. The following study adopts the HSM's terms *ability* and

motivation in describing receiver characteristics and contends that motivation and ability

impact an individual's attention and interpretation.

It should also be mentioned that in addition to sender, message, and receiver

characteristics, signaling theory identified feedback (countersignals) and environment

(distortion) influencing mechanisms. These attributes were not investigated in the present

study in attempt to maintain a narrow scope of focus. The influence of these mechanisms

on the receiving and interpretation of messages is suggested for future research.

Information from signaling theory and information-processing models was used

to develop a conceptual framework representing employee perception formation of senior

manager safety commitment. In combination with the other information in this literature

review, the model was used to generate the study's research questions and coding

framework used in data analysis.

2.6 A Conceptual Framework

Figure 1, a conceptual framework, depicts the process of senior leader safety

commitment information transfer and employee interpretation. As shown in the

framework, signals are channelled from one of three sources: leader decisions,

behaviours, or other informants. Furthermore, sender, message, and receiver

characteristics impact the way signals are cognitively processed (heuristic and/or

systematic processing), leading to perception formation. To this researcher's

knowledge, the process of employee perception formation of senior leader safety

commitment has not yet been represented nor investigated in a scientific capacity. The

framework therefore provides a basis for the generation of this study's research questions

and coding framework for data analysis.

Coinciding with the left side of the framework (leader decisions, behaviours, and

other informants), this study first aims to identify sources of manager safety commitment.

That is, what management behaviours and/or decisions influence perceptions of safety

commitment? The middle of the framework represents the characteristics that can impact

cognitive processing of information (the receivers characteristics, characteristics of the

sender, and characteristics of the actual message). It is suggested that these characteristics

differentially impact the level in which information will be cognitively processed

(heuristic versus systematic). Correspondingly, these processes prompt investigation of

the specific characteristics that influence perception formation. For example, how are

individuals motivated to identify and think about messages of leader safety commitment?

Combined, this framework represents the overarching research question posed in this

investigation: what does senior leader safety commitment look like to employees?
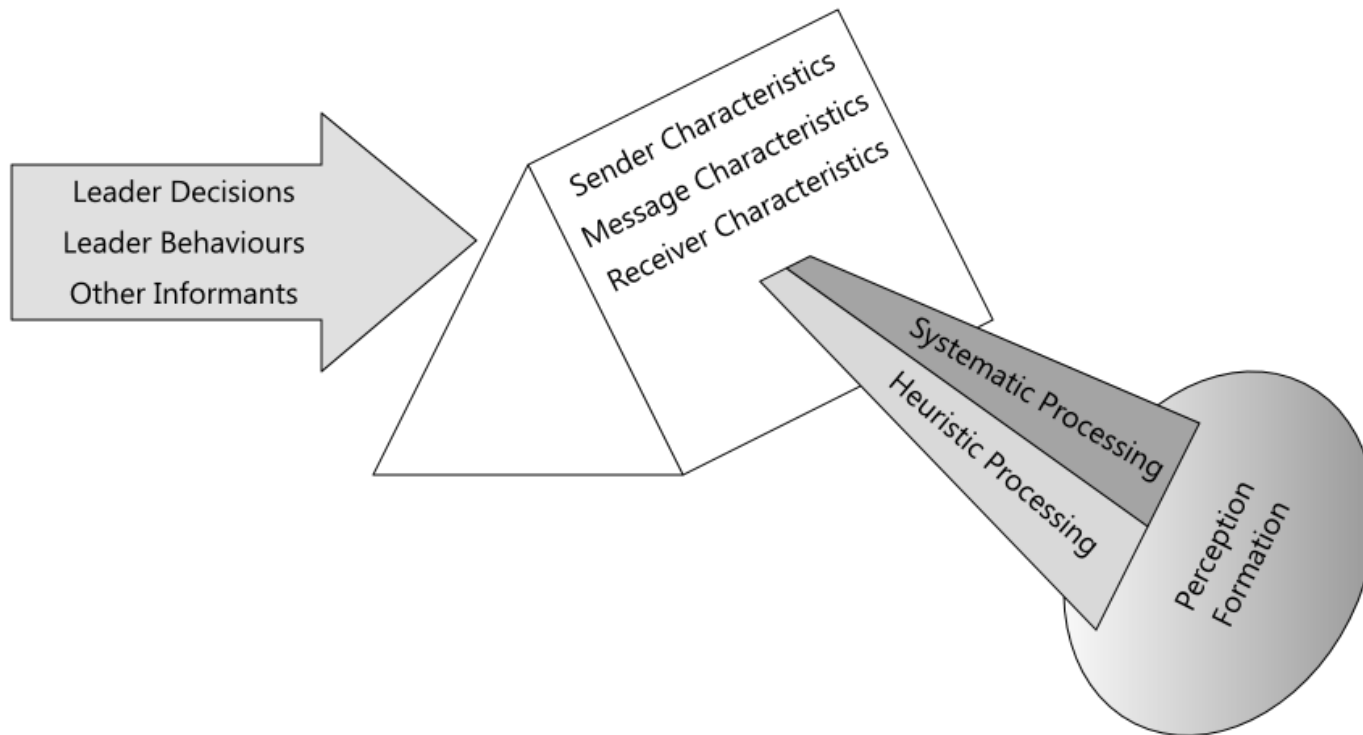
Figure 1. Conceptual framework depicting the process through which perceptions of senior leader safety commitment are formed. Signals are received from one of three sources (leader decisions, leader behaviours, or other informants). Sender, message, and receiver characteristics impact how signals are cognitively processed (systematically and/or heuristically), resulting in perception formation.

Section 3: Method

The present study adopted qualitative methodology using one-on-one interviews with frontline employees to understand perception formation of senior leader safety commitment. Merriam (2014) defines qualitative research as a method that "…focuses on meaning in context [and] requires a data collection instrument that is sensitive to underlying meaning when gathering and interpreting data" (p. 2). The present study aims to explore the process of employee perception formation and therefore to learn from participant experiences and interpretations. Qualitative investigation is suggested for use when "a problem or issue needs to be explored" (i.e. investigation of variables not easily measured; Creswell, 2013, p.47). Experimental methods typically facilitate studies of causation or prediction, whereas qualitative analysis aids in "uncovering the meaning of a phenomenon for those involved" (Merriam, 2014, p.5). Qualitative methods also facilitate analysis of complex information by allowing collection of rich and in-depth data and multiple ways to view data and identify emergent themes (Richards & Morse, 2013). This mode of inquiry is therefore most appropriate for the present study.

3.1 Participants

Fourteen participants from two worksites at a national transit organization were recruited for this study using convenience sampling. Participant inclusion criteria included being English speaking and employed with the organization for at least 6 months.

3.2 Materials and Measures

A semi-structured interview (see Appendix A) was used in this investigation as it provided the flexibility to evaluate participants' responses and probe appropriately to garner more detailed information (Fylan, 2005). The semi-structured interview is a method best suited for research cases where "…the researcher knows enough about the study topic to frame the needed discussion in advance…" (Richards & Morse, 2013, p. 127-128). Furthermore, semi-structured interviews provide in-depth information regarding participants' experiences and perceptions (Fylan, 2005). In comparison to focus groups, interviews provide participants the opportunity to express their opinions confidentiality, promoting honest answers. Evidence suggests that focus group participation may result in conformity, whereby participants withhold information and contribute polarized views that align with the greater group (e.g., Sussman, Burton, Dent, Stacy, & Flay, 1991).

The semi-structured interview guide was created using a modified version of Flanagan's (1954) critical incident technique. Flannagan (1954) stated that to be critical, "an incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects" (p. 327). Examples of interview questions included: "think of a manager who is committed to safety. How do you know this senior manager is committed to safety?" Prompts were used to stimulate discussion regarding perceptions of senior leader commitment behaviour.

A demographic survey assessing participants' age, gender, current employment role, and other pertinent information was also used (see Appendix B). Interviews were

recorded using an IPhone 4s and stored on a password-protected laptop computer. Microsoft Word© and Microsoft Excel© software was used for data analysis and word processing.

3.3 Procedure

3.3.1 Recruitment

Participants were solicited by approaching management of a national transit organization in Canada. A member of management was e-mailed by the researcher and arrangements were made to complete interview sessions at two worksites. The organization solicited employee participation and scheduled interview attendance. The organization provided a private room on site at both Halifax and Moncton locations for the interviews.

3.3.2 Interviews

Interviews were conducted on two days in the same week. Interviews on each day began at roughly 8:30am and ended around 5:30pm. At the beginning of each interview, the participant was provided an informed consent form detailing voluntary participation, study content, and confidentiality of the data (see Appendix C). This information was explained in detail by the interviewer and participants were given the option to refrain from participating. Prior to participation any questions were answered and participants were asked additional verbal consent before audio recording commenced.

Fourteen one-on-one semi-structured interviews were conducted to investigate employee perceptions of senior manager safety commitment. Interview content included 15-20 minutes of questions related to a pre-existing safety initiative at the organization,

followed by 40-45 minutes of manager safety commitment discussion. Interview

guides were used during interview sessions to ensure consistency in interviewee

experience (see Appendix D). At the end of each interview session participants were

given a feedback form thanking participants for their participation and providing contact

information for the researcher, research advisor, and university ethics (see Appendix E).

3.3.3 Data Saturation

This study followed principles outlined by Francis et al. (2010) to ensure the

participant sample resulted in data saturation. Data saturation occurs when "no new

themes, findings, concepts, or problems, [are] evident in the data" (Francis et al., 2010,

p.4). The exploratory nature of this study and complexity of research and interview

questions supported initial use of a sample of 10 participants. The researcher reviewed

field notes after day one of interviews and noted consistent ideas and themes across the 8

interviews. On day two of interviews review of field notes suggested saturation had been

met at 10 interviews as no new themes or ideas were noted. Four more interviews were

conducted and notes were compared to ensure no further ideas or themes were brought

up. At this point the researcher was confident that saturation was met.

3.3.4 Ethics

The proposed study involved no direct threat or risks to participants. To mitigate

risk of employees feeling uncomfortable when discussing manager safety commitment or

lack of safety commitment, identifying information was omitted in all research

documents produced from the data. Furthermore, participants were informed that

participation was voluntary and that they may withdraw at any time prior to data analysis

(July 15th). The researcher's contact information and contact information for the Saint Mary's University research ethic board was supplied to participants in case any questions or issues arose after interview completion. The Saint Mary's University research ethics board provided ethical approval for this study.

3.4 Qualitative Analysis

3.4.1 Qualitative Paradigm

A qualitative paradigm is a set of assumptions and beliefs that dictate one's worldview and the nature of reality (Guba & Lincoln, 1994). Within the realm of qualitative research, this researcher most closely associates with the postpositivist paradigm. This perspective maintains a scientific approach to research and individuals working under this paradigm recognize that cause and effect is not absolute (Creswell, 2012). Instead, postpositivists assume that all cause and effect is "a probability that may or may not occur" (Creswell, 2012, p.23). The postpositive approach uses a logical, step-by-step process in analysis and qualitative studies are typically written in the form of scientific reports (Creswell, 2013). Guba and Lincoln (1994) outline three fundamental questions that outline the functioning of a paradigm. These include (1) the ontological question (what is the nature of reality?), (2) the epistemological question (what is the nature of the relationship between inquirer and what can be known?), and (3) the methodological question (how can the inquirer find out this information?). With respect to ontology, postpositivism subscribes to critical realism; the belief that objective reality exists but that humans are unable to perfectly assess this reality (Guba & Lincoln, 1994). Postpositivism assumes a modified objectivist epistemology whereby the researcher

understands that "it is possible to approximate (but never fully know) reality" (Guba & Lincoln, 1994, p. 111). Methodologically, the postpositivist paradigm supports use of experimental investigation through qualitative techniques, including completion of inquiry in natural settings.

3.4.2 Thematic Analysis

Consent for audio recording was provided by each participant and a professional transcriptionist was hired to provide transcripts of the audio data. To ensure data integrity, transcripts were assessed for accuracy by listening to twenty seconds of each audio recording at three time points throughout the interview (beginning, middle of interview, end of interview) and reading transcribed text. Next, the steps of thematic analysis as outlined by Braun and Clarke (2006) were followed:

Phase 1:Data Familiarization. Data familiarization was obtained through repeated readings of interviews. Interviews were read in full by the researcher and checked for accuracy, a process that furthered data familiarization. Prior to coding of the interview text, transcripts were read in full and notes were taken regarding apparent themes and patterns in the text. The number of interviews (*N*=14) facilitated strong data familiarization.

Phase 2: Generating Initial Codes. Interviews were read individually and the text was assessed for meaningful and relevant content, facilitated by the researcher taking notes during the initial read-through. Codes were assigned using a hybrid approach of inductive and deductive analysis following an example by Fereday and Muir-Cochrane (2006). In adopting a deductive approach, codes were generated following a coding framework, developed from previous research and brainstorming with a SME (see

Appendix F). Initial codes were manually assigned using Microsoft Word© track

changes to segments of text reflecting information relevant to the research questions. Text

representing a code was copied and pasted into a Microsoft Excel© spreadsheet

containing a list of code names and interviews. Following an inductive approach, text

representing phenomena not included in the initial coding framework were coded and the

new code was added to the framework. After initial coding, interviews were reassessed

by the researcher to double check codes. Upon completion of coding, a total of 107 codes

were identified (65 of these codes derived from the data).

   Phase 3: Searching for Themes. Theme generation was initiated after coding of

data. The spreadsheet containing a list of all codes and associated text representations

was reviewed and similar codes grouped together in a separate word document. Theme

development followed Braun and Clarke's criteria for defining a theme: "a theme

captures something important about the data in relation to the research question, and

represents some level of *patterned* response or meaning within the data set" (p.10).

Moreover, themes were identified at the semantic level whereby themes were identified

by the surface meaning of the data (Braun & Clarke, 2006). Grouped codes were given a

potential thematic title and this process was repeated until the sorting of codes was

exhausted. Potential groups of codes and theme titles were assessed to determine themes,

sub-themes, and data belonging to these overarching groupings. Preliminary analysis

revealed 4 overarching candidate themes that included dimensions of commitment and

lack of commitment. Themes and associated subthemes (indicated in bracketed text)

included:

- engaged safety leadership (active safety leadership, open safety leadership,

  respectful leadership)

- consistency in safety leadership (consistency in safety leadership, resolute in

  position to work safely)

- allocating resources to safety (allocating money to safety and allocating

  manpower to safety)

- policies and procedures reflect a value for safety (management of safety is people

  focused and safety is a priority in policies and procedures).

Themes and associated subthemes were compiled into a table and accompanied by

detailed descriptions.

  Phase 4: Reviewing Themes. Review of themes began by investigating each

theme individually to determine if it could be refined as well as reviewing theme

similarities to determine if themes could be combined. The preliminary theme table was

sent to two committee members for review and discussion and prompted revision of

themes. As a result of these discussions, themes were further divided to better represent

the indicators of commitment and lack of commitment. Four additional themes with

subthemes were generated, including:

- unengaged safety leadership (passive safety leadership, lack of transparency in

  safety leadership, lack of respectful leadership)

- inconsistency in safety leadership (inconsistent leadership behaviour, value for

  production exceeds value for safety)

- neglecting to allocate resources to safety (neglecting to allocate money to safety,

  neglecting to allocate manpower to safety)

- policies and procedures counteract safety prioritization (no identified

  subthemes).

The primary four themes remained with slight modifications made, for a total of eight

candidate themes.

  Phase 5: Defining and Naming Themes. Analysis of the data revealed eight

candidate themes and fourteen subthemes. Of these themes, four emerged as indicators of

safety commitment, and the remaining four represented a lack of safety commitment. The

four themes reflecting a priority for safety included: (1) engaged safety leadership, (2)

consistency in safety leadership, (3) allocating money to safety, and (4) policies and

procedures reflect a value for safety. The additional themes that reflected a lack of safety

commitment included: (5) unengaged safety leadership, (6) inconsistency in safety

leadership, (7) neglecting to allocate resources to safety, and (8) policies and procedures

counteract safety prioritization. After further review, slight modifications were made to

two subtheme titles. After finalizing the themes, detailed summaries were created to

describe the essence of themes and support final theme titles (discussed below; see

appendix G for a concise table of themes, subthemes, and descriptions).

3.4.3 Analyzing Authenticity and Antecedents of Route Processing

  Participant responses regarding senior manager authenticity were analyzed by

reviewing individual responses and aggregating shared ideas. A similar approach was

taken to identify and collect information regarding antecedents of information route

processing. Transcripts of interview data were coded to identify the source of

information, including direct (management behaviours, decisions) and indirect (other

informants) sources. Sender, message, and receiver characteristics were also identified by

coding features representative of these constructs; all identified characteristics were

included in the final report.

Section 4: Results

The purpose of this study was to explicate the process of how employees form

perceptions of senior management's safety commitment. Participant ages ranged from 21

to 66 years with a mean age of 40. Eight participants (57%) indicated having met a

member of senior management in their present organization. Experience in the

transportation industry varied greatly among participants, averaging 8 years and ranging

from 1 year to 30 years. Participants were all English speaking and average interview

time across the 14 interviews was 46 minutes and 15 seconds.

4.1 Theme 1: Engaged Safety Leadership

Senior leader commitment to safety was often described through leadership

behaviours demonstrating active involvement in worksite safety management, an open

and approachable demeanour, and respect for employees. This included having senior

management visit the worksite and feeling able to approach and converse with these

members. More importantly, participants stated that commitment was a reflection of

senior management who discussed safety at their site and who were knowledgeable about

policy and procedure. Maintaining a preventative approach by being actively involved at

the worksite and open to accepting questions and concerns was also a consistent

description. Aligned with this notion was mention of feeling respected and valued by

senior management. Three subthemes that were identified within engaged safety

leadership included: (1) active safety leadership, (2) open safety leadership, and (3)

respectful leadership.

Active Safety Leadership. Within engaged safety leadership was a consistent

message of leader's active involvement with employees. Participants described a senior

manager who is committed to safety as someone who is visibly involved in safety matters. This included visiting the worksite more than once per year, discussing safety matters with employees, addressing employee safety concerns in a timely manner, commending safety compliance, and using a coaching style of leadership in lieu of only punitive action. Active involvement at the frontline level was also provided as an example of the strongest indicator of senior management's safety commitment. One participant described safety commitment as:

> "walking, walking around, walking on the property. […] going out to the job sites, maybe spending an hour or two with the crew, section crew and their vehicle, whether they're going to a work place, just get on the work site, do a quick job review with them. How did this go, how did that go, what's the process."

Moreover, a significant overarching trend within active safety leadership was senior management having an understanding of frontline employee work conditions and tasks. Employees described that senior management commitment is reflected in a leader who is knowledgeable of the day-to-day operation at the frontline level and who makes executive decisions based on first-hand knowledge. One participant described that senior management's safety commitment could be enhanced by taking these steps:

> "…get involved, like and I don't know, I've never met them so I can't say they probably have lots of stuff they're doing, I understand that, they're busy guys but if you're making decisions that big, they need to know what they're deciding on, not just look at a couple of pieces of paper that have a budget on it and say no that's not going to work sorry. Like find out do these guys need this to be safe?"

Similarly, another participant described how more active involvement would enhance his perception of senior management's commitment to safety:

> "getting out there in the fields, and seeing their employees work, seeing how they do things and I know they're obviously super busy too but that should be, that would be one of the things that I would think that would really help."

Participant descriptions also indicated that safety commitment was reflected in senior leader's management of supervisors and other levels of management. Observations of supervisor and mid level management's safety commitment (e.g., involvement in safety matters, allocating resources to safety, openness and communication) were attributed to senior manager's leadership. For example, one participant described that management making safety a priority was an initiative driven from the top down:

> "Always, always. Like that's top three like [unclear] like we don't care if the train's late, we don't care you know, you feel like you're being rushed, you're not rushed, it's not a race, it's safety first […] it's a message from the seniors right down."

This notion was also mentioned by a participant when describing that allocation of resources to safety demonstrates commitment and is managed from the top down: " they don't spare the budget when it comes to safety […] and this is from, right from the top down…"

Open Safety Leadership. The notion of open safety leadership also emerged from the data within the broader theme of engaged safety leadership. Open safety leadership included descriptions of communication with management, such as feeling able to and having the means to contact and speak with senior management. This included senior

management being open to receiving concerns, feedback, and questions. Additionally, this included senior management asking questions, resolving disagreements, and sharing information about safety statistics and safety-related processes in the organization. One participant described that management taking the time to hear employees opinions before making a decision demonstrated a commitment to safety: "maybe just listening and like not just being stuck on one certain way of doing something. Taking suggestions and taking a minute to actually go through different suggestions before taking action...." Furthermore, in describing how management could improve their commitment to safety, a participant described providing means for following up on a raised safety concern:

"…if we could see some of that stuff and maybe given a phone number even above or whoever is in charge of making the decision, like I'm sure he's probably a ways up the management pole so he doesn't want a bunch of phone calls from all these people but if we had some way of getting in touch with somebody that's involved with the decision and see like what's their reasons...."

Respectful leadership. Respectful leadership was a third subtheme of engaged safety leadership and is characterized by the perception that management trusts and values employees. Participants' expressed the importance of management's respect for employees in demonstrating commitment. Individuals' descriptions of respect included senior management ensuring that employees receive coaching (e.g., constructive feedback) when a mistake is made and that they ensure all management maintain fair and realistic expectations (i.e. expectation to complete tasks management would feel comfortable completing themselves). A participant described that committed senior management will practice and ensure that lower level management "…won't ask

somebody to do something that they personally wouldn't do themselves." As well, one participant described his opinion of the organization's C.E.O, noting the man's value and respect for individuals:

"every month, yah every month we get a note, [the C.E.O] on email, and it's his own personal writings, he and everyone I've talked to that has met him, couldn't ask for a nicer person. And he wants to talk about the person, not talking about the job, not talking about what happened yesterday or today, he will maybe at the tail end, find out about you, what makes you happy, what's your life story."

4.2 Theme 2: Consistency in Safety Leadership

Consistency in safety leadership behaviour was commonly described among participants. Participants expressed that leaders who practice what they preach, follow through on statements made in response to raised safety concerns, and consistently prioritize safety over production reflected senior management's commitment to safety. Moreover, some participants described management consistency (alignment) in statements and actions as the strongest indicator of safety commitment. Two subthemes emerged from the theme consistency in safety leadership, including: (1) sincere safety leadership and (2) unwavering position to work safely.

Sincere safety leadership. Sincere safety leadership was discussed by a majority of participants. Participants described the importance of senior management abiding by the principles they are promoting (i.e., practicing what is enforced and promoted). Following through on safety concerns was described by one participant when asked how his perception of management safety commitment could be improved: : "I guess […] like I said following through on stuff"

One participant described the importance of sincerity in the promotion and wearing of protective equipment:

"that's just one example, practicing what they preach, so actually they say they value safety and they put in all these rules, following those rules I guess, so if they're visiting a site maybe wearing the equipment that they're supposed to…"

Other participants described the example of sincerity in management's promotion and use of protective equipment. In describing a manager committed to safety, one participant stated:

"well like when you're, say you're somewhere that needs personal and protective equipment, they're the ones first to have their hard hats on, their safety glasses or vests, they're not getting out of the truck with their crocks on you know and their sweaters, or their coffee in their hand saying hey you don't have your safety glasses on right. Someone who's basically saying you know this is the way it's supposed to be done, this is the example that I'm setting and now you follow, that's what I'd see."

Unwavering position to work safely. In the same vein as consistency of leader behaviour, maintaining an unwavering position to work safely emerged as an indication of safety commitment. Participant descriptions indicated that senior management demonstrating an unwavering commitment to safety was a significant indicator of safety commitment. For example, one participant recounted how a senior level manager enforced safety rules at the cost of production, demonstrating consistency in management message of a priority safety and management action:

"I know he had a courier in Moncton, refused to let him back on the property

because he was using a cell phone, driving on the road right so my view of him is

strong."

Additionally, a participant stated that a manager who is committed to safety would not

compromise safety for anything, as described below:

"I guess they don't compromise like the situation gets tough, they don't

compromise and say o.k. well let's just do it this one time. It's always, they put

their foot down and they say no this isn't safe we're not going to do it. […] and I

think that you need somebody who has the ability to put their foot down and say

no like this isn't right, we're not doing it."

4.3 Theme 3. Allocating Money to Safety

Participants expressed that allocating finances to safety demonstrated

managements' safety values. This included allocating money to maintenance and

purchasing of equipment, safety programs, and other safety causes. Additionally, some

participants described that allocating money to safety is the strongest indication of safety

commitment. In describing senior management operations, several participants stated that

executive leadership is motivated by financial operations. For example, one participant

stated: "well a C.E.O, they have a lot to do with the financial aspect of, and income and,

so that's their main priority I guess." Similarly, in discussing the level of management in

control of allocating finances to safety, participants attributed this responsibility to senior

management: "not at my level and I don't think so in the higher levels, senior

management I don't know. When it comes to safety, they have all the dollars and cents to

put towards it, the cheque book is there." Regarding commitment to safety, participants

described allocating money to the purchase, inspection, and repair of equipment used in daily job tasks. One participant also expressed that allocating finances to safety training was a reflection of commitment:

> "a company that was truly committed to safety I think they'd be a little more willing to spend the money needed on equipment or tools or training. Training especially actually now that I think of it, on how to be safe, on proper procedures for things, stuff like that."

4.4 Theme 4. Policies and Procedures Reflect a Value for Safety

Participants described that senior leader commitment to safety is demonstrated through organizational policies and procedures that reflect a value for safety. In this context, organizational policies included formal plans implemented by senior management that dictate safety related processes in the organization. Procedures are those steps required to support and carry out an organizational policy that are enforced by senior management. Participants described a variety of policies and procedures implemented by management that inform perceptions of a priority for safety. These included the implementation of safety rules in response to accidents and injury, requiring a formal approval process at the executive level for the implantation of new safety rules, individuals having the right to stop work if they feel unsafe, dedicating positions within the organization to safety, and the publishing reports and memos related to safety. Two subthemes emerged from this overarching theme: (1) management of safety is people focused and (2) safety is a priority in policies and procedures.

Management of safety is people focused. Policies and procedures developed and approved by senior management reflect a priority for employee safety. This included

development and enforcement of safety rules with a clear focus on keeping employees

safe and management of employee behaviour being structured to provide coaching and

constructive feedback versus punitive action. Participants discussed how organizational

policies and procedures reflect senior management's commitment to safety. One example

was an established policy that allows workers to stop working if they perceive the task to

be unsafe. One participant explained this policy, but described its limitations in that it is

only effective for individuals willing to approach their manager and express their

concern:

> "guys can reject work for sure and they're aware of that. And if they don't feel
>
> safe, they don't do it and there's no manager here that will make you do it if you
>
> don't feel safe. That's on a guy who can look at you face to face, you know what I
>
> mean, he'll be face to face and say listen I'm not doing that today I don't feel
>
> safe..."

Additionally, participants expressed that senior management's creation of new rules in

response to safety events demonstrated a commitment to safety. One participant

described the generation of new policies in response to accidents and injuries across the

company:

> "what it seems like if anything happens anywhere in the system, well we have a
>
> new safety rule. Well somebody got hurt in Calgary and o.k. well we're going to
>
> change the safety, this is the way it should be, which I understand."

Similarly, one participant stated that rules within the organization are used to keep

people safe, reflecting a priority for safety by senior management: "for the most part I

mean they are good, they've got a lot of rules in place because something happened to somebody so they make sure it doesn't happen to anybody else."

Safety is a priority in policies and procedures. This subtheme represents participant views that policies and procedures reflect a priority for safety. This included positions within the organization being dedicated to safety, policies and procedures ensuring that changes to safety functioning (e.g., safety rules) within the organization require a formal approval process at the executive level, and memos and reports published in the company and distributed to employees include a focus on safety. One participant described that the extensive approval process involved in creating and changing rules demonstrates senior management's commitment to safety. That is, senior management ensures a process is followed in decision-making regarding policies and procedures followed at the frontline level:

> "I mean like I said these are the rules, and I know that [the C.E.O is] involved on different committees like when there'd be a different procedure or safety rule that would come out, that it has to go to him to be approved right, it just can't be, one guy, I can't just ask a guy o.k. can I do it this way now, it has to be, it has to go through the approval committee before we can change a process or procedure, so it goes right to the top..."

Moreover, participants described that memos and reports sent to all members of the organization have a focus on safety. However, there was a substantial divide in participants' opinions of reports. A minority stated they read the reports and appreciated the information within, while a majority stated they did not read the information nor care for what was included. One participant that was positive about such reports stated that

safety tips were posted regularly, demonstrating management's focus on safety: "they're always putting up safety tips of the week and stuff like that."

4.5 Theme 5. Unengaged Safety Leadership

Participant responses also included senior leader behaviour and decision-making that inform perceptions of a lack of safety commitment. Participants described that experiences of management who are uninvolved in safety matters, fail to speak about safety, neglect to ask questions about safety matters, and who fail to ensure lower level management engage in safety leadership demonstrate a lack of safety commitment. As well, neglect to keep employees informed in the process of responding to safety concerns was described as a lack of safety commitment. Participants described feeling personally disrespected by management's lack of compassion and punitive or vengeful behaviour inform perceptions of a lack of safety commitment. Three subthemes emerged from the data: (1) passive safety leadership, (2) lack of transparency in safety leadership, and (3) lack of respectful leadership.

Passive safety leadership. When discussing senior management who are not committed to safety, participants described those who adopted a passive approach to safety. This included being uninvolved in safety matters, including not visiting the worksite, not speaking with employees about safety, and having a lack of knowledge about job tasks and safety policy and procedure. Some participants expressed that management's neglect to ask questions and lack of openness to safety concerns was the strongest indication of a lack of safety commitment. When asked to describe a manager who is not committed to safety, one participant expressed: "well, total disregard for the human factor. Drives by unsafe conditions, does not write a detailed report on what he

has seen, does not follow up, with informal or formal investigations. That would be an unsafe manager." As well, there was frequent discussion of a lack of knowledge among managers: "I've had it happen where you are promoting the safety rules but the people that are promoting the rules really didn't know what the rules were." Moreover, some participants speculated that this paucity in knowledge was a result of a lack in training, as described by one participant:

> "well they say they catch the act but they're observing what we're doing and making judgement calls, safety judgement calls on what we're doing yet they may not be actually trained in the processes that we're doing so it's like so why are they the ones to say what's unsafe when they're not trained in what we're doing? It just doesn't make sense."

As well, one participant discussed that supervisor and middle level management's actions demonstrating a lack of safety commitment were attributable to senior management leadership. Participants described that these observations reflected a lack of senior leader safety commitment. One participant described senior managements' inability to lead, as lower level management are not implementing senior management's plans of action: "well, it trickles, it has to trickle down to right down through the senior VPs, down to the general managers, right down to the [supervisors] right. He can say all he wants as the president but he's not around all these small terminals to see what is underneath him. The managers are actually implementing what he says right, and they're not."

Lack of transparency in safety leadership. Another trend reflecting a lack of safety commitment was a lack of transparency of senior management decision-making, indicated through a lack of feedback from management. This notion was most often

described in the context of raised safety concerns. For example, many employees

discussed requesting new equipment or equipment repairs due to safety concerns, but not

receiving any feedback from management regarding their request: "it tends to be it's

never repaired, we don't hear anything about it." One participant recounted the

frustrations of this experience:

> "well you would think within like a month or so you'd get some sort of indication
>
> of o.k. we've looked into this, we understand what's going to happen now, it
>
> might take a little longer but it's being looked into right instead of just never
>
> hearing from them again."

Similarly, one participant expressed that any feedback regarding a raised concern is

preferred compared to silence: "I'd rather see that we're not having the finances, at least

we have a reason to why it's not happening. We just don't hear anything."

>*Lack of respect in safety leadership.* Participants often described instances of a

lack of respect and how this promoted a perception of lack of safety commitment. Many

participants mentioned that managers adopt a punitive focus and are concerned with

punishing employees instead of providing constructive feedback to improve everyone's

safety. Some employees described this punitive focus as the strongest indication of a lack

of safety commitment. As well, participants described issues of vengeful management

and that the primary concern for all levels of management was not employee well being.

One participant disclosed how management's lack of trust and focus on punitive action

promoted perceptions of a lack of safety commitment:

> "I just don't have time for their foolishness, them hiding in the woods and doing
>
> all [this] […] testing and stuff like that, so that's why I came up here, cause it was

too big of a headache because you're working out there as an employee and you

know they're out there and half the time you don't want to accumulate demerits

because you don't want to get fired because you hire on here and you get a

mortgage and you've got a family to take care of, so you're more interested in

looking on the roadway, well where is the [supervisor] sitting today, and you're

not paying attention to what you're doing right, and then you're running into stuff

or getting [hurt] or you know your focus is more on not getting demerits and

where they are compared to your work right."

Furthermore, one participant described feeling disrespected when senior management

would have a lower level manager deliver punitive action:

"we rarely hear directly from them, like it comes back to like when they're

hiding in the bushes watching us work, they'll be the one to put in the report and

say that we were doing this unsafe, but they'll get one of their underlings to

come out and talk to us later on."

As well, in describing a senior manger who is not committed to safety, a participant

described a manager who expects an employee to complete a task the manager would not

do him or herself: "…if they asked us to do some work that they wouldn't do themselves,

it's kind of hard to see anyway but it's easy for them to say one thing and mean another."

Finally, participants described that a lack of compassion when mistake or injury

was made suggested management did not care for employee safety. One participant

described the process of injury investigation, highlighting a disregard for employee well-

being: "they want to break everything down to see where you made a mistake, what you

did wrong, how, it was your fault that the injury occurred...."

4.6 Theme 6. Inconsistency in Safety Leadership

In describing a lack of safety commitment, participants also discussed inconsistent and contradictory leader behaviours. Participants described that management who do not following through with action in response to statements made about safety improvement inform perceptions of a lack of safety commitment. Additionally, management prioritizing production over safety was described as an indication of management's lack of safety commitment, characterized by a pressure for employees to complete tasks quickly and turning a blind eye to safety noncompliance to ensure the job is completed in a shorter time. This theme is characterized by management's inconsistency and contradiction in statements and behaviours, primarily in promoting safety but not following through on actions to support this position. Two subthemes emerged from inconsistency in safety leadership: (1) insincere safety leadership and (2) value for production exceeds value for safety.

Insincere Safety Leadership. Participants described the negative impact of insincere senior manager statements and behaviours. Primarily, participants described management's insincerity in not following through with action when addressing raised safety concerns: "they pretty much just tell you what you want to hear at the time, famous words: I'll look into it." This participant also describes that a manager who is not committed to safety is: "basically somebody saying they're going to do something and they don't do it sort of thing." Moreover, a participant provided an example of management's false promises or inconsistency in statements and actions:

"…like I said we had a big meeting when one of the head guys came down and we all sat in a room and they talk to you about stuff that's going on, this and that,

and they spew out all these ideas, things they're going to do and then, and here

it is six months later and I haven't seen a single change in anything right."

Several other participants stated similar notions, describing their experiences of

insincerity in management's statements and behaviours:

"it comes down to them preaching the safety. If they're preaching the safety you

should be able to go to them with a safety concern. It's just all concerns that we

come up with, a lot of them are, never seem to be addressed, so. We tell them, but

there just doesn't seem to be anything done about it. Some of the little easier

things, yah they tend to get on to that pretty quick. Some things that take a little

bit of a commitment on time, manpower, finances, rarely seem to get taken care

of."

Participants also described management's neglect to lead by example as a

reflection of a lack of safety commitment. This included management implementing and

enforcing safety rules but neglecting to abide by these rules. For example, one participant

described management's neglect to wear appropriate safety protection when in the

worksite:

"…we have to wear safety glasses in our vehicle with the window down. And

even if our window is down that much, we get taken on statement for not having

our safety glasses on and at the same time, multiple times, we've seen them get on

[equipment] with no hard hat, no vest on, their regular shoes, and just not taking

the time to think about us, they should be following the same safety rules…."

Similarly, another participant described that the strongest indication of a lack of safety

commitment would be management's neglect to follow the rules that he or she

implements: "…it would probably be like the opposite of what I was saying a leader would be you know […] they're not leading by example, they're not wearing their equipment and stuff like that."

Value for production exceeds value for safety. In describing a lack of safety commitment, a majority of participants described management who would compromise safety by prioritizing production. Some participants described this finding as the strongest indication of senior management's lack of commitment. This included senior management pressuring employees to increase speed of production and turning a blind eye to safety compliance to facilitate this need. One participant described this issue:

> "I know a lot of senior management they like to preach safety but from my experiences, they like to preach it until it starts slowing down production. That's when it seems to kind of go out the window and they're oh don't worry about that, it's like this is what matters right now type thing."

Similarly, this participant described the contradictory nature of management behaviour and his feelings of discontent:

> "it's just hard because you know like in the nature of the job that we have it's, they say oh we'll never rush you, you know, we'll never do this stuff and I can understand why things happen because we're a company that tries to move things forward quickly and, but they say oh we'll never rush you but then the next, it's like come on, come on, come on, and I don't know I just find it's tough that way."

This notion of contradiction in promoting safety but maintaining expectation for hurried production was echoed by several other participants: "so I'm not saying it's all bad right, there's just sometimes they say stuff and then what they actually do reflects a whole

different story." One participant described his preference for consistency, highlighting

how inconsistent behaviour can be frustrating and promote scepticism of management's

safety commitment:

> "Exactly. It's like it's one thing to say safety doesn't matter, and it's all about
>
> production, that's one thing, but then say safety is the only thing that matters,
>
> production doesn't matter, that's another, but like at least be consistent with what
>
> you're doing, like don't preach one thing and practice the other."

Another participant described that senior management turning a blind eye to employees

working overtime to finish production more quickly would demonstrate a lack of

commitment:

> "… [if] they were tired and the company or senior management knew that this
>
> was happening and didn't stop it, turned a blind eye to it, that would probably be
>
> something that would concern me in terms of them not being committed to
>
> safety."

4.7 Theme 7. Neglecting to Allocate Resources to Safety

Participants also described management's neglect to allocate resources to safety in

describing what indicates a lack of safety commitment by senior management.

Participants described that failing to allocate money to ensure appropriate functioning of

equipment and allocating money for the purchase of small goods in lieu of outstanding

repairs that compromise safety indicate a lack of safety commitment by senior

management. Additionally, shutting down safety programs was viewed as a money-

saving task, informing perceptions of a priority for finances over safety. Neglect to

allocate resources to safety also included failing to supply sufficient manpower to ensure

the safe completion of job tasks. Participants stated that a lack of appropriate staff demonstrated management's priority for production and financial gain over safety, thereby demonstrating a lack of safety commitment. Two subthemes emerged in this theme: (1) neglecting to allocate money to safety and (2) neglecting to allocate manpower to safety.

Neglecting to allocate money to safety. A neglect to allocate finances to safety was discussed as an indication of a lack of safety commitment. Participants described management neglecting to allocate money to equipment repairs, purchases, or infrastructure repairs and purchases. Moreover, some participants described this finding as the strongest indication of senior management's lack of commitment. One participant provided a description of the issue of financial allocation when describing senior management's commitment to safety:

> "…they're committed to safety to a certain point if it doesn't cost them money […] things like laying off a lot of people, not repairing machinery that needs repair, and they talk about safety and you're driving vehicles that I'm sure we shouldn't be driving but they want to save money somehow and so it's always, like I said, it's unbelievable the machinery we've had, we've got, they're old, we don't even get new machinery, we got one nice new machinery, I was surprised, […] there's a lot of machinery there that we shouldn't, they should be new, they're 50, 60 years old some of them."

In addition to this, participants described that management failing to meet requests for repaired or new equipment and infrastructure, but allocating money to the purchases of small goods reflects a lack of commitment. One employee expressed his frustration when

management allocated resources to the purchase of new stickers to advertise a safety

campaign while his request to repair equipment went unanswered:

"…say like we wanted that stuff fixed right, seemed pretty simple, they don't do it

and then they go out and buy you know all these little stickers that they put

everywhere that says you are responsible for your own safety. And I asked like

how much they paid for it she said like $1000 or something, I said you could have

used that to fix some lights right. We don't need stickers everywhere telling us

what we already know right."

Furthermore, one participant described that senior management shut down safety

programs in response to costs incurred from accidents in the field. The participant felt

that the shutting down of safety programs was used to save money and improve the

company stock prices, demonstrating a priority for finances over safety:

"…we've had numerous incidents […] in the last year or more and that all costs

us big dollars, and they recoup any way they can so they shut off this program,

shut off that program, shut off that program, you have to recoup that money in

order to keep your stocks going up, my view right but I was never told it was shut

down because of the budget. That's my view."

Neglecting to allocate manpower to safety. Participants also mentioned allocating

manpower to safety during interview discussions. Participants described that

management's neglect to provide appropriate manpower contributed to accidents and

injury. One participant recalled how a colleague had injured his shoulder due insufficient

manpower when completing a job: "these things are reported all the time, and it comes

down to manpower, again they don't have the manpower to maintain and just grease

things like it should be done, so he hurt his shoulder…" Similarly, a participant

described that senior management tries to run the organization with as few employees as

possible, contributing to unsafe working conditions and a perception of a lack of safety

commitment:

> "they try to run the company with as few employees as they can, as tight a ship as
>
> they can, so you know they don't, a lot of times they won't have any extra men
>
> around like an incident like that happens...."

4.8 Theme 8. Policies and Procedures Counteract Safety Prioritization

In describing a lack of safety commitment, participants also noted that some

policies and procedures counteract safety prioritization. This included discrepancies in

punitive procedure, hiring policies and procedures, and the creation and implementation

of multiple rules, including rules for some work groups and not others.

In describing discrepancy in punitive procedure that indicated a lack of

commitment, one participant explained that coaching letters were distributed when an

employee was witnessed acting unsafely by a supervisor or middle management. The

participant stated that coaching letters do not contain any information other than what the

employee was found to do wrong (i.e., no constructive feedback is included), and

although coaching letters are promoted as an informal notice, they are attached to an

employee's permanent record:

> "they have these things they call coaching letters, like they'll give you after they
>
> spot you doing something unsafe, you'll get one, although it might be a week
>
> later, saying that, like you were found doing something unsafe and this is
>
> basically an informal notice saying that you weren't doing it the proper way, but

at the same time it goes on your permanent record. So they're saying it's an

informal notice but it's still going on your permanent record…."

Senior management's policies and procedures for hiring supervisors were also

viewed as a reflection of commitment. Participants explained that senior management fail

to ensure supervisors are knowledgeable and experienced through the hiring and training

process, reflecting a lack of senior management safety commitment. One participant

described this experience:

"I think [the company's] training for their supervisors and who they hire for their

supervisors, I don't think they have enough training to be our supervisor, or I feel

like there should be something, like you have to like for your driver's license you

can't just get a car and then you can drive, but you have to take a driver's course

or you have a period where, that leads up to that where, like they hire supervisors

a lot here where just right off the street, they have no experience, they don't, they

should have at least say like we're apprentices some of us, and they should be at

least out of the apprentice stage, working with the company before they become

supervisors and I think that would make a big difference with safety."

Participants also indicated that contradictions in policies and procedures also

demonstrated that safety was not a priority. For example, one participant described that

organizational rules differed for different work groups, creating confusing work

conditions:

"we have different rules for different people at different places, like I work for

[my department], I have to wear a hard hat in the yard. [A different department

member] comes in, I can be standing right beside like this [...] if I don't have

my hard hat on I'm in trouble. You're not required to wear one."

4.9 Authenticity

In the interviews participants were also asked to describe how they could tell if

senior management are authentic in their promotion of safety commitment. Statements

included senior management who: follow through on statements that are made, visit the

worksite and speak with frontline employees, provide detailed feedback to employees on

how they are working, are knowledgeable in safety protocol and procedure, are open to

ideas and feedback from employees, expect employees to complete tasks they would feel

safe to complete themselves, reward safety compliance, and who consistently prioritize

safety over production.

One participant described that authenticity was a reflection of knowledge,

particularly in asking questions when one is not knowledgeable, as well as taking the

initiative to speak up when an unsafe act is witnessed:

"a prime example right now is my assistant […] supervisor, […] she used to run

her own, she used to have her own company, private company […] and when she

got into the […] industry she had no clue. But now she's picked my brain apart

every day for the last five years […] she's picked other supervisors, other

foremen, and passed supervisor branch apart, she's a good supervisor. She's really

authentic when it comes to safety and promotes it. If she sees something wrong,

she's not afraid to give a friendly blast to the boys you know, stop right now, you

know, see what you're doing wrong."

Additionally, one participant described that management maintaining fair and realistic

expectations for work reflects authentic safety commitment. The participant described

how unfair expectations are made transparent through a pressure for production:

"…actually seeing them get in there and do that, our type of work, you would

never see it but at the same time, if they asked us to do some work that they

wouldn't do themselves, it's kind of hard to see anyway but it's easy for them to

say one thing and mean another. It's like oh yah we don't want you to do that

work, it's unsafe but really they're pushing the productivity envelope so much

that it's like there's no other way for it to happen. If you want productivity, you're

asking us to do this unsafely. So that's definitely upper management type thing,

not our direct supervisor."

The existence or lack of a relationship was also described by participants in

discussions of manager authenticity. Many individuals described the importance of

having a relationship with a person to determine authentic behaviour. One participant

described that authenticity can best be determined by having a relationship with an

individual and experiences and discussions with that person. In reflecting on his

supervisor's authenticity, the participant stated "Well I know my supervisor fairly well,

you can hear it in his voice. […] You can see there's concern on his face." A participant

described a similar notion by referring to the importance of time in determining

authenticity: "how do you learn to trust somebody? Just by, over time and they don't lie

to you and they're straight up with you...." In discussing authentic safety commitment of

the organization's C.E.O, there were mixed responses. Some participants described an

inability to determine authenticity of senior management due to a lack of relationship,

as described by one participant:

> "you know once in a while he'll send a letter out that you know we're committed
>
> to safety and we want to do better and stuff like that, and you're thinking o.k.
>
> maybe he's serious but then you're thinking, the guy's just a picture you know,
>
> you never see him so you don't know if he's there for, you know he's there for the
>
> money but is he committed to this or he's just blowing wind here."

For other participants, although a relationship did not exist, inferences about senior

management's authenticity were made through indirect sources (newsletters, magazine

articles, media interviews, information from others). One participant inferred authenticity

from experience observing the C.E.O speak in the press and reading about the individual

in the newspaper: "well he sounds like he's really, like I say he's genuine, he sounds like

he's a real person. He doesn't talk or sound like an executive, he'd probably be the guy

sitting next to you at lunch."

Lack of authenticity was described as senior management who are inconsistent in

behaviour, including not leading by example and management who enforce safety rules

for some employees but turn a blind eye when other employees make an infraction. Lack

of authenticity was also described as management who: are not open to suggestions or

feedback from employees, do not follow through on statements made regarding safety

concerns, and express a value for production over safety. One participant described the

C.E.O's unauthentic safety commitment as promotion of safety in newsletters and memos

but neglect to ensure all levels of management enforce safety policies and procedures:

"…I know he says those things but by the actions of his managers underneath him, I

don't believe [he is authentic in his commitment to safety], no." Similarly other

participants described that senior management's pressure for production contradicted

promotion of safety, reflecting unauthentic leadership. One participant stated: "they talk

about safety and they turn around and talk about production." Another participant stated:

"…senior management I would say they've got to believe in it, they're pushing it,

pushing it, pushing it but when it comes to the bottom line, I don't see it. You

know it's going to get spoken to you about and talked about and everything but

productivity seems to be a little more in the forefront right getting it done. Not

telling you to do it the wrong way, but shitting on you when you don't get it done

right…"

4.10 Direct Message Sources

Results demonstrated that senior manager decisions and behaviours are direct

information sources that signal management's value for safety. Participants described a

variety of visible outcomes attributable to management decision-making that demonstrate

safety commitment. Decisions were inferred from observing the implementation of

policies and procedures focused on employee safety, the allocation of money to safety,

and the prioritization of safety over production. These signals were described as senior

management decisions regarding production of safety rules in response to safety

incidents, allocating money to equipment or infrastructure, and suspending production

due to unsafe conditions. Senior manager behaviours demonstrating safety commitment

included visiting the worksite, speaking with employees about safety, and

addressing/meeting safety concerns in a timely manner. Participants described that

management visiting the worksite, speaking about safety with employees, and

providing detailed feedback on the status of safety issues, reflected safety commitment.

A lack of safety commitment was also demonstrated by senior leader decision-

making or behaviour. Neglecting to allocate money to safety, pressure for production

over safety, a lack of feedback regarding safety concerns, and safety rules that do not

reflect a value for safety, were inferred by participants as management decisions and

described as a lack of safety commitment. Behaviours demonstrating a lack of safety

commitment included lack of safety knowledge and not leading by example. Appendix H

provides a complete list of source characteristics for leader decisions and behaviours.

In some instances, codes derived from the data were attributed to both leader

decisions and behaviours. These included rewarding safety compliance, enforcing safety

rules, sharing information about safety statistics and safety related organizational

processes, safety knowledge, and turning a blind eye. For example, rewarding safety

compliance was described by one participant as an example of senior management

decision-making, demonstrated through the annual receiving of a safety bonus. A

different participant described senior management's verbal praise for safety compliance

during a site visit as a reflection of safety commitment. Similarly, participants described

sharing information about safety statistics and safety related organizational processes as

examples of senior management's decisions and behaviours. One participant stated that at

senior management's presentation of safety statistics at an annual safety meeting

demonstrates commitment to safety. Another participant described that receiving printed

information about the cause of accidents was attributable to senior management decision-

making and reflected safety commitment. Safety knowledge was inferred through senior

management's decision to implement new tools and equipment. One participant

expressed that providing new tools and equipment needed to complete tasks safely

demonstrated senior management's knowledge of work tasks. A different participant

described that commitment to safety was reflected in a senior manager who is able to

verbalize the rule of the day when visiting the jobsite, subsequently demonstrating a

knowledge for safety policies and procedures. Finally, turning a blind eye was also

described as information attributed to senior management's decisions and behaviours.

One participant described that pressure from senior management to complete work

quickly despite increased risk demonstrated decisions reflecting a lack of commitment. A

different participant described that lack of safety commitment is reflected in senior

management who ignore safety infractions when visiting the worksite. Description of the

relevance of these findings is included in the discussion section.

4.11 Indirect Message Sources and Message Characteristics

In addition to signals of safety commitment from management's decision-making

and behaviours, signals of safety commitment were identified as being perceived from

indirect sources. These sources included information in printed or televised mediums,

stories from colleagues, family, or lower level management, and overheard information

exchanged between senior management and lower level managers at the worksite. Signals

of commitment were also inferred through employees experience at the worksite,

including supervisor and middle management's leadership practices. Participants

discussed that supervisor and middle level management's actions demonstrating safety

commitment or a lack of safety commitment, were attributable to senior management's

leadership. Comparatively, supervisor and additional levels of management's neglect to

engage in safety leadership behaviours were said to reflect senior management's lack

of leadership behaviour.

Descriptive characteristics of messages were also described by participants and

included: written information published for all employees at the organization (e.g.

newsletters, memos), written information published for the individual (e.g. coaching

letter), verbal information given in person, verbal information given over the phone,

indirect information (information mixed in with an abundance of additional information),

and direct information (information that is clear and focused only on safety). A detailed

summary of indirect message sources and quality characteristics is provided in Appendix

I).

4.12 Sender and Receiver Characteristics

Similar to the descriptions of message characteristics, participants described

characteristics related to the message sender. Participants described a number of

attributes reflecting a senior manager who is convincing in his or her promotion of safety

commitment, including an individual perceived to be: trustworthy, confident,

professional, friendly, strong in public speaking, happy, honest, credible, engaged, smart,

respectful, reliable, open, and an individual who takes responsibility. Contrarily,

participants described attributes that promoted a senior manager as not committed to

safety, including: bull-shitter, insecure, unengaged, lack of knowledge, disrespectful, lack

of compassion, arrogant, and someone who fails to take responsibility.

With respect to receiver characteristics, participant descriptions indicated that

their motivation or ability impacted how signals of senior management safety

commitment were received. Participants stated that newsletters and memos that contained

information that was specific to their job made them more inclined to read the

information. For example, one participant described that messages that are relevant are

helpful:

> "…usually, I skim through them, most of it doesn't really relate to what I do, but
> you know the odd one does, like if somebody gets hurt they send out a notice that
> says you know somebody went and lost their thumb and you think oh geez right,
> it happened right and you say o.k. and the next time you're in that situation then
> well geez now I understand how that other guy did it, so I'll make sure I don't
> right, so stuff like that does help."

Adding to this notion, one participant described a letter sent at least once per month by

the organization's C.E.O, describing his opinion of the content: "…it's just like

community stuff they're doing somewhere else, nothing's ever around here, it's always in

Brampton, out west and it's just stuff like that, photo opportunities…"

Participants also described their ability to receive messages. For example, one

participant described his experience of senior management visiting the worksite,

indicating that an individual's focus changes and enhanced self-monitoring is applied to

ensure mistakes are not made:

> "if they're there, now you got everybody nervous, you know they're watching and
> you know what they're watching for and o.k. everything is closed down,
> everybody watches themselves, so you're obvious, you can see them so it scars
> everybody right there and hopefully they don't make a mistake in front of them."

A small number of participants described that there is an abundance of newsletters

and memos sent by senior management, making individuals less inclined to read and

utilize the information. Many participants expressed that information in newsletters

and printed media addressed to all employees in the organization could not be trusted.

Some participants referred to these articles as propaganda

> "I don't believe everything I hear that's for sure, right, you know what I mean so
>
> but as far as dealing with them, well you have no dealings with them, you read the
>
> propaganda they give you, and I do anyway, a lot of people just delete or throw it
>
> away…"

One participant described that when information is not relevant he and others are not

inclined to read it: "…people don't care or pay attention. Propaganda. Most doesn't

pertain to what I do. If something happens they send out a notice. That stuff does help."

Appendix J provides a detailed summary of sender and receiver characteristics described

by participants.

4.13 Summary of Results.

In summary, participants described a range of management behaviours that

indicate safety commitment and a lack of safety commitment. In the context of senior

managers, descriptions included behaviours and decision-making regarding safety as well

as how management regulate or fail to regulate the behaviours and decision-making of

lower level managers.

Active, open, and respectful leadership behaviours in the context of safety

management were discussed by a majority of participants. Participants described that

consistencies in leader statements and actions provided a strong message of safety

commitment. This included ensuring consistency in all levels of management functioning

as well as all levels maintaining an unwavering position to work safely. In discussion of a

lack of safety commitment, participants described management who promoted safety but prioritized production or made promises to look into safety concerns but provided no follow up. Moreover, allocating money to safety and ensuring policies and procedures demonstrate a priority for safety were included as descriptions of senior management's safety commitment, while failure to allocate money or ensure policies and procedures promote a priority for safety was discussed as a reflection of a lack of commitment.

Within the context of policies and procedures reflecting a priority for safety, it is important to note that mixed results were found regarding the creation and implementation of new rules following safety incidents. A majority of participants described that rules were a reflection of safety commitment, however, a minority of employees described that the number of rules made it difficult to complete tasks successfully. Some participants described that at times rules differed depending on work group membership, creating confusion.

In discussions of management authenticity, authentic managers were described as those who followed through on statements that were made, visited the worksite and spoke with employees, ensured transparency by providing feedback, were knowledgeable about safety, open to employee concerns and feedback, and maintained fair expectations, and who consistently prioritized production over safety. Contrarily, manager's not authentic in their safety commitment were described as individuals who were not open to feedback or concerns from employees, inconsistent in leadership behaviour, do not follow through on statements made in response to safety concerns, and who demonstrate a value for production over safety.

Participants also described message medium and quality, as well as sender and receiver characteristics. Messages were identified from numerous sources in the work environment, including verbal information from individuals, information inferred from observing the disposition and experience of others, overheard verbal exchanges, and information from changes or lack of change experienced in the work site. Moreover, employees described specific aspects of the message sender, such as personality, appearance, demeanour, and degree of relationship between receiver and sender. Regarding message content, participants described a variety of message characteristics, including messages written for many versus written for an individual, verbal information (in person or telephone), online video information, and safety information combined with other information (indirect) versus safety information the only information in a message (direct).

Finally, participants' responses were analyzed to determine receiver characteristics that impact message interpretation. Nervousness, faith in accuracy of the message source, information relevance, and general view of the information were identified. In sum, the results of this study identified individual components of the conceptual framework and support the proposed process of perception formation. These findings and their implications are discussed in detail in the next section.

Section 5: Discussion

5.1 Purpose of research

The purpose of this research was to provide an understanding of how employees perceive senior manager safety commitment. This includes understanding what aspects of senior management behaviour and decision-making influence employee perceptions and how employees discern authenticity of commitment. Furthermore, this study aimed to identify antecedents of information route processing that inform perceptions of senior management's safety commitment. The findings from this study contribute to greater knowledge of organizational safety functioning and provide a deeper understanding of employee perceptions as they relate to manager safety commitment.

5.2 Discussion of Research Questions

5.2.1 What does senior manager safety commitment look like to employees?

The results from this investigation demonstrated that perceptions of senior manager commitment to safety are formed through direct and indirect employee experiences. That is, employees make inferences about senior manager safety commitment from direct interaction with senior management and through indirect messages from a variety of mediums. In short, resulting themes suggest that employees form perceptions from senior managements' engagement in safety leadership, consistency in safety leadership, allocation of resources to safety, and development and implementation of safety related policies and procedures. Senior leaders demonstrate these signals of commitment through observable behaviours (e.g., visiting the worksite) and through decisions resulting in outcomes at the worksite (e.g., implementing new

safety rules). Signals of senior leader commitment are also inferred through indirect sources, such as supervisor and lower level management's leadership practices. In this context, participants form perceptions of senior management's commitment through senior leader's management of direct reports and associated subordinates.

Overall, employees perceived senior management commitment as management's personal involvement in safety matters at the worksite, openness to communicating with employees and receiving feedback, and expression of respect and value for employees. These aspects of engaged safety leadership suggest that employees perceive individualized recognition as an indication of senior leader safety commitment. In essence, management who visit the worksite more than once per year, interact with employees about safety in a constructive manner, and make informed decisions based on these experiences demonstrate a value for individuals' safety. Additionally, some employees perceived lower level management's leadership behaviour as a result of senior management leadership. Supervisor and middle level management's leadership was described as a reflection of senior management's decision-making and priority for safety. This finding suggests that supervisor and lower level management play an important role in shaping employee perceptions of senior management leadership behaviour and safety commitment. Thus, lower level management's leadership behaviours should be considered when investigating perceptions of senior leader safety commitment.

Similarly, employees perceived senior management commitment as a reflection of policies and procedures centered on the safety of people, indicated by senior management implementing safety rules, enforcing coaching and constructive feedback versus punitive action, and using a formal approval process when making changes to safety functioning.

Some participants viewed memos and reports focused on safety as a reflection of

senior management's safety commitment, however, the success of this signal depended

on message relevance and individuals' attitudes toward the published document.

Participants who found published reports irrelevant or negative did not view the material

as a reflection of commitment. Allocating money to safety was often expressed as

reflection of commitment. Allocating finances to safety indicates a cost inferred by senior

management and thus, a priority for individuals' safety above financial gain. Finally,

participants mentioned consistency in safety leadership as an indication of commitment.

Results demonstrated that senior management who ensure all management lead by

example, follow through on statements made in response to employee safety concerns,

and maintain a priority for safety over production influence perceptions of safety

commitment.

Aligning Results with Influence Tactics. The aforementioned findings are

consistent with literature on leader influence tactics. The theme of engaged safety

leadership is characterized by active, open, and respectful leadership, constructs closely

aligned with soft influence tactics (Kipnis & Schmidt, 1985). In describing senior

management safety commitment, individuals most often described influencing

mechanisms centered on promotion of care and value for the employee, including

openness and communication, consistency in prioritizing employee safety, and ensuring

policies and procedures prioritize employee safety.

A more recent study investigating influence tactics and safety found that the soft

influence tactic consultation (employees involved in the decision-making process) and

the rational tactic rational persuasion (using logical arguments and factual evidence)

individually influenced safety participation, with safety climate partially mediating

these relationships (Clarke & Ward, 2006). These findings closely align with the present

study, suggesting that senior management's efforts to enhance transparency and use

knowledge of worksite functioning to inform decision-making are important in promoting

perceptions of commitment. Clarke and Ward (2006) also found that the soft influence

tactic inspirational appeals (using emotional language to emphasise task importance and

arouse enthusiasm) was found to influence safety participation, a relationship fully

mediated by safety climate. Again, this notion was supported by participant descriptions

of the importance of active safety leadership, including senior management visiting the

worksite and discussing safety matters. Although participants did not supply descriptions

of management using emotional language, participants described the importance of senior

management discussing safety matters with frontline workers, providing some support for

this notion.

      Aligning Results with Leadership Literature. Investigations of the positive

impact of transformational leadership and contingent reward on safety outcomes has

found safety climate as a mediating factor. Zohar (2002) found an association between

active leadership (including transformational leadership and contingent reward

behaviours), improved safety climate, and fewer injuries. Kelloway, Mullens, and Francis

(2006) determined similar findings, identifying a significant relationship between safety-

specific transformational leadership behaviour on safety consciousness, a relationship

mediated by safety climate. Clarke's (2013) meta-analysis provides further support of the

impact of general transformational leadership behaviours on safety outcomes,

demonstrating a significant, positive impact of transformational leadership behaviours

and transactional leadership behaviours on employee safety, relationships mediated by safety climate.

The present study aids in better understanding these findings, demonstrating the specific behaviours employees perceive as reflections of safety commitment. For example, engaged safety leadership encompasses leadership qualities consistent with transformational leadership's individualized consideration (management demonstrating value and concern for employees; Avolio & Bass, 2002). The findings that senior management who lead by example and maintain an unwavering position to work safely demonstrate safety commitment describe transformational leadership's idealised influence (inspiring others to follow by acting as a role model; Avolio & Bass, 2002). Support was also found for transformational leadership's intellectual stimulation (challenging followers to be innovative and creative; Avolio & Bass, 2002). Barling, et al. (2002) described that in the context of safety practice, leaders use intellectual stimulation to "…encourage their employees to address occupational safety issues and enhance information sharing about occupational safety and risks" (p. 489). Participant descriptions of open safety leadership included management being open to feedback or safety concerns and asking questions about safety functioning. These behaviours likely promote discussion of occupational safety issues and safety risks, thereby demonstrating idealized influence.

Interestingly, support for transformational leadership's inspirational motivation (inspiring and motivating followers; Avolio & Bass, 2002) was limited. The present study's findings of active safety leadership and respectful leadership (two subthemes of engaged safety leadership) provide some support for this notion. Active safety leadership

constitutes talking to frontline employees about safety and providing employees with constructive feedback, whereas respectful leadership describes management's demonstration of value and care for employees. These characteristics may inspire employee value for safety, particularly through coaching (encouragement and detailed constructive feedback). Avolio and Bass (2002) describe that in the context of occupational safety, inspirational motivation involves "…challeng[ing] subordinates to go beyond their individual needs for the collective good. [Leaders] do so by convincing their followers that they can achieve safety levels previously believed to be unattainable, using symbols and stories to clarify their mission" (p. 489). Although participants described promotion of safety through stories in newsletters published by management, some participants found this information to be useless and lack relevance. As well, some participants regarded this information as propaganda, thought to be used by management to influence positive perceptions. Other participants perceived written information to be a valid portrayal of management beliefs and values, suggesting that these individuals may infer inspirational motivation behaviours through published documents. Greater investigation is needed to understand if employee perceptions of senior management's safety commitment include acts of inspirational motivation.

The findings in this study also support literature in ethical leadership. Described as honest and open individuals who maintain integrity (Walumbwa et al., 2008) this leadership style involves a transactional focus on moral management (reward and discipline). Thus, the findings in this study describing leader attributes of honesty and openness, combined with findings that senior leaders who develop, enforce, and ensure

others enforce safety rules reflects commitment, suggest that ethical leadership and transactional leadership qualities are important in promoting safety commitment.

Aligning Results with Senior Management Literature. As mentioned in Chapter 2, Flin (2003) surmised that senior management portray safety commitment through their management of resources, particularly time, money, and people. Similarly, Zohar (2014) proposed that senior managers influence perceptions of safety commitment through hazard control and risk management. The present findings echo these speculations, and provide greater insight into management behaviours. Management of time as an indication of safety commitment describes many of the findings in the present study. Allocating time to safety is supported to be perceived by employees as senior management's engagement in safety at worksites, ensuring all levels of management are transparent about decision-making and actions, ensuring consistency in managements statements and actions, and developing policies and procedures that reflect a value for safety. Similar to Flin (2003), allocating money to safety was identified as theme from participant descriptions, and is supported to be an important factor influencing perceptions of commitment. Finally, Flin's (2003) speculation that allocating manpower to safety influences perceptions of senior manager safety commitment was not directly identified in the present investigation. Support for this notion exists however, as participants described a neglect to allocate manpower to safety as an indication of a lack of safety commitment, suggesting the alternative would assert a positive influence. More investigation is needed in this area to determine the impact of manpower on employee perceptions of senior leader safety commitment.

Comparing the present study's results with findings by Fruhen and colleagues

(2014b), this research provides preliminary insight regarding alignment of employee

and senior manager perceptions of safety commitment. As discussed in the literature

review, Fruhen and colleagues' (2014b) investigated the personal attributes perceived to

impact safety management. The authors surveyed senior managers and found that social

competence and interpersonal leadership skills were described as attributes central to the

demonstration of safety commitment. In the present study, consistent results were found.

Participants described management communicating about safety, listening to participants

concerns and feedback, and demonstrating a value for employees as indications of safety

commitment, behaviours reflecting social competence and interpersonal skills. Similarly,

Fruhen et al.'s (2014b) finding that perceptions of safety commitment are impacted by

leader personality was similar to findings in the present study. Participants in the present

study described leader attributes that influence perceptions of authenticity, including

open/approachable, fair, reliable, and respectful (see section 5.2.3 for discussion of

attributes). Moreover, the present study's themes representing safety commitment

provided evidence consistent with Fruhen et al.'s (2014b) findings that safety knowledge

and problem-solving demonstrate safety commitment. Employees and senior managers

perceived senior managements' knowledge of safety policies and procedures, inquiry to

find out first hand knowledge of functioning at the worksite, and informed and

transparent decision-making as reflections of commitment. Interestingly, Fruhen and

colleagues (2014b) identified balanced allocation of finances to safety as a characteristic

of senior management problem-solving. Similarly, the present study found that allocation

of finances to safety was a reflection of safety commitment, however, individuals noted

that a neglect to allocate resources fuelled perceptions of a lack of safety commitment.

Further investigation is necessary to determine alignment between these perceptions, as management's balancing of finances may reflect a neglect of resource allocation to employees, promoting negative perceptions.

Finally, Fruhen et al. (2014b) found mixed results regarding the motivational trait regulatory focus. Regulatory focus is a form of self-regulation whereby individuals are motivated to accomplish goals using prevention or promotion strategies (Higgins, 1997). Prevention strategies involve motivation guided by security, safety, and responsibility, whereas promotion strategies include motivation guided by advancement, growth, and accomplishment (Higgins, 1997). In the context of organizational safety, Fruhen at al. (2014b) suggest that prevention-focused motivation is characterized by an avoidance of negative outcomes and a focus on safety that can be indicated by avoidance of risk. Comparatively, the authors characterize promotion-focused motivation by a desire for accomplishments and gains that can be indicated by prioritization of issues. Interestingly, Fruhen at al.'s (2014b) study found that manager's provide descriptions of both prevention and promotion strategies when identifying attributes of senior manager safety commitment. Although it is not possible for employees to identify the motivation strategy behind management's actions, theoretical evidence suggests that these strategies play a role in shaping management behaviour and decision-making, therefore impacting follower perceptions and behaviours (Kark & Van Dijk, 2007). Fruhen et al. (2014b) speculate that managers may engage in both strategies to balance caution while completing a number of tasks in a timely manner. Results from the present study support this notion, as employees' perceptions of management's mitigation of risk (e.g., maintaining an unwavering position to work safely) and timely response to safety

concerns paired with allocation of resources demonstrate that management's use of both strategies can aid in sending a strong signal of safety commitment. More investigation is needed in this area to better understand the role of regulatory focus on management behaviour and perceptions of safety commitment.

It is important to note that the aforementioned research on senior leader safety commitment (i.e., Flin, 2003; Fruhen et al., 2014b; Zohar 2014) attempted to identify behaviours that influence perceptions of commitment, however, behaviours influencing a lack of commitment were mostly absent from discussion. Results from the present study indicated that behaviours influencing a lack of commitment (unengaged safety leadership, inconsistency in safety leadership, neglecting to allocate resources to safety, and policies and procedures that counteract safety prioritization) have a powerful impact on employee perceptions, signifying the importance of research in this area.

5.2.2 What management behaviours reflect a lack of safety commitment?

Perceptions of senior management's lack of safety commitment appeared largely as an absence of safety commitment behaviours. For example, unengaged safety leadership emerged as a theme in the data, represented by passive or uninvolved safety leadership, a neglect to provide feedback to employees to keep them informed of management decision-making and action, and a lack of respect in safety leadership. Unengaged safety leadership was also represented by senior management's neglect to ensure lower level management implemented senior management's plans of action. These findings add further support to the notion that active safety leadership characterized by senior leadership who are present and involved at the frontline level are important in demonstrating safety commitment. As well, these results suggest that supervisor and

lower level management practices influence perceptions of senior management leadership, highlighting the importance of considering these factors when investigating perceptions of senior leader safety commitment.

Furthermore, inconsistency in safety leadership, including not leading by example and prioritizing production over safety, neglecting to allocate money to resources and neglecting to allocate manpower for safe completion of work tasks, and enforcing policies and procedures that impede employees' ability to act safely were described by participants as indicators of a lack of safety commitment.

Aligning Results with Leadership Literature. These findings are consistent with previous literature surrounding poor leadership, characterized by passive and abusive leadership behaviours (Kelloway, Sivanathan, Francis, Barling, 2005). Kelloway and colleagues (2005) contend that passive leadership is characterized by a lack of voluntary intervention, or intervention only when absolutely necessary, and avoidance of decision-making and role responsibilities. Empirical investigations have established a connection between passive leadership and negative safety outcomes. Zohar's (2002) findings included passive leadership negatively impacting safety climate, consequently contributing to greater injury rates. Similarly, Kelloway at al.'s (2006) investigation found that safety-specific passive leadership behaviour contributed to poorer safety climate and in turn, higher incidence of injury. These characteristics align with the present study whereby employees descriptions of managements' lack of safety commitment included passive acts, such as not visiting the worksite, not discussing safety with employees, and turning a blind eye to safety noncompliance.

Moreover, Kelloway and colleagues (2005) described abusive leadership as "[engagement] in aggressive or punitive behaviors toward […] employees" (p. 91). In the present study, reports by participants described a lack of safety commitment as disrespectful leadership, including senior management enforcing a punitive focus while failing to provide constructive feedback, senior management allowing or practicing vengeful management behaviour, and senior management allowing or maintaining a lack of manager trust in employee operations. Thus, it is suggested that abusive leadership contributes to perceptions of a lack of safety commitment, although this finding has yet to be supported experimentally.

The present findings regarding inconsistency in safety leadership behaviour reflecting a lack of safety commitment are also supported by previous literature. Mullen, Kelloway, and Teed (2011) defined inconsistent leadership as the interaction of passive and safety-specific transformational leadership, whereby leaders engage in these leadership behaviours at different frequencies. The authors found that passive leadership behaviour attenuated positive outcomes (greater safety compliance and safety participation) from transformational leadership behaviour. Combined with Mullen et al.'s (2011) findings, the results from the present study highlight the importance of consistency in management's safety leadership.

5.2.3 How do employees discern if management are authentic in their safety commitment behaviour?

In the present study, participants described discerning managements' authenticity of safety commitment through their experience of management actions, including visits to the worksite, interaction with employees, receiving detailed feedback on how employees

are working, openness to receiving ideas and feedback from employees, demonstration

of knowledge for safety protocol and procedure, following through on statements made,

maintenance of fair and realistic expectations, rewarding of safety compliance, and

prioritization of safety over production. These descriptions of leader behaviours reflect

personal characteristics of compassion, trustworthiness, and honesty, characteristics

previously highlighted in authentic leadership literature (Avolio & Gardner, 2005).

Moreover, descriptions of the impact of having a relationship with senior management

combined with the aforementioned characteristics suggest that authenticity is best

determined through managements' personal interaction with employees. As well, results

suggest that it is the consistent engagement in this behaviour across time and context that

promotes authentic commitment. This notion is best supported through participants'

descriptions of unauthentic leader behaviour. Descriptions included inconsistency in

management behaviour, particularly not leading by example, and turning a blind eye to

safety noncompliance. Not following through on statements made, not being open to

suggestions or feedback from employees, not having a relationship with employees (i.e.,

never having met employees) and prioritizing production over safety were also described

as factors that promote the perception of unauthentic leaders. These behaviours directly

oppose the characteristics described in authentic leadership, such as maintaining a high

moral character and being aware of the context in which one operates (Avolio & Gardner,

2005).

In addition to the management behaviours, a variety of leader attributes were

described as having an impact on participant's perceptions of authentic safety

commitment. For example, humility, trustworthiness, honesty, professionalism,

confidence, friendliness, happiness, intelligence, reliability, and credibility were a few

of the attributes described as influencing positive perceptions of safety commitment (see

Sender Characteristics in Appendix J for a full list of attributes). Perceptions of leader

attributes varied across participants and were inferred through a number of different

mediums. When describing the senior leader of the organization, attributes were inferred

from the manager's emotional disposition (e.g., facial expression, tone of voice), content

in writings completed by the manager (e.g., style of writing), publications highlighting

manager philanthropy (e.g., photos and stories about volunteering), news stories about the

manager's involvement in the industry, and information about the manager described by

colleagues, other management, or friends and family. Leader attributes reflecting a lack

of safety commitment were also described by participants and included arrogance,

unintelligence, someone who is disrespectful, someone who lacks compassion, an

individual who is a poor communicator, who is unreliable, and someone who fails to take

responsibility. These results are consistent with previous literature that has shown an

impact of leader attributes on perception (e.g., Trumbo & McComas, 2003; Chaiken &

Eagly, 1983). Moreover, consistent with models of signaling and information processing,

this study supports that a combination of leader attributes and behaviours impact

perception formation. As well, the variance in participant responses regarding

discernment of authenticity suggests that individual (i.e., receiver) characteristics

contribute to this process. More on this in section 5.2.6.

5.2.4 What management behaviour most strongly signals safety commitment?

In discussing the management behaviours that signal the strongest commitment to

safety, participants described senior management who are actively involved at the

frontline level by visiting the worksite and discussing safety with employees. Others

discussed senior management who are consistent in their statements and actions

prioritizing safety, such as promoting and use of protective equipment, and following

through on statements that are made. Others mentioned that the strongest indication of

safety commitment was allocating money to safety by purchasing new equipment,

equipment repairs, and ensuring equipment was inspected annually. These results suggest

that the most convincing or strongest indication of manager safety commitment varies

among individuals. That is, no single management behaviour or decision emerged that

reflected a position of commitment above all others. Depending on participant experience

and preference, specific behaviours are more indicative of safety commitment than

others.

Consistent among perceptions however, is that value for safety is perceived as

safety-related costs incurred by senior management. For example, the aforementioned

behaviours demonstrated senior leaders promoting a value for individuals' safety by

visiting the worksite, discussing safety with employees, and promoting safety), costing

senior managers their time. Moreover, allocating money to safety (purchasing equipment,

equipment repairs, and inspections) reflects a financial cost incurred by senior

management. It is likely that the perceived consistency of behaviour indicating safety

commitment reflects a series of costs (time and money) over an extended period. These

findings are aligned with Flin's (2003) notion that senior managers indicate value for

safety through allocation of time, followed by money. Results from the present study did

not determine a clear indication of which cost better reflects safety commitment,

however, the frequency of statements suggests management's time has a greater impact on employee perceptions.

5.2.5 What management behaviour most strongly signals a lack of safety commitment?

Similar to the findings of strongest commitment behaviour, in discussing what indicates the strongest lack of safety commitment, participants mentioned neglecting to allocate money to safety, prioritizing production over the safety of employees, not leading by example, using punitive action in lieu of constructive feedback, and having poor communication with employees. Again, no single behaviour emerged as the strongest indication of a lack of safety commitment, however, these results further support the finding that management incurring safety-related costs signals priority for safety. Management neglecting to incur cost for the purposes of safety demonstrates a lack of safety commitment. Again, costs align with notions of senior management safety commitment demonstrated through allocation of time and money (Flin, 2003). Interestingly, neglecting to allocate money to safety arose as the most frequent indication of a lack of safety commitment, however, more investigation is needed to determine the order of neglected costs that most strongly indicate a lack of safety commitment.

Interestingly, allocating manpower to safety (Flin, 2003) was not described by participants when discussing perceptions of the greatest indicator of senior managements' safety commitment or neglect for safety. Support for this notion was garnered through participant's general discussion of senior leader safety commitment, with descriptions mentioning a neglect to allocate manpower to safety reflected a lack of safety

commitment. More investigation is needed to determine the impact of allocating manpower to safety on employee perceptions.

5.2.6 What characteristics of route processing antecedents influence perception formation?

As previously mentioned, a variety of leader characteristics are suggested to impact perceptions of senior managements' authentic safety commitment. In combination with this, results indicate that characteristics of the message and receiver impact message interpretation.

Results from the present study suggest that high quality (strong, persuasive, and valid) messages of safety commitment are those that promote an unfaltering message of commitment. Findings imply that messages of highest quality are those that instil the perception that management value employees as individuals and prioritize safety above all else, particularly production and other financial obligations in the organization. As mentioned, value for safety is reflected through management incurring safety-related costs related to time (e.g., visiting the worksite and discussing safety with employees) and money (e.g., purchasing equipment or equipment repairs). Importantly, this prioritization appears to be high quality only if practiced consistently. Findings indicated that inconsistency in prioritization of safety reflected a high quality message of a lack of safety commitment, as individuals perceived this contradiction as a signal of unauthentic commitment.

Descriptive aspects of messages associated with high quality message or signal of safety commitment included face-to-face verbal discussion of safety commitment by a senior manager. Although most frequent among participant descriptions, there were

mixed reviews on the impact of newsletters and memos within the organization that promote senior management's safety commitment. This finding suggests that these types of materials within the organization should be used sparingly, as an abundance of messages can contribute to a disregard for information.

Receiver characteristics may also impact perception formation. Results indicated that participants have felt nervous when senior management visit the worksite, subsequently increasing focus on completing job tasks without error. Thus, it is possible that employees may be distracted by this emotional disposition and concentrate on the job task, overlooking the message of senior management's incurred time costs. Similarly, an issue of trust in senior management was also described, reflected in participants' descriptions of management memos and newsletters as propaganda. This lack of trust may cause individuals to scrutinize information sent by senior management, making individuals less inclined to believe messages. Distrust in management may discredit information sent by management (memos or newsletters), in turn influencing receiver's motivation to read messages. These findings further support signaling and information-processing theories that information processing in a complex processes, influenced by sender, message, and receiver characteristics.

Results also suggest that message relevance impacts information interpretation; some participants described paying attention to information that was relevant to them, but disregarding information that was not. Furthermore, general view of information is supported to impact interpretation of messages from senior management. This was showcased through participant's descriptions of receiving memos and newsletters from senior management. Individuals who had found newsletters and memos useless claimed

that they no longer read messages, and thus, no longer received these types of messages from senior management. These findings are in agreement with Petty and colleague's (1981) findings that personal relevance of an issue impacts information processing whereby more relevant issues encourage deeper processing and less relevant issues contribute to use of heuristics. Thus, it is supported that messages of safety commitment more often influence perceptions when they are relevant (i.e., deemed useful) by the receiver.

5.2.7 In what way are employees motivated to analyze messages of safety commitment?

Results from the study suggest that employees are motivated to analyze messages of safety commitment through accuracy seeking motivation. This form of motivation is characterized by the desire to assess the validity of presented information (Chaiken et al., 1996). This form of motivation is supported through participants' questioning of the accuracy of information contained in organizational newsletters and memos. That is, questioning if the C.E.O had written articles endorsed with his signature. These published articles contain information from senior management reflecting safety commitment, however, many individuals stated that they are unable to discern if these statements are authentic or not. Moreover, accuracy motivation is further supported by participants' general view of information distributed by management. Many participants viewed messages from management as propaganda, or information sent for the betterment of managements' image. In these cases, participants may be engaging in accuracy motivation, as they are motivated to scrutinize if messages are genuine or disingenuous. Descriptions of employee experiences did not yield support for impression motivation

(motivation to hold attitudes viewed favourably in an interpersonal context; Chaiken et al., 1996). It is plausible, however, that one-on-one interviews did not provide appropriate assessment for this investigative question. Participants may not consciously perceive an attitude change to maintain opinions with that of their workgroup. Moreover, participants may be reluctant to admit to the researcher that their opinion was formed to promote in-group favourability (e.g., engagement in impression management; Leary & Kowalski, 1990). More investigation is needed to identify individuals' motivation to analyze incoming messages of senior leader safety commitment.

5.3 Aligning Results with the Conceptual Framework

The conceptual framework outlined in Section 2 (Figure 1) illustrates the process of information transmission and interpretation when employees form perceptions of senior manager safety commitment. Results fit within the conceptual framework in that information from senior management was identified from one of three sources: (1) leader decisions inferred from observable outcomes, (2) leader behaviours (observable actions by the leader), or (3) other informants (information supplied by a source other than the senior leader). Results also support this framework in that various sender, message, and receiver characteristics were identified in participants' discussions of senior manager safety commitment.

In the present study, route processing antecedents were identified as individual phenomena (i.e. identification of all possible antecedents versus their impact on information route processing). Research on information processing supports that these phenomena contribute to combinatory or alternate route processing. As described in the literature review, the theory of the HSM contends that individuals who are motivated and

able to scrutinize message content will exercise deep processing, carefully analyzing

the message (Chaiken et al., 1989). Comparatively, individuals who are unable or not

motivated to receive messages will rely on heuristics (e.g., sender or message

characteristics) in forming perceptions (Chaiken et al., 1989). Thus, individuals who are

unable or are not motivated to scrutinize signals of senior leader commitment will likely

engage in cues regarding sender characteristics. This finding is noteworthy as the results

in this study identified a range of characteristics, including descriptions of positive and

negative senior leader attributes (e.g., trustworthy, open, respectful, disrespectful, lack of

knowledge). Individuals who maintain a negative view of senior management's safety

commitment may resort to negative cues when they are not able or motivated to analyze a

message of commitment. This result highlights the importance of ensuring signals of

commitment are relevant and stimulating to employees, particularly for employees who

view senior management negatively. Providing relevant and stimulating signals (signals

that impact employees experience at the worksite and demonstrate an incurred cost by

senior management to prioritize safety) promote the likelihood of employee motivation to

receive signals and engage in systematic processing. In turn, this increased motivation

and deeper processing of a message enhances the potential to improve negative

perceptions.

It was beyond the scope of this study to assess the cognitive mechanisms involved

in information processing; however, previous research on information processing

suggests that employees engage in individual or combinatory route processing (e.g.,

heuristic and/or systematic route processing; Chaiken et al., 1989) when forming

perceptions. In short, the nature of the present investigation facilitated identification of

individual components of the process of perception formation (various sources of information and sender, message, and receiver characteristics). Combining these findings with previously discussed theory, these results support the conceptual framework (Figure 1) depicting the process of perception formation.

5.4 Study Implications

The implications of this study hold theoretical and practical implications. Theoretically, the findings from this study reinforce previously held notions of leader safety commitment while providing valuable insight into an understudied area: perception formation of senior management's safety commitment. Results from this study suggest that signals of senior manager safety commitment come from three sources: leader behaviours, leader decisions, and other informants. Other informants included a variety sources, such as supervisor and lower level management's engagement in leadership behaviours. These findings demonstrate the variety of sources influencing perceptions of senior leader commitment. Signals of senior management's safety commitment included engagement and consistency in safety leadership, allocating finances to safety, and ensuring policies and procedures prioritize safety. Importantly, behaviours reflecting a lack of safety commitment included unengaged and inconsistent safety leadership, neglecting to allocate resources to safety, and implementing policies and procedures that counteract priority for safety. Moreover, in determining authenticity of manager behaviour, individuals' descriptions imply that senior management's actions and decisions, as well as attributes inferred about the leader, can influence perception formation. These findings provide an initial understanding of senior manager safety commitment and prompt additional theoretical investigation to identify consistency

across industries in senior manager behaviours and decisions reflecting safety commitment.

The findings of this venture also support the importance of practitioners understanding employee experiences in organizational safety development. These findings have implications for practitioners involved in designing and implementing senior management training initiatives to improve safety leadership in organizations. There is support in the literature that transformational leadership can be taught (Barling, Weber, & Kelloway, 1996), suggesting the behaviours identified in this study may be used in leadership training initiatives.

Presently, safety climate questionnaires are typically used to assess safety climate within organizations (Flin, 2003), however, questionnaires provide a limited scope regarding employee experiences. The present study supports that adopting more investigative methods to understand employee perceptions within the organization (e.g., interviews or focus groups) would be a valuable addition to understanding an organization's safety and developing senior leader training initiatives. Within individual organizations, understanding signals that influence employees' perceptions of safety commitment and lack of safety commitment will allow practitioners to customize training developments. Understanding the unique signals experienced at an organization will provide a more accurate understanding of safety commitment and safety climate. Additionally, surveying senior management's perceptions of safety commitment to identify alignment between manager and employee perceptions may be used to further enhance understanding and training development.

In summary, the following points should be considered in shaping organizational safety development:

- Organizations and practitioners should consider how employees perceive senior management's: engagement in safety leadership throughout the organization, consistency in safety leadership, allocation of finances to safety, and implementation of policies and procedures pertaining to safety.

- Organizations and practitioners should consider how employees' perceive a lack of commitment by senior management, including: unengaged safety leadership, inconsistent safety leadership, a neglect to allocate resources to safety, and policies and procedures that counteract safety.

- Following identification of the aforementioned phenomena, focus should be placed on strengthening senior leader behaviours that positively impact perceptions and mitigating behaviours that influence negative perceptions. This includes promoting consistent demonstration of acts that exhibit incurred cost of time or money to prioritize the immediate safety of employees. As part of this practice, organizations and practitioners should strive to enhance the delivery and interpretation of signals of positive safety commitment by considering source, message, and receiver characteristics that may enhance or impede this process. For example, perceived leader attributes, the medium through which the message is relayed, message descriptive characteristics, and employee motivation and ability to receive the message should be considered so that signals may be tailored to ensure quality, and consequently, influence.

- The extent to which senior management establish and maintain relationships with employees should be considered to enhance the likelihood of perceived manager authenticity. Additionally, organizations and practitioners should aim to shape senior leader behaviour to demonstrate authenticity through promotion of behaviours relating to individualized consideration, honesty, and trustworthiness. This includes fostering the consistent practice of: (1) visiting the worksite, (2) discussing safety matters with employees and providing coaching and feedback to employees that demonstrates a knowledge of job tasks and risks, (3) demonstrating open communication by seeking feedback and ideas from employees by asking questions, (4) ensuring employees are kept informed of management decision-making (5) ensuring raised safety concerns are met with visible outcomes, (6) maintaining fair and realistic expectations, (7) leading by example, (8) commending safety compliance, and (9) prioritizing safety over production.

5.5 Qualitative Research Considerations

5.5.1 Role of the Researcher

Scientific inquiry utilizes validated instruments for research purposes, and thus, the researcher is essentially removed from these aspects of the study (Golafshani, 2003). In qualitative inquiry, however, the researcher is considered an instrument used in data collection and analysis (Golafshani, 2003). It is, therefore, important that the researcher disclose potential biases, assumptions, or experiences that may influence the researchers inquiry.

The researcher had experience with the participant organization prior to the present investigation. This experience included working as a research assistant of Saint Mary's University that partnered with the participant organization to develop a safety program. The researcher was therefore exposed to discussions regarding the organization's culture, leadership functioning, and safety functioning, as well as meetings and focus groups involving organizational members, prior to the present study. The position of research assistant and work with the participant organization was maintained prior to and for the duration of the present research venture. The researcher conducted the present study's participant interviews, analysis of interview data, and production of the resulting report. The study's method of qualitative analysis and results from analysis were discussed in detail with committee members to mitigate bias. However, it is acknowledged that the researchers' knowledge of literature in the area of leadership influence and organizational safety (including safety climate, safety culture, and manager safety commitment), and experience with the participant organization may have influenced bias during interviews or analysis.

Attempt to mitigate bias was made through a series of practices, including: use of a systematic analysis approach (Braun & Clarke, 2006); maintenance of awareness for the potential of personal bias that could impact data collection and interpretation; use of previously constructed and committee-reviewed interview questions; use of iterative questioning in interviews to clarify understanding; reflecting on interviews after each were completed to consider the researcher's performance; reflective appraisal of the project through note-taking during interviews and analysis.

5.5.2 Trustworthiness (Validity and Reliability)

Approaches in the scientific method to assess the rigour of a research venture are popularly known and include tests for internal validity, external validity, and reliability (Lincoln & Guba, 1986). These methods do not apply to qualitative investigations, however, as qualitative inquiry does not use these evaluative techniques (Lincoln and Guba 1986). Thus, the rigour of a qualitative study must be established through other means. Lincoln and Guba (1985) devised criteria that parallel standards for establishing rigour in the scientific method and termed this standard: trustworthiness of the data. Trustworthiness is garnered through the establishment of credibility (confidence in the "truth" of the findings), transferability (findings are applicable in other contexts), dependability (findings would be repeated in a similar research venture), and confirmability (findings are determined by the subjects and non-biasing characteristics of the researcher). The following sections address how each criteria was addressed in the present study.

Credibility. Credibility, akin to internal validity in experimental inquiry, was established through detailed discussion and iterative questioning in interviews to ensure clarification and prevent misinformation (member checks; Lincoln & Guba, 1986). Credibility was also supported through the researchers use of trust building (Shenton, 2004); the researcher discussed the confidentiality of participant's information and explained the researcher's background and motivation for research to build trust with participants. The researcher attempted to maintain awareness for the potential of personal biases that may impact data via a priori values and constructions by following previously established interview questions that had been reviewed by a committee, maintaining

awareness of questions used to probe responses in the interview, and reflecting on interviews after completion to consider the researcher's performance (Shenton, 2004). Furthermore, credibility was enhanced through data collection at two job sites in different provinces and from participants who maintained a range of work experiences and represented a variety of work positions (Shenton, 2004). As suggested by Shenton (2004), peer scrutiny of the research project was established through practitioner and academic feedback during a presentation of the proposed investigation at local safety-related conferences, as well as thesis committee member review and feedback during the proposal and main stages of the project.

Transferability. Guba and Lincoln (1994) contend that transferability (akin to generalizability in experimental inquiry) is achieved through detailed description of time, place, context, and culture in which data is collected. Shenton (2004) provided comparable, but more specific recommendations to achieve this quality, and will be the method followed in this study. Shenton (2004) states:

"…information on the following issues should be given at the outset: (a) the number of organizations taking part in the study and where they are based, (b) any restrictions in the type of people who contributed data, (c) the number of participants involved in the fieldwork, (d) the data collection methods that were employed, (e) the number and length of the data collection sessions, (f) the time period over which the data was collected" (p. 70).

To meet requirements of transferability, full disclosure of these criteria were included in the participants and procedure sections of this paper.

Dependability and Confirmability. Dependability and confirmability relate to a qualitative study's reliability in that they represent the extent to which a study could be replicated (using the same methods and participants) to achieve similar results (Shenton, 2004).

Dependability was sought by providing a detailed account of the steps taken in data collection and analysis, described in the method section of this paper (Shenton, 2004). Providing detail of these processes facilitates scrutiny by fellow researchers of the steps taken, as well as replication of the study to verify consistent results. Following Shenton's (2004) recommendation, this study provided descriptions of "the research design and its implementation [and] the operational detail of data gathering…" (p. 71). The research design and implementation as well as operational detail of data gathering are included in the methods section of this document. The author's reflective appraisal of the project was maintained alongside field notes during the research process.

Finally, confirmability was demonstrated through inclusion of the methods adopted and the strengths and reasoning for using these approaches (Shenton, 2004). Moreover, consistent with Shenton's (2004) recommendations, results from data analysis were discussed in full, including a priori theories that were not found in the data.

5.6 Limitations and Future Research

Limitations exist in the present study. First, causal conclusions cannot be made about the process of perception formation, as an experimental method was not used; however, qualitative investigation provided an understanding of experience that experimental methods cannot produce (detailed descriptions of participant experiences).

Second, for convenience of sampling, interviews were conducted at the worksite.

It is possible employees engaged in impression management (Leary & Kowalski, 1990) when describing management who are committed or not committed to safety. Attempts to minimize participant impression management were made by explaining verbally and in writing the confidentiality of information disclosed in interview sessions.

Third, because data collection occurred during one-day worksite visits, individual interviews were limited to a maximum of one hour. Interviews averaged around 46 minutes; thus, it is possible that time pressure impacted some participants ability to provide comprehensive answers for all interview questions.

This study is an initial step in understanding how employees perceive senior manager safety commitment. Additional research should investigate the transferability of the present study through replication in other high-risk organizations. The present study identified a number of attributes, behaviours, and decisions that influence employee perceptions of senior manager safety commitment; however, additional research should investigate the combination of characteristics that best promote perceptions of commitment. In line with this notion, future studies should investigate the order of senior management's safety-related cost allocation (or lack of allocation) that demonstrates extent of safety commitment. Particularly, as this study's findings differed with previous research (e.g., Flin, 2003), the role of manpower should be investigated in more detail to determine the extent of this cost on employee perceptions. Individual's engagement in systematic and heuristic route processing when forming perceptions of commitment may also be explored, and the present study's conceptual framework may be tested empirically to determine its strength in representing the process of employees' perception formation.

Further research should also aid in understanding how individuals' are

motivated to interpret messages of commitment (e.g., accuracy seeking motivation versus

impression motivation). Additionally, as mentioned in the literature review, investigation

of the functioning of countersignals and distortion from environment on perception

formation should be explored, as it will provide greater insight into employee perception

formation. Alignment between senior manager and employee perceptions is another area

of future research that should be investigated. Determining the behaviours, decisions, and

attributes that reflect safety commitment for both employees and senior managers will

provide valuable insight regarding organizational safety climate. Moreover, determining

the behaviours or actions senior managers must engage in to change individuals'

perceptions of safety commitment is another avenue of research that may be studied.

Identifying the length of time and types of behaviours management must engage in to

change employee perceptions from lack of commitment to authentic commitment will

provide valuable insight for researchers and practitioners.

5.7 Conclusion

It is well known that understanding and improving safety within organizations is a

critical venture. The present study adds to this initiative by utilizing qualitative

methodology to provide an in-depth look at employee perceptions of senior manager

safety commitment. Results from this study suggest that signals of safety commitment are

channelled through senior leader decisions, behaviours, and other informants. Moreover,

results support that perception formation is a complex process impacted by a variety of

sender, message, and receiver characteristics. Manager behaviours or decisions that

impact perceptions of safety commitment included acts that represent a priority for

individual's safety, broadly surmised as: engaged safety leadership, consistent safety leadership, the allocation of money to safety, and implementation of policies and procedures that reflect a value for safety. Moreover, to better understand employee perceptions, participant's observations of a lack of safety commitment were solicited. In sum, these perceptions reflected managers who are unengaged or inconsistent in safety leadership, who neglect to allocate resources for money, or who implement policies and procedures that counteract a priority for safety.

Participant descriptions suggest that the strongest indication of management's value for safety is the consistent demonstration of incurred cost of time or money in order to ensure the immediate safety of employees. In addition to this, the authenticity of management's commitment may be best indicated through behaviours and decisions that promote individualized consideration and a value for employee safety. A variety of leader attributes were also mentioned by participants in describing how to tell if someone is authentic (e.g., honesty, friendliness, intelligence, and humility). Additionally, having met senior management (i.e., having a relationship) was supported to have a significant impact in allowing some participants to discern authenticity. Several individuals described being unable to make inferences about senior management's genuine concern for safety due to never meeting the individual. Finally, descriptive aspects of the message and their role in perception formation suggest that certain mediums (e.g., verbal) and qualities (e.g., one-on-one discussion) promote more positive perceptions.

In conclusion, this study contributes to the organizational safety evidence-base in providing a greater understanding of the process of senior leader perception formation. As well, the study findings contribute to organizational practice through improved

understanding of senior leader safety leadership and betterment of practitioner led safety development training. The present investigation is a first step in identifying the process of perception formation of senior leader safety commitment and provides recommendations for how to stimulate additional research in this area going forward.

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Appendix A
Interview Questions

1. Think of a senior manager who is very committed to safety:
    a. Describe to me how you know this senior manager is committed to safety
        i. In what ways do you notice this behaviour?
            Prompts: Do you observe them directly, hear stories by colleagues, infer them from the work environment? Through what technical mediums are messages relayed?

    b. Describe to me the type of senior management behaviour you think shows the greatest commitment to safety
        i. In what ways do you notice this behaviour?
            Prompts: Do you observe them directly, hear stories by colleagues, infer them from the work environment? Through what technical mediums are messages relayed?

2. Think of a senior manager who is not committed to safety:
    a. Describe to me how you know this senior manager is not committed to safety?
        i. In what ways do you notice these behaviours?
            Prompts: Do you observe them directly, hear stories by colleagues, infer them from the work environment? Through what technical mediums are messages relayed?

    b. Describe to me what type of senior management behaviour you think shows the greatest disregard for safety?
        i. In what ways do you notice these behaviours?
            Prompts: Do you observe them directly, hear stories by colleagues, infer them from the work environment? Through what technical mediums are messages relayed?

3. Tell me about how you can tell a manager is *authentic* in his/her commitment to safety?
    a. What types of characteristics lead you to think they are authentic?
        i. Prompts: How do you perceive that a leader is self-aware, honest, and/or transparent? Do you observe them directly, hear stories by colleagues, infer them from the work environment? Through what technical mediums are messages relayed?
    b. What types of characteristics lead you to think they are not authentic?
        i. Prompts: What kinds of behaviours, decision-making, outside information lead you to form this opinion? Do you observe them directly, hear stories by colleagues, infer them from the work environment? Through what technical mediums are messages relayed?

Appendix B
Demographic Questionnaire

Please state your **gender**: _____

Are you a Canadian resident or citizen?
☐ Yes
☐ No

Please state your **age**: _____

What is the title of your current employment position?: _____　　☐N/A

How long have you been employed in this role?: _____　　☐N/A

What type of industry do you work in? _____　　☐N/A

How many people work in the organization you work in (including all locations)?
(An estimate is fine) _____　　☐N/A

Have you personally met any of the senior management at your current organization?
☐ Yes
☐ No
☐ N/A

Have you personally worked with any of the senior management at your current organization?
☐ Yes
☐ No
☐ N/A

If 'Yes', please briefly describe your involvement with senior managemenet and a rough estimation of the length of this experience (e.g., one hour, two months, every day):
_____
_____
_____
_____
_____

Appendix C
Informed Consent Form
Understanding Perceptions of Senior Leader Safety Commitment
REB # 15-265

Kate C. Bowers
Department of Psychology
Saint Mary's University

INTRODUCTION

I am a Masters of Science student in Psychology at Saint Mary's University (SMU), and I would like to invite you to participate in a study aimed at understanding perceptions of senior leader safety commitment.

Participation in the study is voluntary and involves participating in an interview (one-on-one discussion session with a researcher). You will be asked to provide personal experiences and opinions related to senior managers' safety behaviour. Your responses will be kept confidential to the research team and there is no way of identifying your information with your name. You are free to withdraw from the study without penalty before July 15th, 2015. After this date data analysis will have begun and it will be impossible to identify or remove your individual information from the study. If you choose to withdraw, any information gathered will be destroyed and will not be included in the study.

PURPOSE OF THIS RESEARCH

The purpose of this research is to better understand senior leader safety commitment. Our goal is to better understand *how* employees form perceptions of senior leader safety behaviour, that is, the process of perception formation. We aim to understand what senior leader safety commitment looks like to you and how you come to form this perception. This knowledge will improve understanding of safety leadership, potentially advancing organizational safety management practices.

WHO IS ELIGIBLE TO TAKE PART?

This study targets workers in Canadian high-risk industries who have been employed at their current organization for at least 6 months.

WHAT DOES PARTICIPATING MEAN?

You will be participating in a 60 to 90 minute interview with a researcher. The interview will occur after you have completed the signed consent form and asked any questions you have. Participation will include thinking of a senior leader within your organization (e.g., CEO, President, etc.) and discussing the behaviours that reflect a priority or disregard for safety. You will also be asked to disclose (via confidential survey) some demographic information, including gender, age, and how long you have been an employee with your organization. You may skip any questions you do not wish to answer and you will be

given a $50.00 VISA card at the conclusion of the interview for your participation. Funding for gift cards is provided by Saint Mary's University CN Professorship in Safety Culture.

WHAT ARE THE POTENTIAL BENEFITS OF THIS RESEARCH?
There are no direct foreseeable benefits with participating in this study. Participating in this study will contribute to organizational and academic understanding of how employees form perceptions of senior leader safety commitment.

WHAT ARE THE POTENTIAL RISKS FOR PARTICIPANTS?
You may feel uncomfortable answering some questions asked in this interview. This may be due to your relationship with senior management and experience with safety in your organization.

If you do become upset during or after the interview, you can contact Dr. Mark Fleming at ▮▮▮▮▮▮ or ▮▮▮▮▮▮▮▮▮▮ or Dr. Jim Cameron ▮▮▮▮▮▮ or ▮▮▮▮▮▮ for assistance.

WHAT WILL BE DONE WITH MY INFORMATION?
Your name and contact information will only be used for the purposes of conducting the interview. This information will be used to schedule a time for you to participate in the study and send relevant research materials. This information will not be linked with your interview transcript and will only be made available to the research team. Audio recording and written documentation will be used to complete an academic report as well as provide aggregate information to your organization on how senior management safety commitment is perceived by employees. Your personal information will not be directly connected with your responses; responses will be anonymous in any and all research papers, publications, and communications with your organization.

All information collected in this study will be stored on password-protected computers and will only be accessible by the research team members and professionals hired to transcribe material. Your information will not be shared with anyone else. Data will be stored for 5 years before being destroyed.

Please note that any information you provide will not impact your current or future employment with your organization.

HOW CAN I WITHDRAW FROM THIS STUDY?
Participation in this study is completely voluntary. You have the right to participate or not, and if you choose to participate, you can withdraw from the study at any time during your interview participation. Withdrawal may be completed by requesting to skip interview questions or by notifying the interviewer that you do not wish to continue. It is important to note that once data analysis has begun (July 15th, 2015) it will be impossible to remove your responses. Your responses will never be linked with your name and always remain unidentifiable.

HOW CAN I GET MORE INFORMATION?
Information or questions regarding this study may be requested at any time from Kate Bowers at ███████████████ or Dr. Mark Fleming at ███████████████ or ███████. If you have any questions or concerns about ethical matters, you may contact the Chair of the Saint Mary's University Research Ethics Board at ethics@smu.ca or 420-5728. This research has been reviewed and approved by the Saint Mary's University Research Ethics Board.

Statement of Agreement

I understand what this study is about, appreciate the risks and benefits, and that by consenting I agree to take part in this research study and do not waive any rights to legal recourse in the event of research-related harm.

I understand that my participation is voluntary and that I can end my participation at any time without penalty.

I have had adequate time to think about the research study and have had the opportunity to ask questions.

Verbal agreement: please state YES or NO

Please keep a copy of this form for your records.

Appendix D
Interview Guide
Understanding Perceptions of Senior Leader Safety Commitment
REB # 15-265

Kate C. Bowers
Department of Psychology
Saint Mary's University

Written consent will first be sought using signed consent forms approved by the Saint Mary's University Research Ethics Board.

Introductory Script: Welcome and thank-you for agreeing to participate in this interview. Your input is a valuable asset to this research venture. My name is Kate Bowers and I am part of a researcher team at Saint Mary's University investigating how employees form perceptions of senior manager safety commitment. I would like to remind you that your participation is voluntary, and you may chose to end your participation in any time. You may also feel free to skip any interview questions you do not wish to answer. Any information you provide will be confidential and your personal information will never be directly connected with your responses. Information you provide will be used in an academic report and aggregate data will be relayed back to your organization to help them understand how employees form perceptions of senior leader safety commitment. First we will begin with a demographic survey.

--

Request for participant to complete a demographic survey:.
- Allow 5 minutes to fill out form (address any questions that arise)
- Collect form
- Thank participant

Discuss the utility/focus of interview:
- Ask if participant has participated in an interview before
- Explain why/how it is a valuable tool for collecting data
  - In this research venture interviews will allow us to gain more in-depth information regarding how perceptions of senior leader safety commitment are formed. Using a one-on-one discussion facilitates a comfortable, confidential environment and flexibility in gaining answers to our research questions.

Discuss logistics of the session:
- Length of interview: 60-90 minutes
- Break available on participant request

- Discuss bathroom options, exit location, and safety protocol (e.g., evacuation procedure)

Inform participant that audio recording will now commence:
- Ensure participant is comfortable and consents to recording
- Commence audio recording

Ask participant if he/she has any questions before starting:
- Address any questions

Commence interview questions:
- Follow interview guide

--

Conclude Interview:
- End audio recording
- Thank for participation
- Address any remaining questions
- Provide feedback form and discuss content on form (i.e., how to withdraw, how to acquire research results).
- Provide $50.00 VISA gift card

Appendix E
Participant Feedback Form
Understanding Perceptions of Senior Leader Safety Commitment
REB # 15-265

Kate C. Bowers
Department of Psychology
Saint Mary's University

Thank you very much for participating in this study.

Today you have chosen to take part in a discussion concerning senior leader safety commitment. Your views on this subject contribute to a greater understanding of how employees form perceptions of senior leader safety commitment. In turn, this knowledge will improve understanding of safety leadership, potentially advancing organizational safety management practices.

The information you provided today will remain confidential and stored securely on password-protected computers shared only with research members and professionals hired to transcribe material. Your responses will be used in academic text and presentations and aggregate data will be provided to your organization to foster understanding of how senior management safety commitment is viewed. **Your responses will not be identifiable; printed information cannot be traced back to you.**

For questions or more information about this research, or to request a summary of the study's results, please contact a member of the research team (expected completion date: August 31, 2015):

Kate Bowers at █████████████████
Dr. Mark Fleming at ███████████████ or ██████████

If you have any questions or concerns about ethical matters, you may contact the Chair of the Saint Mary's University Research Ethics Board at ethics@smu.ca or 420-5728. This research has been reviewed and approved by the Saint Mary's University Research Ethics Board.

Appendix F

Coding Framework

Conceptual Framework Category	Code Name *Denotes codes established from the data *Italicized text denotes codes identified as leader decisions and behaviours*	References
Leader Decisions (Leader actions reflecting a priority for safety that are directly attributable to senior leadership)	Allocates money to purchase of small goods before allocating money to mitigate safety issues*	Connelly et al. (2011) Furhen et al. (2014a, 2014b) Flin (2003) Flin & Yule (2004) Brainstorming with SME
	Allocates money to safety	
	Allocates manpower to safety	
	Allocates money to repair, inspect, or purchase equipment or infrastructure*	
	Allocates money to safety training*	
	Allocates money to safety programs/initiatives*	
	Allocates time to safety	
	Implements new safety rules in response to accidents/incidents*	
	Ensures all levels of management practice safety leadership*	
	Ensures changes in safety functioning require a formal approval process at the executive level*	
	Ensures positions within the organization are dedicated to safety*	
	Ensures memos and reports focus on safety*	
	Fails to ensure all levels of management engage in safety leadership*	
	Hiring process does not reflect a value for safety*	
	Lack of compassion*	
	Neglects to allocate manpower to safety*	
	Neglects to allocate money to safety*	
	Neglects to allocate money to repair, inspect, or purchase equipment or infrastructure*	
	Neglects to allocate sufficient manpower to ensure safe completion of tasks*	
	Policy/Procedure does not reflect a value for safety*	
	Policy/Procedure reflects a value for safety	
	Pressure for work overrides value for safety*	
	Problem solves	
	Production pressure does not precede value for safety*	
	Punitive process does not reflect a value for safety*	
	Provides means for contact*	
	Rewards safety compliance	
	Safety rules do not reflect a value for safety*	
	Shuts down safety programs to reduce costs*	
	*Turns a blind eye**	
Leader Behaviours (Observable actions that reflect a priority for safety and are directly attributable to senior leadership)	Addresses/meets safety concerns in a timely manner	Connelly et al. (2011) Furhen et al. (2014a, 2014b) Flin (2003) Flin & Yule (2004) Brainstorming with SME
	Asks questions	
	Consistent in actions/behaviours over time	
	Demonstrates concern for the employee*	
	Disrespects employees*	
	Does not follow through on statements*	
	Does not lead by example*	
	Does not speak about safety*	
	Does not trust employees*	
	Does not visit the worksite*	
	Enforces safety rules	
	Follows through on statements*	
	Involved in safety matters	
	Lack of safety knowledge*	
	Lack of feedback regarding raised safety concerns*	
	Leads by example	
	Maintains fair and realistic expectations*	
	Maintains unfavourable or unrealistic expectations*	
	Open/approachable	
	Open to receiving concerns, feedback, or questions*	
	Participative leadership	
	Positive attitude about safety	
	Provides coaching and constructive feedback to employees	
	Provides timely feedback and promotes transparency*	
	Punishes employees for safety incidents*	
	Resolute in position to work safely*	

	Respects and values the work group	
	Safety knowledge	
	*Shares information about safety statistics and safety-related processes in organization**	
	Social competence	
	Speaks about safety	
	Takes time to listen and considers suggestions before acting*	
	Visits worksite to monitor staff	
Other Informants (Senior management decision-making or behaviour relayed by an indirect source)	Information inferred from a lack of safety incidents/accidents at the worksite*	
	Information/stories from colleagues	Flin (2003) Brainstorming with SME
	Information/stories from colleagues' experience/disposition (e.g., supervisor and middle management leadership practices)*	
	Information/stories from family*	
	Information/stories from other informants (e.g., stranger)*	
	Information/stories from supervisor/middle management	
	Online video media (online presentation by senior management)	
	Overheard information/stories (e.g., overheard phone calls)*	
	Printed article from organization (e.g., organizational magazine, newsletter, poster)	
	Printed media (e.g., news story in newspaper)	
	Written article on company website	
Sender Characteristics (Characteristics attributable to the message source that influence message interpretation)	Appreciative*	Chaiken & Eagly (1987) Petty & Cacioppo (1986) Connelly et al. (2011) Trumbo & McComas (2003) Yule & Flin (2004) Brainstorming with SME
	Authentic/Genuine	
	Bull-Shitter*	
	Confident*	
	Credible	
	Credible*	
	Doesn't speak without considering the consequences*	
	Engaged*	
	Fair*	
	Good Communication*	
	Happy/Smiling*	
	Insecure*	
	Lack of knowledge*	
	Lack of respect*	
	Likeable/Friendly	
	Open/Approachable	
	Professional*	
	Reliable*	
	Respectful	
	Smart/Knowledgeable	
	Trustworthy	
	Unengaged*	
	Well spoken*	
Message Characteristics (Characteristics attributable to the message content that influence message interpretation	Abundance of messages*	Bhattacheriee & Sandford (2006) Chaiken (1980) Connelly et al. (2011) Petty, Cacioppo, & Goldman (1981) Petty et al. (1983) Brainstorming with SME
	Direct (message focused only on safety)*	
	Indirect (message intertwined with other info)*	
	Verbal in person	
	Verbal over phone	
	Written (addressed to many)	
	Written for individual	
Receiver Characteristics (Characteristics attributable to the recipient of the message that influence message interpretation)	Ability	Chaiken (1987) Petty & Cacioppo (1986) Todorov et al. (2002)
	Motivation	

Appendix G

Summary of Themes and Subthemes

Theme	Description	Subtheme	Subtheme Description
Safety Commitment / Engaged Safety Leadership	Participants described commitment to safety as management who demonstrated an active, open, and respectful approach to safety management. This included visiting the worksite multiple times each year, ensuring lower level management engage in safety commitment behaviours, asking about and listening to employee concerns, and demonstrating value and respect for employees.	Active Safety Leadership	Leadership characterized by active involvement at the frontline level. This included descriptions of senior management visiting the worksite, discussing safety matters with employees and providing feedback to employees, demonstrating knowledge of frontline tasks and safety policies and procedures, rewarding safety compliance, and addressing safety concerns in a timely manner. Ensuring all other levels of management engage in safety leadership behaviours was also described as an indication of senior manager's safety commitment.
		Open Safety Leadership	Leadership characterized by an open and approachable demeanour that promotes communication between frontline employees and management. This included descriptions of senior management providing means for contact and being open to receiving concerns, feedback, or questions. Additionally, this included senior management moving on from disagreements, and sharing information about safety statistics and safety-related processes in the organization.
		Respectful Leadership	Leadership characterized by trust and value for employees. Descriptions included senior management ensuring employees receive coaching (constructive feedback) when a mistake is made and ensuring management expectations are fair and realistic (i.e., expectation to complete tasks management would feel comfortable completing themselves).
Consistency in Safety Leadership	Consistency in safety leadership behaviour was commonly described among participants. Individuals expressed that leaders who abide by the policy and procedure they promote, follow through on statements, and consistently prioritize safety over production reflected senior management's commitment to safety.	Sincere Safety Leadership	Sincere safety leadership included descriptions of senior management implementing and abiding by safety rules and following through on statements made in addressing safety concerns.
		Unwavering Position to Work Safely	Unwavering position to work safely included descriptions of senior management never compromising safety for production and consistently maintaining safety as a top priority.
Allocating Money to Safety	Participants expressed that allocation of money to safety demonstrated senior management's value for safety. This includes purchasing of new equipment and equipment repairs, paying for inspection of equipment, allocating money to safety training and safety programs, and ensuring finances are spent towards meeting safety concerns before purchase of small goods.	-	-

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	Theme	Description	Subtheme	Subtheme Description
	Policies and Procedures Reflect a Value for Safety	Individuals stated that committed senior leadership is demonstrated through organizational policies and procedures that reflect a value for safety. This includes policies and procedures that reflect a priority for employee safety and promote transparency of management decision-making.	Management of Safety is People Focused	Descriptions included that policies and procedures developed and approved by senior management reflect a priority for employee safety. This included development and enforcement of safety rules with a clear focus on keeping employees safe and management of employee behaviour being structured to provide coaching and constructive feedback versus punitive action.
			Safety is a priority in policies and procedures	Descriptions included that policies and procedures ensure that changes to safety functioning (e.g., safety rules) within the organization require a formal approval process at the executive level, positions within the organization are dedicated to safety, and memos and reports published in the company and distributed to employees include a focus on safety.
Lack of Safety Commitment	Unengaged Safety Leadership	Participants described a lack of safety commitment to as management who are passive in safety leadership, who do not provide adequate feedback to promote transparency in decision making, who maintain a punitive focus with a lack of coaching, and who demonstrate a lack of respect.	Passive Safety Leadership	Leadership characterized by inactive involvement at the frontline level. This included senior management not visiting the worksite, not speaking with employees about safety, and having a lack of knowledge about job tasks and safety policy and procedure. Passive safety leadership was also characterized by a neglect to ensure other levels of management engage in safety leadership.
			Lack of Transparency in Safety Leadership	Leadership characterized by a lack of communication and openness between frontline employees and management. This included descriptions of senior management neglecting to provide feedback in response to raised safety concerns and management decision-making.
			Lack of Respect in Safety Leadership	Leadership characterized by a lack of respect or value for employees. Participants described managers adopting a punitive focus and concern for punishing employees instead of providing constructive feedback. Descriptions also included vengeful management behaviour, disrespecting employees, and management not trusting employees.
	Inconsistency in Safety Leadership	Inconsistency in safety leadership behaviour was described as an indication of a lack of safety commitment. Participants expressed that leaders who do not follow through on statements made about safety improvement, do not abide by the rules they are promoting, and who prioritize production over safety demonstrate a lack of safety commitment.	Insincere Safety Leadership	Insincere safety leadership was described as inconsistent and contradictory management behaviour. This included not following through with action when addressing raised safety concerns and not leading by example.
			Value for Production Exceeds Value for Safety	Leadership behaviour described as management who compromise safety for production, including pressuring employees and turning a blind eye to safety noncompliance to increase speed of production.

	Theme	Description	Subtheme	Subtheme Description
	Neglecting to Allocate Resources to Safety	Participant's descriptions of a lack of safety commitment also included managements' neglect to allocate resources to safety. Descriptions included failing to provide money to purchase and repair equipment, and failing to ensure sufficient staff to complete tasks safely in the expected timeframe.	Neglecting to allocate Money to Safety	Neglecting to allocate money to safety was described as management neglecting to purchase or repair equipment, neglecting to fund equipment inspections, neglecting to purchase or repair infrastructure, and management purchasing small goods before allocating money to greater safety needs.
			Neglecting to Allocate Manpower to Safety	Neglecting to allocate manpower to safety was described as management neglecting to provide appropriate manpower to ensure jobs may be completely safely in the expected timeframe.
	Policies and Procedures Counteract Safety Prioritization	Participants noted that policies and procedures can counteract safety prioritization, demonstrating a lack of safety commitment. This included discrepancies in punitive procedure, issues in hiring policies and procedures, and the creation and implementation of multiple rules, including rules for some work groups and not others.	-	-

Table of Responses Reflecting Leader Decisions and Behaviours

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
Engaged Safety Leadership	**Active Safety Leadership**	Visits worksite to monitor staff				B	B				B	B	B		B		B: "they have one fella like I say, he runs the whole show […] and he shows up once a year, twice a year, he'll come in and see if everything is right you know."
		Speaks about safety				B	B	B			B	B			B		B: "he promotes safety, you know every time he's here there's always talk about safety. He will start out with different instances that happened."
		Safety knowledge			D						B						B: "I think if they actually kind of did the same thing more that we did and looked up the rule of the day, and [...] make us believe that they care about safety a little more." D: "...we got better tools, and I have the proper tools to work with and such [...] [the previous C.E.O] wasn't really one for repairing or doing any kind of work [...]. [The present C.E.O] is knowledgeable and seems to have more of a, he wants the cars to run smooth and such and

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	especially with the [safety incidents] and that, again the pressure is on.
		Addresses/meets safety concerns in a timely manner		B		B						B		B	B		B:"…the feedback that you get is definitely, if it's positive or I mean, I'm happy even with it being negative, but at least you get some information, get educated on the situation."
		Enforces safety rules		D								B					B: "they take corrective action and tell you" D: "I know he had a courier in Moncton, refused to let him back on the property because he was using a cell phone, driving on the road right so my view of him is strong"
		Rewards safety compliance				B	B					D		B			B: "...she hands him a hard hat and safety glasses and [the C.E.O] was very appreciative of it, he thought it was awesome, thought it was great that she did that. So I mean it could, these are his rules, right, he's the

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	company so these are the rules that he rolls out and he doesn't have a hard hat and safety glasses on, I would say that he would expect somebody to call him out on it." D: "...every year we get a safety bonus, it's, I believe it's in November it comes out and [the company] and the management of our terminal will purchase or give us x amount of dollars to spend as congratulations, we've made it another year."
		Ensures all levels of management practice safety leadership					D			D							D: "Yah it would be pretty, it would put a pretty bad taste in their mouth I would think if they seen somebody, a senior person, not following safety rules, specific safety rules but they are required to do this or they'll lose their job".
	Open Safety Leadership	Provides means for contact						B									B: "if we could see some of that stuff and maybe given a phone number even above or whoever is in charge of making the decision, like I'm sure he's probably a ways up the management pole so he doesn't want a bunch of phone calls from all these people but if we had some way of getting in touch with somebody

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	that's involved with the decision and see like what's their reasons..."
		Takes time to listen and considers suggestions before acting											B				B: "just listening and like not just being stuck on one certain way of doing something. Taking suggestions and taking a minute to actually go through different suggestions before taking action..."
		Open to receiving concerns, feedback, or questions	B				B					B	B	B			B: "that's kind of the way they receive it as well, like if there's something you don't like, please tell me and I will take care of it"
		Shares information about safety statistics and safety-related processes in organization		B		B			D		B		D				B: "they'll just show you like different incidents that we had and talk about them, how are we going to prevent this from happening again? Root causes of the accident, why it happened, it's usually broke down into every individual incident that happened. D: "when I did the peer education, I would get copies of all incidents in the east that happened and the reasons why..."

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
	Respectful Leadership	Demonstrates concern for the employee												B	B		B: "[the C.E.O] wants to talk about the person, not talking about the job, not talking about what happened yesterday or today, he will maybe at the tail end. [He wants to] find out about you, what makes you happy, what's your life story"
		Provides coaching and constructive feedback to employees				B	B	B									B: "I'd say that most of the time the message is a lot better than the action. It definitely is, I mean you can sit down and talk to somebody and encourage them not to do it again or explain why it happened or what could happen and instead of you know [unclear] give them, like you don't have your job, he leaves pissed off instead of concerned right."
		Maintains fair and realistic expectations						D		D	D						B: "I trust my managers to not put me in a situation that they wouldn't work in"
Consistency in Safety Leadership	**Sincere Safety Leadership**	Follows through on statements		B				B									B: "we don't see who else above him is involved in the decision or we rarely ever hear the outcome of the decision so, if we could see some of that stuff […] I'm sure it would kind of help the process anyway.

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
		Leads by example	B	B		B	B										B: "That's just one example, practicing what they preach, so actually they say they value safety and they put in all these rules, following those rules I guess, so if they're visiting a site maybe wearing the equipment that they're supposed to." D:
	Unwavering Position to Work Safely	Resolute in position to work safely	D						D								D: "I guess they don't compromise like the situation gets tough, they don't compromise and say o.k. well let's just do it this one time. It's always, they put their foot down and they say no this isn't safe we're not going to do it."
		Production pressure does not precede value for safety					D	D	D			D					D: "I've seen him shut down a [worksite] for unsafe working conditions for us right […] we shut these people down and that's big dollars right, I've seen him do that"
Allocates Money to Safety		Allocates money to repair, inspect, or purchase equipment or infrastructure			D		D	D					D				D: "I, all you know my cover-alls, boots, glasses, everything is paid by the company. Never an issue to get."
		Allocates money to safety training						D									D: "a company that was truly committed to safety I think they'd be a little more willing to spend the money needed on equipment or tools or

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	training. Training especially actually now that I think of it, on how to be safe, on proper procedures for things, stuff like that"
		Allocates money to safety programs/initiatives					D		D								D: I know they must support [the safety program], they're paying for it.
Policy/Procedure Reflects a Value for Safety	**Management of Safety is People Focused**	Implements policies and procedures focused on employee safety	D	D	D	D			D	D		D	D			D	D: "for the most part I mean they are good, they've got a lot of rules in place because something happened to somebody so they make sure it doesn't happen to anybody else."
		Implements new safety rules in response to accidents/incidents								D		D					D: "what it seems like if anything happens anywhere in the system, well we have a new safety rule. Well somebody got hurt in Calgary and o.k. well we're going to change the safety, this is the way it should be, which I understand."
	Safety is a Priority in Policies and Procedures	Ensures changes in safety functioning require a formal approval process at the executive level					D										D: "I mean like I said these are the rules, and I know that [the C.E.O] is involved on different committees like when there'd be a different procedure or safety rule

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	that would come out, that it has to go to him to be approved right, it just can't be, one guy, I can't just ask a guy o.k. can I do it this way now, it has to be, it has to go through the approval committee before we can change a process or procedure, so it goes right to the top..."
		Ensures positions within the organization are dedicated to safety										D					D: "Well their positions are about safety so I would say it's top priority for them."
		Memos and reports demonstrate a priority for safety	D				D		D			D			D		D: "...they try and send the message and like there's, the whole thing is based on you know either safety or employees and like, I don't know how accurate the information is in it, but they present it that it is about safety and it's a culture about safety and I mean that's a good thing."
Unengaged Safety Leadership	**Passive Safety Leadership**	Lack of safety knowledge					B	B	B		B				B		B: "he asked us what the rule of the day is, we have a rule of the day, every day, and he asked us but I don't think he knew himself right, you know what I mean, but it's true and they're really all like that. The only thing they have they just ask what's the rule of the day and you could tell

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	them anything, they'd say o.k."
		Does not visit the worksite						D									D: "...they don't see us so we might be a number on their page..."
		Does not speak about safety													B		B: "a lack of communication […] someone who never talks about safety…"
		Fails to ensure all levels of management engage in safety leadership													D	D	D: "Well, it trickles, it has to trickle down to right down through the senior VPs, down to the general managers, right down to the [supervisors] right. He can say all he wants as the president but he's not around all these small terminals to see what is underneath him. The managers are actually implementing what he says right, and they're not."
	Lack of Transparency in Safety Leadership	Lack of feedback regarding raised safety concerns		D				D				D	D				D: "I'd rather see that we're not having the finances, at least we have a reason to why it's not happening. We just don't hear anything."

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
	Lack of Respect in Safety Leadership	Disrespects employees						D									D: "We rarely hear directly from them, like it comes back to like (41:28) when they're hiding in the bushes watching us work, they'll be the one to put in the report and say that we were doing this unsafe, but they'll get one of their underlings to come out and talk to us later on"
		Punishes employees for safety incidents	D					D	D					D			D: "three incidents happened here[...] yesterday, there were two [incidents] and an injury. So right away the call comes down from senior management, a safety blitz. So now they'll be out nailing for all those things that they let go by for the last x amount of time, so yah, it's overlooked at times and other times it isn't, so that generally comes from a safety blitz."
		Maintains unfavourable or unrealistic expectations	D					D									D: "if they asked us to do some work that they wouldn't do themselves, it's kind of hard to see anyway but it's easy for them to say one thing and mean another. It's like oh yah we don't want you to do that work, it's unsafe but really they're pushing

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	the productivity envelope so much that it's like there's no other way for it to happen. If you want productivity, you're asking us to do this unsafely. "
		Does not trust employees							D							D	D: "Senior management did not believe that we could operate that well, so they sent in a testing team, very masterful drama out of Montreal and then a senior manager and superintendent and then a couple of other ones right, and they sent them in and we were 98% good so we proved that we could do it right. But they don't believe it right, so and that kind of undermines what you're doing..."
		Lack of compassion						D	D					D			D: : ...most everything that the company does is to look good for the shareholders and I think that's the way most companies are so yah they promote it, they don't want people to be injured but a lot of it is to look good for the shareholders. I think so, I think that's the main reason they promote it, is to look good.

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
Inconsistency in Safety Leadership	**Insincere Safety Leadership**	Does not lead by example	B	B		B	B				B		B				B: "...you know we all talk and did you see this manager he didn't have this on, he doesn't have that on, how come we got to have it on if they, and they're promoting and giving us a hard time about it..."
		Does not follow through on statements with action	D	D				D							D		D: "it comes down to them preaching the safety. If they're preaching the safety you should be able to go to them with a safety concern. It's just all concerns that we come up with, a lot of them are, never seem to be addressed, so. We tell them, but there just doesn't seem to be anything done about it. Some of the little easier things, yah they tend to get on to that pretty quick. Some things that take a little bit of a commitment on time, manpower, finances, rarely seem to get taken care of."
	Value for Production Exceeds Value for Safety	Pressure for work overrides value for safety		D	D	D		D	D		D			D		D	D: "I know a lot of senior management they like to preach safety but from my experiences, they like to preach it (21:28) until it starts slowing down production. That's when it seems to kind of go out the window and they're

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	oh don't worry about that, it's like this is what matters right now type thing, like. It's like they preach one thing one minute, and the next thing it doesn't matter, so."
		Turns a blind eye	D		D	D				D				D	B		B: "getting in and driving away from someone being unsafe, or they would not even talk about it. They change subjects when it comes to, a subject factor [about safety] D: "that would be very upsetting to me if I knew that senior management knew of certain [piece of equipment] or something that could blow up or whatever, or a [worksite] wasn't safe [...] they knew about it and they sent crews on it, that kind of thing."
Neglects to Allocate Resources to Safety	**Neglects to Allocate Money to Safety**	Neglects to allocate money to repair, inspect, or purchase equipment or infrastructure	D	D	D	D		D					D	D		D	D: "I would say the greatest disregard they show for safety is the fact with maintenance, like how they've cut back so much, they've cut back every department and they don't like keep things up, maintain. I would say that's where they show the greatest disregard, it's all about the shareholders and stock prices. Where do

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	they cut back? They cut back on maintenance. "
		Allocates money to purchase of small goods before allocating money to mitigate safety issues		D													D: "...we wanted that stuff fixed right, seemed pretty simple, they don't do it and then they go out and buy you know all these little stickers that they put everywhere that says you are responsible for your own safety. And I asked like how much they paid for it she said like $1000 or something, I said you could have used that to fix some lights right. We don't need stickers everywhere telling us what we already know right."
		Shuts down safety programs to reduce costs							D								D: "we've had numerous incidents with derailments in the last year or more (36:09), and that all costs us big dollars, and they recoup any way they can so they shut off this program, shut off that program, shut off that program, you have to recoup that money in order to keep your stocks going up, my view right but I was never told it was shut down because of the budget. That's my view"

Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
	Neglects to Allocate Manpower to Safety	Neglects to allocate sufficient manpower to ensure safe completion of tasks				D								D		D	D: "they try to run the company with as few employees as they can, as tight a ship as they can, so you know they don't, a lot of times they won't have any extra men around like an incident like that happens, they, if you can, they want you to finish..."
Policies and Procedures Counteract Safety Prioritization		Punitive process does not reflect a value for safety						D							D		D: "they have these things they call coaching letters, like they'll give you after they spot you doing something unsafe, you'll get one, although it might be a week later, saying that, like you were found doing something unsafe and this is basically an informal notice saying that you weren't doing it the proper way, but at the same time it goes on your permanent record. So they're saying it's an informal notice but it's still going on your permanent record..."
		Hiring process does not reflect a value for safety						D	D				D				D: "it's definitely looked at that way because they'll bring somebody in, when they hire people they won't necessarily hire within the company, they'll bring in somebody outside the company that

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Theme	Subtheme	Code	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	Example
																	may not be qualified for the position at all"
		Safety rules do not reflect a value for safety	D	D		D	D								D		D: "we have different rules for different people at different places, like I work for [my department], I have to wear a hard hat in the yard. [A different department member] comes in, I can be standing right beside like this [...] if I don't have my hard hat on I'm in trouble. You're not required to wear one."

Appendix I

Table of Responses for Indirect Message Source and Characteristics

	Source	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Indirect Message Sources	Information inferred from a lack of safety incidents/accidents at the worksite				x										
	Information inferred from experience at the worksite (e.g., supervisor and middle management leadership practices)	x	x		x		x	x				x	x		x
	Information/stories from colleagues				x					x					
	Information/stories from colleagues' experience/disposition				x						x				
	Information/stories from family								x						
	Information/stories from other informants (e.g., stranger)							x							
	Information/stories from supervisor/middle management	x	x	x			x				x	x		x	
	Online video media (online presentation by senior management)								x		x				
	Overheard information/stories (e.g., overheard phone calls)						x					x			x
	Printed article from organization (e.g., organizational magazine, newsletter, poster)	x	x	x	x	x	x	x	x	x	x		x	x	
	Printed media (e.g., news story in newspaper)										x				
	Written article on company website									x	x				
	Characteristic	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**	**P12**	**P13**	**P14**
Message Characteristics	Abundance of messages		x		x										
	Direct (message focused only on safety)				x						x				
	Indirect (message intertwined with other information)	x				x		x							
	Media (video)								x		x				
	Verbal (in person)	x	x		x	x				x	x				
	Verbal (over phone)					x				x		x		x	
	Written (addressed to many)	x	x	x	x	x	x	x	x	x	x		x	x	
	Written (for individual)						x								

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Table of Responses for Sender and Receiver Characteristics

	Characteristic	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Sender Characteristics	Ability to move on	x		x		x									
	Appreciative												x		
	Arrogant												x		
	Asks questions													x	
	Bull-shitter			x											
	Caring/compassionate/altruistic			x			x								
	Confident													x	
	Considers consequences before speaking	x													
	Credible													x	
	Engaged	x													
	Fails to take responsibility		x		x										x
	Fair													x	
	Friendly								x					x	
	Good communicator	x			x	x									
	Good listener														
	Good public speaker								x						
	Happy/smiling			x											
	Honest/genuine/authentic	x		x		x	x				x				
	Humble			x		x									
	Insecure												x		
	Lack of care/compassion					x									
	Lack of knowledge					x	x	x		x		x		x	
	Lack of relationship	x	x	x			x	x	x		x	x	x	x	
	Lack of respect	x				x	x								
	Likeness/Similarity													x	
	Looks out for you														x
	Open/approachable		x	x		x					x				
	Poor communicator				x										
	Professional								x						
	Relationship	x	x		x	x			x		x	x	x	x	
	Reliable		x												
	Respectful				x								x		
	Smart/knowledgeable	x		x										x	x
	Takes responsibility								x						
	Trustworthy												x		
	Unengaged					x									

	Characteristic	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Receiver Characteristics	Faith in accuracy							x							
	Information has a lack of meaning		x												
	Information is relevant/intriguing		x	x										x	
	Information is relevant/intriguing		x	x										x	
	Information not relevant		x												
	Information viewed negatively		x					x		x	x	x			x
	Lack of trust						x								
	Nervous				x										
	Questioning (source) accuracy	x	x	x	x			x		x		x			