The Competing Values Framework in the Norwegian Police: Paradoxical or Interacting?

The relationship between the CVF, Change Readiness and Training Climate in the Norwegian police

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Master's thesis in Psychology

UNIVERSITY OF OSLO

15.05.19

2019

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Abstract

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The Local Police Reform in the Norwegian police is a massive change process, and change efforts are still implemented. Interest in what facilitates effective change in the police is thus an important research topic. The following thesis investigated whether the four climate types of the Competing Values Framework could predict Change Readiness, and facet-specific climates. The relationship between Training Climate and Change was also investigated. This study is part of a long-term collaborative project between the Norwegian Police University College and the Department of Psychology at the University of Oslo. A self-report questionnaire was developed and data was collected in one police district prior to this thesis (N= 216). Structural equation modeling was used to investigate the relationship between variables, through 13 hypotheses. The results revealed that rational goal climate facilitated change readiness, while internal process climate was negatively associated with change readiness. Rational goal climate and human relations climate were positively associated with training climate, while the internal process model predicted training climate negatively. No indirect effects were found between the framework and change readiness, through training climate. This study suggests that rational goal climate is prevalent in the Norwegian police, and can help facilitate change readiness in the organization. Rational goal values might help the police organization transition into a learning organization. Finally, this study supports previous research suggesting an interacting relationship among the CVF quadrants.

Keywords: readiness for change, the competing values framework, training climate, police organization, learning organizations

Practical information: This study is part of a collaboration between the University of Oslo and the Norwegian Police University College. A web questionnaire was used to collect data, prior to this thesis.

Acknowledgements

This thesis is the result of a long-time collaborative research project between the department of Work and Organizational Psychology at the University of Oslo, and the research department at the Norwegian Police University College (NPUC). A big thank you to NPUC for providing me and my fellow students with office space.

Taking part in this project has been an enlightening and unforgettable experience, which wouldn't be possible without several people. First, I would like to thank my supervisor, Roald Bjørklund, for valuable insight and discussions, and for your encouragement and positivity. I am also very grateful for the methodological guidance of Knut Inge Fostervold, who has provided much-needed help with the many statistical challenges that emerged during the analysis. I would also like to acknowledge Aina Corneliussen and Marte-Lise Vilhelmshaugen, for your valuable support and feedback on this thesis. In addition, I would like to thank Kjersti Gravdal Steen for help with formatting. A huge thank you to my fellow project and office mates, for much appreciated and constructive discussions, laughs and support through occasional despair. I also need to thank my seven-year old MacBook for simply surviving this ordeal. Finally, a special thank you to my friends and family, for your support and encouragement throughout this process.

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A significant challenge for the police organization is that the operative environment is constantly changing. In recent years, new types of crime have emerged and criminal activity has become more organized and mobile (NOU2013:9, 2013). Additionally, technological innovations and international terrorism have contributed to the fast-changing and complex environment police organizations have to manage and cope with (Luen & Al-Hawamdeh, 2001; Yilmaz, 2013). These challenges require adaption and changes to the Norwegian police organization in terms of specialized competencies and skills, and new and alternative approaches to police work and systems (NOU2013:9, 2013). Furthermore, police organizations have changed from a place of emphasizing bureaucratic and archaic hierarchical values, to a focus on meeting the demands of the community and form a closer relationship with the public (Yilmaz, 2013).

In the aftermath of the July 22th terror attacks, the Norwegian police received considerable criticism, and subsequent evaluation of the event identified several flaws in how the police handled the crisis. Specifically, the evaluations pointed to problems with leadership, culture, coordination and cooperation, as well as an inability to learn from earlier mistakes (NOU2012:14, 2012; NOU2013:9, 2013). These inquires facilitated the implementation of a massive organizational restructuring of the police organization, the Local Police Reform (Nærpolitireformen). The reform, which is still being institutionalized, has resulted in a reduction of police districts, from 27 to 12 regional districts. In addition, the objectives of the reform is to facilitate knowledge-based police work, and putting stronger emphasis on "core values" (Difi, 2017; Gundhus, 2017). Thus, an important research subject is to investigate what constitutes effective implementation and institutionalization of the police reform. In this study, the concept of change readiness will be investigated, a concept that has been shown to predict successful organizational change (Armenakis, Harris, & Mossholder, 1993; Vakola, 2014).

This thesis will address the concepts of global and facet-specific climate, organizational change and training in the Norwegian police. To limit the scope of this thesis, one dimension of training climate was chosen to test its effect on Readiness for Change and its relationship with the Competing Values Framework. Previous research (Easterby-Smith, Antonacopoulou, Simm, & Lyles, 2004; Johnsen, 2018; Jones, Jimmieson, & Griffiths, 2005; Kværne, 2018) has implicated one or two climate types of the CVF to investigate its effects on change readiness. Thus, research connecting the entire framework to Readiness for Change is limited. Consequently, this study might be an important contribution to climate research, as it

implicates the entire framework, with the objective of accounting for global climate in the Norwegian police. In addition, the effects of global climate on facet-specific climate (Training Climate) will be investigated.

The study will first present relevant theories and related empirical findings. Specifically, a discussion of climate, the Competing Values Framework, Training Climate and Readiness for Change will follow. Next, the hypotheses will be presented, followed by a presentation of methods, results, implications, limitations and recommendations for future research.

Climate and Culture

In the organizational literature, the concepts of organizational climate and culture have suffered from conceptual and definitional overlap, thus making it difficult to clearly describe these concepts. Accordingly, Schneider, Ehrhart, and Macey (2013, p. 362) explain organizational climate and culture as "two alternative constructs for conceptualizing the way people experience and describe their work settings." Consequently, the terms have been used interchangeably in the organizational literature, which could be due to somewhat similar methodological approaches. Schneider et al. (2013) report an increase in survey measurement of the culture construct in the last two decades, whereas earlier research often has favored qualitative methods. Survey measurement is the preferred method for measurement of climate.

The distinction between culture and climate comes to light trough definitions of the constructs by Syvantek and Bott (as cited in Patterson et al., 2005), who conceptualize organizational culture as collective values and norms that influence employee interactions with peers, management and clients, while organizational climate can be understood as a behavioral expression of culture. Climate is a representation of how employees perceive policies, practices and procedures in the organization, and how these perceptions are reflected in employee behaviors and interactions. Similarly, Schneider et al. (2013) describe the emergence of climate in an organization as a process, where employees, through experience and observation, ascribe meaning to policies, practices and procedures. Finally, Kuenzi and Schminke (2009) distinguishes between climate and culture by arguing that organizational climate exists at the surface – and behavioral level, while organizational culture represents

assumptions more deeply embedded in organization. Consistent with these considerations, climate and culture will be viewed as distinct but overlapping constructs in this thesis.

Organizational Climate

Disagreement over construct conceptualization and operationalization is an issue in the climate literature, a concern which is thoroughly reviewed in Kuenzi and Schminke (2009). One issue is with the level of analysis, through the distinction between organizational climate and psychological climate. This entails whether organizational climate should be conceptualized at the unit level, as shared perceptions of work environment, or at the individual level, as a reflection on how an employee perceive and is impacted by their work environment (Kuenzi & Schminke, 2009). Another issue is whether climate research should capture the work environment through a wide range of characteristics, known as a general or molar climate. The principles underpinning the global climate approach is comparable to the principles of organizational climate, representing the set of global perceptions employees have regarding their organizational environment (James & Jones, 1974; Schneider et al., 2013). The alternative is to measure climate through facet-specific climates, which concentrates on specific behaviors or outcomes, such as safety or service climates. Global or molar climates are more strongly related to global outcomes, such as department performance (e.g. Kuenzi, 2008) while facet-specific climates are superior when it comes to predicting specific outcomes of interest (Schneider, Ehrhart, & Macey, 2011). For example, innovation climate has been shown to predict innovative behaviors (e.g. Anderson & West, 1998), and service climate has been linked to customer satisfaction (e.g. Gelade & Young, 2005).

Organizational climate is linked to organizational activities, and appears to mediate the relationship between organizational culture and organizational outcomes (Kuenzi, 2008; Kuenzi & Schminke, 2009).This study will take a global climate approach, and will therefore implicate a global climate scale to measure the impact of global climate on Readiness for Change. However, a facet-specific climate measure is also included in this study. Therefore, a second research objective is to investigate how facet-specific climate relates to the Competing Values Framework and Readiness for Change. A discussion on the Competing Values Framework will follow on page 5.

Police Culture

The Norwegian police received considerable critique in the aftermath of the terror attack on Norway on July 22nd, 2011. The commission entrusted with evaluating police efforts during the attack, identified several challenges and flaws in how the police force handled the situation. Specifically, several of the problems could be attributed to leadership, communication and coordination in the organization. The report also identified flaws in the ability to learn from training and identify risks, and to implement and execute plans. Additionally, it was pointed out that the police seemed unwilling to learn from mistakes, and that coordination and cooperation could be improved (NOU2012:14, 2012). Finally, the commission suggested that the operational failures before and during the attacks could be attributed to police culture and attitudes (Gundhus, 2017; NOU2013:9, 2013).

A number of definitions have attempted to encompass the concept of police culture. For instance, Manning (as cited in J. Chan, 1996), suggests that police culture comprises beliefs, practices, rules and principles for police conduct. Furthermore, police culture is recognized as a form of occupational culture, where the tasks and challenges relevant to the occupation influences values, rules and principles of conduct (Christensen & Crank, 2001; Gottschalk, 2007). The values and principles of police culture was reviewed by Christensen and Crank (2001), who identified themes such as secrecy, self-protection, uncertainty and preservation of respect. Additionally, features such as officer solidarity and support have been identified as key components of police culture (J. Chan, 1996; NOU2013:9, 2013). Police culture has been characterized as a combination of military principles and business organization principles (Christensen & Crank, 2001), with an emphasis on bureaucratic and archaic hierarchical values (Yilmaz, 2013). In recent years, changes have been implemented to make the transition from a police culture characterized by bureaucratic and authoritarian values to a culture characterized by democracy (Gottschalk, 2007; Puonti, 2004). In addition, police work has become more knowledge-based (Chen & Edgington, 2005), and places greater emphasis on interacting with and meeting the demands of the public (Yilmaz, 2013). However, one caveat regarding change efforts in police cultures is the argument that the culture in itself might be an obstacle for police reform (J. Chan, 1996), and that occupational cultures are quite difficult to change (Hofstede, Neuijen, Ohayv, & Sanders, 1990).

The Competing Values Framework

The Competing Values Framework (CVF) originates from Quinn and Rohrbaugh (1983), in an attempt to organize the literature on organizational effectiveness. Building on earlier literature, Quinn and Rohrbaugh identified three axes or value dimensions, comprised in a spatial model. The first value dimension is concerned with whether an organization has an internal or external focus (organizational focus), while the subject of the second dimension is structure – ranging from stability to flexibility. Finally, the third dimension is related to an organization's means and ends.

From these three axes, four different models of organizational analysis emerge (Figure 1). In the top left quadrant, with an emphasis on flexibility and internal focus, is the human relations model. Its counterpart, the rational goal model, emphasizes control and an external focus. The top right quadrant is the open systems model, with an external and flexible focus. Finally, the internal process model emphasizes control and internal focus. The quadrants in the framework that are placed diagonally from each other represents opposites, which entails that the human relations model stands in contrast to the rational goal model. Similarly, the open systems model is the counterpart of the internal process model. Correspondingly, the proponents of the CVF predict that the climate types in opposite quadrants will demonstrate negative correlations (Quinn & Rohrbaugh, 1981, 1983). Furthermore, the parallels in the model represents quadrants that share a common emphasis on one axis, but are separated by a different emphasis on the opposite axis.

The third value dimension of the Competing Values Framework describes the four models in terms of their valued outcomes and associated processes – how these preferred outcomes is achieved. The objective of the human relation model is human resource development, achieved through cohesion and morale, while the means of the rational goal model is productivity and efficiency, achieved through planning and goal setting. The intention of the flexible approach of the open system model is to achieve growth, while the internal process model is concerned with stability and control, which is achieved through information management and communication. The means – ends dimension of the CVF clarifies why each model is associated with a specific objective and subsequent implementation approach (Quinn & Rohrbaugh, 1983).

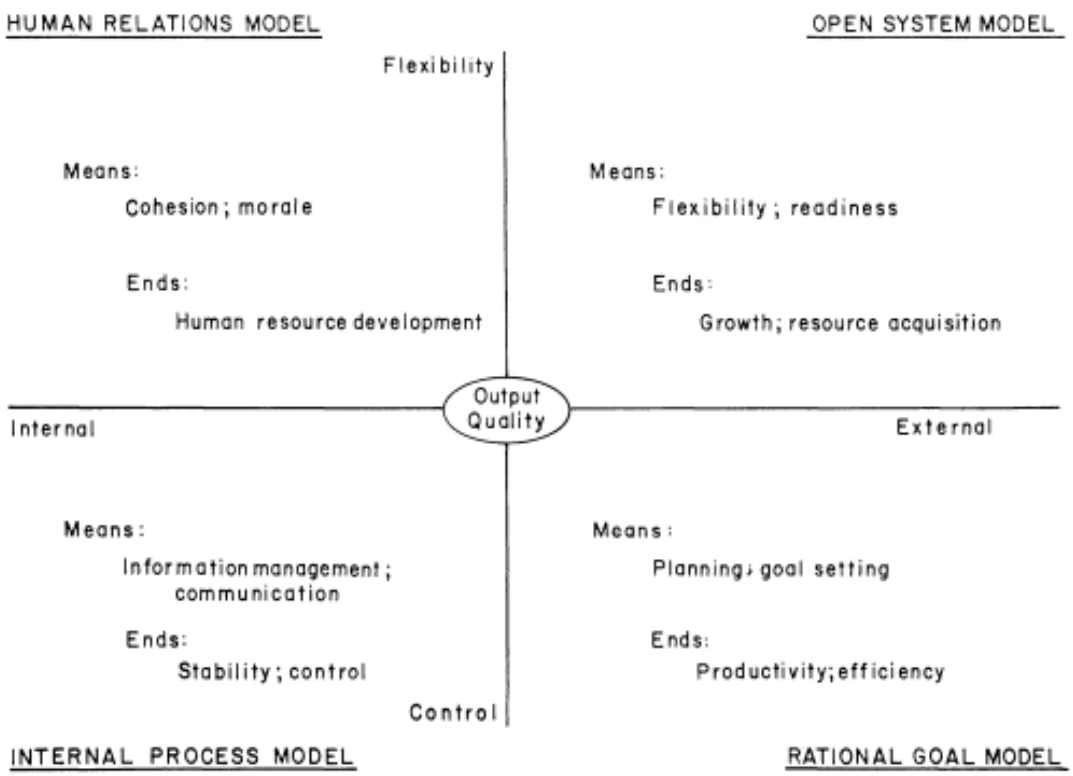


Figure 1. The Competing Values Framework. Obtained from Quinn & Rohrbaugh (1983).

The Components of the CVF

Human relations model. The underpinnings of the Human Relation Model are the emphasis on flexibility and internal control. This climate type is characterized by shared employee perceptions that favor cohesion, morale and human resource development. The focus of an organization characterized by a strong Human Relations climate is to facilitate positive working relationships among employees, as a means to expedite and maintain loyalty and contentment in the organization. Furthermore, the concern for employee welfare is reflected in the emphasis on recruitment and training efforts, and motivation (e.g. Kuenzi, 2008; Quinn & Rohrbaugh, 1983). In addition, Patterson et al. (2005), through their development of a multidimensional climate scale, identified seven scale dimensions assumed to resonate with the Human Relations Model. This is concurrent with, and expands the initial model of Quinn and Rohrbaugh (1983).These dimension are: employee welfare, job autonomy, participation, communication, a concern for training and development, trust and cooperation, and support and understanding from supervisors.

Internal process model. The Internal Process Model share the underlying value dimension of internal focus with the Human Relation Model, but in contrast, this type of climate is also characterized by control. This entails an emphasis on information management, stability and communication, and an organization with a strong Internal Process Climate will attempt to minimize impulses from the outside environment, to maintain tradition, rules and procedures (Kuenzi, 2008; Patterson et al., 2005; Quinn & Rohrbaugh, 1983).

Open systems model. In an Open Systems Climate, the shared perceptions of the organizations' members are growth, resource acquisition and external support. This CVF quadrant is characterized by flexibility, and an external focus. An organization with a strong Open Systems Climate will look to the external environment, and attempt to maintain congruence by adapting to externally imposed changes (Kuenzi, 2008; Quinn & Rohrbaugh, 1983). For the Open Systems Model, Patterson et al. (2005) identified dimensions reflecting values and norms such as flexibility and focus towards change, an environment encouraging innovation, orientation towards the market and customers, and reflexivity and adaptability.

Rational goal model. Finally, the Rational Goal Model emphasizes control and external focus in the framework. This quadrant emphasizes planning and productivity, especially in order to meet the demands of the external environment. Similarly to the Open Systems Model, it is important to adapt to the changing trends in other social systems. The control dimension of the quadrant also entails planning for potential new demands. The dimension scales associated with the Rational Goal Model are concerned with the importance of clarifying organizational objectives, goal orientation efforts, efficiency and productivity, quality and job performance feedback (Patterson et al., 2005)

The use and advantages of the CVF

Although the Competing Values Framework originally was intended to capture organizational effectiveness, subsequent research recognizes the framework as a model of organizational climate (e.g. Patterson et al., 2005) and culture (e.g. Hartnell, Ou, & Kinicki, 2011; Yu & Wu, 2009). The framework provides and understanding of how different perspectives and beliefs within an organization can impact its employees and managers.

The usefulness of the Competing Values Framework has been demonstrated through its broad applicability – the framework has been shown to predict global climate and facet-

specific climates (e.g. Colley, Lincolne, & Neal, 2013; Kuenzi, 2008). Furthermore, literature suggest that the CVF covers a wide range of organizational topics, including leadership styles, human resource development and the organizational lifecycle (Kalliath, Bluedorn, & Gillespie, 1999). Moreover, the framework has been frequently used to measure climate, as the CVF provided a much asked for organizational climate measure. In addition, it differs from former climate measures as it is grounded in sound theoretical and empirical assumptions. The Competing Values Framework has been shown to account for the dynamic nature of organizations, in addition to highlighting how organizational units differs in emphasis over time (Hartnell et al., 2011; Kuenzi, 2008; Patterson et al., 2005; Quinn & Rohrbaugh, 1981).

Furthermore, the CVF has served as a theoretical basis for the development of different scales with the objective of measuring global climate. For example, Patterson et al. (2005) comprised 17 dimensions, distributed across all four climate types, in the Organizational Climate Measure (OCM). The objective of the OCM was to address the range of dimensions associated with organizational climate, by placing each dimension under one of the four climate types of the CVF.

Kuenzi (2008) takes a different approach in her doctoral thesis, by proposing an integrated model that combines both global and specific climates, based on the Competing Values Framework. The creators of the OCM proposed that their measure would most likely be useful in measuring facet-specific climates by selecting dimensions relevant for specific outcomes (Patterson et al., 2005). In contrast, Kuenzi argues for a model of molar/global climate that can be measured directly, and found evidence for the possibility to operationalize and measure global climate. Furthermore, the combination of both general and specific climates, measured through an integrated model, was supported.

An important requirement regarding the CVF model, however, is to recognize that the model does not imply that an organization's values and beliefs will exclusively resonate with one type of climate. Patterson et al. (2005) argue that organizational views and perspectives will vary across all four domains of the CVF, as a reflection of competing viewpoints within an organization. Accordingly, it should be expected that organizations would emphasize elements from several climate types simultaneously, and that the CVF represents a topography of organizational climate.

Measurement: ipsative versus normative scales

Typically, the Competing Values Framework have been measured with ipsative scales, for example the Organizational Culture Assessment Instrument (OCAI) developed by Cameron and Quinn (1999). Measurement through ipsative scales usually requires respondents to choose between scenarios, and entails generating scores through forced-choice questionnaire formats (Baron, 1996). The scores of ipsative measurement are mutually dependent, which entails that low scores on one item typically means that another item will generate a high score. This allows the sum of the measures across variables to be constant (W. Chan, 2003). The use of ipsative scales in classic psychometric analysis is somewhat controversial, especially considering that ipsative measurement fails to meet the requirements of parametric statistics. Specifically, it is not possible to perform inferential statistics on this type of measurement, and it is thus impossible to draw conclusions regarding the null hypothesis (Baron, 1996). However, Cameron and Quinn (1999) argue that the use of ipsative scales for measuring the CVF is preferred, considering the "competing" relationship between the dimensions of the framework. Correspondingly, given the limited resources of organizations, placing emphasis on one dimension might entail placing less emphasis on another dimension.

Some studies (e.g. Koritzinsky, 2015; Kuenzi, 2008; Patterson et al., 2005) have used normative scales when measuring the Competing Values Framework, which is also what has been done in this study. A normative scale entails that respondents are free to rate all items freely, which is likely to produce smaller differences and higher correlations. Consequently, it would be expected that the four constructs in the framework would correlate, especially considering that most organizations emphasize values and perspectives from all four climate types. Correspondingly, Kuenzi (2008) reported high correlations between all four CVF constructs in her measurement of the framework. Accordingly, it is possible that the CVF constructs are not distinct, and thus could be measured through one general global climate measure. Correspondingly, Kuenzi (2008) investigated the possibility of a second order factor for the CVF through post hoc analysis, but found no evidence for a general global climate factor. A similar finding was reported by Kalliath et al. (1999). It was argued that a second order factor for the CVF could potentially misrepresent the framework, due to the aforementioned variation and degree of emphasis across climate types within organizations. Following this argument, it could be possible that the CVF constructs within a global climate factor would actually risk cancelling each other out, thus not reflecting how the four CVF

climates are emphasized within organizations (Kalliath et al., 1999; Kuenzi, 2008; Patterson et al., 2005)

Training Climate

The benefits of training in organizations have long been established in the organizational literature (for a thorough review, see Aguinis & Kraiger, 2009). In pursuance of adapting to a continuously changing work environment and increasing competition, it is imperative for organizations to invest in improving employee knowledge, skills and abilities (e.g. Kauffeld & Lehmann-Willenbrock, 2010). Given expectations of rapid technological development and increased emphasis on improving quality of services, it is likely that investment in training will be even more important in the future (Facteau, Dobbins, Russell, Ladd, & Kudisch, 1995). However, despite the evidence of training being beneficial and essential, it is important for organizations to thoroughly plan and evaluate training efforts. For the sake of this thesis, the concepts of "training needs analysis" and "training designs" (as components of the training cycle) will not be discussed. The following section will present a brief overview of the evaluation component of the training cycle.

An early and widely recognized approach to training effectiveness is the hierarchical four-level model of training evaluation: reaction, learning, behavior and results (Kirkpatrick, 1967, 1994). Assessment at the first level (reaction) is concerned with trainee perceptions of the training. According to Kirkpatrick, a determinant of effective training is favorable reactions from employees. The objective of the second level (learning) is to assess whether training efforts has resulted in employee skill and/or knowledge acquisition. Successful realization of the third level (behavior) entails that employees are able to transfer their acquired knowledge and skills to their job. Finally, the fourth level (results) is concerned with whether training efforts influences organizational outcomes, such as increased productivity, performance or overall organizational effectiveness. The focus of this is study is primarily related to the behavior and results levels. Specifically, it examines how the facilitation of transfer (Training transfer climate) impacts organizational outcomes (Readiness for Change).

The concept of successful training transfer requires employees to apply learned knowledge and skills to their job (e.g. Baldwin & Ford, 1988; Burke & Hutchins, 2007; Hatala & Fleming, 2007) The existence of a training "transfer problem" has been thoroughly documented in research (e.g. Baldwin & Ford, 1988). For example, Cromwell and Kolb (2004) reviewed literature on training transfer and found that only 10 to 15 percent of

employee training efforts result in transfer. Conversely, Saks (2002) reports that about 50 percent of training investments result in organizational or individual improvement. Findings such as these have resulted in a growing body of research that attempts to identify factors impacting transfer of training, from learner characteristics such as cognitive ability and self-efficacy, to intervention design and delivery. Baldwin and Ford (1988) suggested a framework of the training transfer process, consisting of three components: training input factors, training outcomes and conditions to transfer. Research on work environment characteristics have received considerable attention, and have fairly consistently yielded positive and significant results in terms of training transfer (Burke & Hutchins, 2007). Organizational climate and culture has been shown to affect post-training behaviors, and social support in particular appear to have an imperative influence on training transfer (Noe, 1986; Tracey, Tannenbaum, & Kavanagh, 1995)

Research on work environment variables that affect transfer is usually centered on individual variables such as supervisory support or opportunity to perform, or in aggregate such as a work environment or transfer climate factor(s). Several researchers (e.g. Rouiller & Goldstein, 1993; Schneider, 1985; Tracey et al., 1995; Tracey & Tews, 2005) suggest that individual and organizational outcome variables should be measured through different types of specific and criterion-related climate constructs. Tracey and Tews (2005), in their discussion of training climate, argue for a narrow definition and operationalization of climate constructs that is specifically related to the outcome variables of interest, consistent with research on facet-specific climates (e.g. Kuenzi & Schminke, 2009).

Rouiller and Goldstein (1993, p. 379) define "transfer of training climate" as "those situations and consequences which either inhibit or help to facilitate the transfer of what has been learned in training into the job situation." Research on and scale development of training transfer climate appear to be consistent with Rouiller and Goldstein's definition, emphasizing the importance of support from managers and peers, and performance evaluations as vital dimensions of transfer climate (e.g. Holton III, Bates, Seyler, & Carvalho, 1997; Tracey et al., 1995). The following section will briefly present suggested scales for measuring Training Climate.

Consistent with their definition of transfer climate, Rouiller and Goldstein (1993) proposed an eight-factor multidimensional model, consisting of dimensions measuring situational cues to transfer, and consequences of transferring. Their research findings revealed that their measure of transfer climate was significantly related to post-training behaviors. In

an attempt to validate the eight-factor model (Rouiller & Goldstein, 1993) and to establish an acceptable instrument of transfer climate, Holton III et al. (1997) developed the Learning Transfer System Inventory (LTSI). This scale consists of dimensions related to learner characteristics, a supportive work environment and training content and design (Holton III, Bates, Bookter, & Yamkovenko, 2007). Thus, while the LTSI primarily emphasizes individual-level motivational constructs, it also includes a measure intended to cover individual perceptions of a supportive transfer climate (peer support, supervisor support and supervisor sanctions). In contrast, Tracey et al. (1995) and Tracey and Tews (2005) argue for a measure of training climate that encompasses shared, aggregate-level perceptions exclusively about the work environment, and transfer of knowledge and skills relevant to the job. Their General Training Climate Scale was based on a review of climate, culture and training, and originally consisted of 24 items, catalogued into five dimensions: job challenge, supervisory support, managerial policies and procedures, and continuous learning culture (Tracey et al., 1995). However, subsequent research and factor analysis of the measure revealed a three-factor structure consisting of employees' perceived support from management, the job and the organization to update and develop their skills and competencies. Research implicating the General Training Climate Scale indicates that employees who perceive that they are being supported in updating their competencies and skills, will be more likely to transfer new knowledge to their job (Tracey et al., 1995; Tracey & Tews, 2005).

In this study, the Training Climate scale originates from The General Training Climate Scale, which consists of job, managerial and organizational support (Tracey & Tews, 2005). In addition, *Peer Support for Training* was included as a fourth dimension of Training Climate in the survey. Both Norwegian and international police culture is characterized by unity, camaraderie and loyalty among coworkers (Christensen & Crank, 2001; Difi, 2017). It is therefore likely that this type of support is prevalent in the Norwegian police, and might predict transfer of training better than i.e. managerial support, which is consistent with earlier research implicating these dimensions (Chiaburu & Marinova, 2005; Facteau et al., 1995). Peer support has been shown to be a significant dimension in several different measures of Training Climate (Holton III et al., 2007; Rouiller & Goldstein, 1993; Tracey et al., 1995). Furthermore, several researchers recognize training climate as shared perceptions of the social support structure that exists in an organization, a structure that consists of peer, supervisory and organizational support (e.g. Cheng & Ho, 2001; Hatala & Fleming, 2007).

Peer Support

General peer support, defined as the opportunity to receive advice from coworkers, has been found to positively influence job satisfaction, organizational commitment and internal motivation. In addition, there is evidence for a negative association between peer support and stress, burnout/exhaustion and turnover intentions (Humphrey, Nahrgang, & Morgeson, 2007).

Research on work environment characteristics that affect training transfer fairly consistently suggest that supportive peers helps employees transfer new skills and knowledge to their job (Birdi, Allan, & Warr, 1997; Clarke, 2002) In fact, there is evidence that peer support might have a greater impact on training transfer compared to the effects of supervisor support (Facteau et al., 1995). A study by Chiaburu and Marinova (2005) found no relationship between supervisor support and training transfer, while the relationship between peer support and training transfer was significant. In addition, support from peers seemed to have a positive effect on trainees' pre-training motivation, a characteristic that has been shown to affect training outcomes. Martin (2010) argues that the maintenance of well-learned skills usually fails without proper motivation to apply them, and that motivation is more dependent on support than trainer characteristics.

Finally, peer support for training has been found to diminish the effects of an unfavorable work climate on the transfer of new knowledge and skills. This finding provides a deeper understanding of how close and immediate factors, such as peer support, interact with more distant factors such as climate (Burke & Hutchins, 2007; Martin, 2010).

The Norwegian Police as a Learning Organization

The idea of a learning organization entails that organizations should function as dynamic systems that, in response to internal or external pressure, should continuously promote learning (Senge, 1990). It is argued that organizations that adopt the principles of learning organizations will more likely be able to develop flexible and adaptable systems that facilitate long-term performance (Senge, 1991). Organizational learning is assumed to be vital for organizational survival and competitiveness (Argyris & Schön, 1978), and learning is imperative to achieve positive economic and interpersonal results (Easterby-Smith et al., 2004). Furthermore, an important predictor of effective learning organizations is the ability to

plan and evaluate, as well as being market oriented (Argyris & Schön, 1978; Senge, 1990; Slater & Narver, 1995). One of the main objectives of The Local Police Reform (*Nærpolitireformen*) is the development and recognition of the Norwegian police as a learning organization (Difi2017:9, 2017; NOU2009:12, 2009; NOU2012:14, 2012; NOU2013:9, 2013). However, the 22th July commission pointed out several difficulties that might obstruct the development of successful organizational learning in the Norwegian police. Specifically, it was argued that the Norwegian police are unwilling to learn from mistakes, and that the capability for learning in general is low (NOU2013:9, 2013). Research by Henriksen (2014) found support for these considerations, contending that there is a lack of understanding regarding the necessity of learning and evaluation in the organization. Furthermore, she argued that the successful development of the Norwegian police organization might be contingent on the facilitation of principles consistent with a learning organization, such as planning, evaluation and continuous learning (Argyris & Schön, 1978; Henriksen, 2014; Slater & Narver, 1995).

Several studies support the notion that learning organizations must be facilitated by organizational culture. Stated differently, members of an organizational learning culture value learning and endeavor to perform,. Furthermore, they support the acquisition and sharing of new knowledge and competencies (Bates & Khasawneh, 2005; Tracey et al., 1995). These findings provide strong indication of a relationship between learning organization culture and training climate. As stated previously, organizational climate can be viewed as the behavioral manifestation of organizational culture, and is furthermore reflected in job-related attitudes and affective states. Correspondingly, employees who perceive their work environment to place value on continuous learning to promote performance, will be more likely to support training efforts and be motivated to learn (Bates & Khasawneh, 2005). The possibility of a relationship between organizational learning culture and training climate was investigated by Bates and Khasawneh (2005), who used several dimensions of the LTSI measure, including two task support elements, to assess training transfer climate. Their study indicated that a learning organization culture that value and emphasize learning as a means of promoting performance, is consistent with a supportive transfer climate. In addition, they found evidence for a mediating effect of transfer climate between a learning organizational culture and innovation. The authors argued the shared pattern of values and beliefs of a learning organization culture influences individual perceptions and behaviors, which is reflected in climate factors (Bates & Khasawneh, 2005).

Readiness for Change

Organizational change and development are widely studied phenomena in social sciences, and is continuously a topic of research interest as organizations face challenges due to globalization and technological advances. Some researchers suggest that these challenges requires organizations to bring about changes as often as every four or five years (Lewis, 1999). Consequently, research in the organizational change domain has attempted to identify what constitutes effective and successful change implementation. The rationale for interest in this topic also stems from research reporting that an alarmingly high number of change efforts fail, with several studies indicating that the success rate of organizational change is low, ranging from 40 to 20 percent (e.g. Beer & Nohria, 2000; Burnes, 2011). Several researchers (e.g. Eby, Adams, Russell, & Gaby, 2000; Tetenbaum, 1998; Vakola, 2014) argue that change efforts must be aligned with organizational characteristics and values in order to be successful. In addition, the failure to account effectively for employees in change efforts is often cited as the reason for organizations not being able to fully realize their efforts. Accordingly, several studies point to the importance of change recipients' reactions to change as an antecedent of successful organizational change (e.g. Bartunek, Rousseau, Rudolph, & DePalma, 2006; Oreg, Vakola, & Armenakis, 2011). One of the most recognized and vital precursors of successful change implementation is individual readiness for change, as it facilitates employee support for change (Armenakis et al., 1993; Holt, Armenakis, Feild, & Harris, 2007).

The definition of change readiness is postulated by Armenakis et al. (1993, p. 681) as an "organizational member's beliefs, attitudes and intentions regarding the extent to which changes are needed and the organization's capacity to successfully make those changes." This definition implies that readiness for change can be thought of as a reflection of employee motivation for oncoming change, which includes a cognitive evaluation preceding a behavioral intention to either resist or support change. The concept of change readiness is comparable to the concept of unfreezing, theorized by Lewin (1947). According to Lewin's change management model, successful change is only possible when an organization "unfreezes" from its current state, changing to a new status quo and then "refreezing" its changed state. The process of unfreezing is similar to change readiness in that it describes how the challenge of destabilization in an organization is necessary in order for employees to

perceive the need for change. According to Armenakis et al. (1993), a key component of change readiness is the perceived need for change. Additionally, Armenakis, Harris, and Feild (1999) also propose a continuous three-phase model of change. The objective of the first phase, the readiness phase, is to prepare organizational members for change and ideally gain their support for the change initiative. The second phase (adoption) entails implementing change and adopting new ways of operating. The third phase (institutionalization), is characterized by efforts to maintain the second phase with the objective of internalize the change effort. The focus of this study will be on the readiness phase of the change process. The Readiness for Change theory differs from the unfreezing theory in that it includes a second component: the organizations' perceived change capacity, which entails an evaluation of whether an organization has the capacity to bring about change (Armenakis et al., 1993).

Subsequent expansion of this theory (Armenakis & Harris, 2002; Armenakis et al., 1999) has identified five beliefs that can predict and create individual readiness for change: discrepancy, appropriateness, efficacy, principal support and personal valence. The first two beliefs are concerned with the perceived need for change, through the change message. In order for the change message to be effective, it must impart a sense of discrepancy, which entails that the message must convey that change is needed. Essentially, this usually requires an emphasis on the distinction between the organization's current performance and its desired end-state, in addition to contextual factors reflecting the need for change. Furthermore, the message must communicate that change is the appropriate reaction to a situation (discrepancy). Armenakis and Harris (2002) argue that although employees might perceive that change is necessary, they might have different ideas regarding suggestions of specific changes. Thus, the result might be that employees resist proposed change.

Additionally, the change message should motivate employees to perceive that they are capable of implementing change, known as efficacy (Armenakis, Bernerth, Pitts, & Walker, 2007). If employees perceive that taking part in in a change process will exceed their coping capabilities, they are unlikely to take any action related to the change process. In contrast, employees who believe themselves to be capable will undertake and perform the required activities (Bandura, 1977). This sense of efficacy can be strengthened (or weakened) by the fourth belief underlying individual change readiness – principal support. Successful organizational change requires that employees believe that their change efforts will receive support, resources and information from superiors and peers. If this is provided, employees are expected to perceive that they are able to implement change. Finally, the fifth change

message component is concerned with personal valence. According to Cobb, Wooten, and Folger (1995), employees facing organizational change will evaluate the potential negative and positive outcomes of the change, as well as the fairness of the change. Rafferty, Jimmieson, and Armenakis (2013) argue that an employees' appraisal of the costs and benefits of change regarding how it will affect their job will ultimately affect individual readiness for change.

The change context

A number of models and approaches have been suggested to facilitate the creation of change readiness and subsequent successful change implementation (Armenakis et al., 1993; Burnes, 2004; Lewin, 1947; Vakola, 2014). For example, the planned and emergent approach to change (Burnes, 2004) has received considerable attention. The planned approach to change recognizes organizations as stable entities, and that the implementation of new behaviors entails discarding old behaviors (Bamford & Forrester, 2003; By, 2005). The idea behind the planned approach is that organizational change entails going through several steps, in order to reach a desired objective which has been planned in advance (Van der Voet, Groeneveld, & Kuipers, 2014). Although this approach has received support in literature, it has been criticized for not accounting for external influences that might impact the organization's change objectives (Bamford & Forrester, 2003).

In contrast, in the emergent approach, organizations are viewed as entities that adapts to their ever-changing environment (Van der Voet et al., 2014). According to the emergent approach, organizations are subject to unforeseen, external events that might determine whether change efforts fail or succeed (Bamford & Forrester, 2003). Thus, while the planned approach fails to account for external influences, the emergent approach views organizational change as a process where the environment guides change efforts (By, 2005).

A combination of both the emergent and the planned approach was suggested in Burnes (2009) framework for organizational change. The framework serves as a guide for various approaches to change efforts, and accounts for the nature of the change effort and the context in which the change occurs. However, the framework does not account for the possibility of implementing several approaches to change within an organization. In addition, it fails to account for specific aspects of more complex organizational structures, such as in the Norwegian police.

Police reforms usually entails a number of changes, and Yilmaz (2013) contends that successful reform efforts are contingent on both internal and external factors that are deemed important for the organization. Specifically, the change approach should be customized to the organization (By, 2005), and it is thus imperative to consider both internal and external organizational context when implementing change (Yilmaz, 2013).

Development of hypotheses

Competing Values Framework and Readiness for Change

While previous research have implicated one or two climate quadrants to test their impact on Readiness for Change (e.g. Johnsen, 2018; Jones et al., 2005; Kværne, 2018; Motland, 2018), this study utilizes all four climate types to predict Readiness for Change. The implication of the entire framework is more likely to encompass more, if not the entire range of organizational climate in the police. This is also consistent with research by Hartnell et al. (2011), who argue that the interrelationships between the four quadrants rejects the idea of a "dominant" or salient climate/culture type. Furthermore, it has been suggested that the climate types of the CVF are more likely to coexist and interact, not compete, in organizations, as organizational climates emphasize unique aspects from each climate type (e.g. Denison & Spreitzer, 1991; Hartnell et al., 2011; Kuenzi, 2008; Patterson et al., 2005). By describing organizational climates based on a dominant climate type and ignoring the interaction between the CVF constructs (Hartnell et al., 2011) there's a possibility of not being able to account for the entire police organization. Thus, with the objective of accounting for the entire climate range in the Norwegian police, the entire framework will be used to measure its effects on change readiness and training climate.

Research on the association between the four climate types of the CVF and Readiness for Change is limited. However, several studies point to the influence of organizational flexibility on change readiness. For example, research by Zammuto and O'Connor (1992) indicated that organizations characterized by a flexible structure and a supportive climate were more likely to implement change successfully. The Human Relations Model and the Open Systems Model are both characterized by flexible policies and procedures, which has been linked to perceived organizational change capacity (Eby et al., 2000). In addition, organizations with strong human relations values are committed to developing and supporting their human resource base, and places great emphasis on communicating openly with

employees (Patterson et al., 2005). Support and communication are essential in predicting and creating change readiness, especially to help facilitate employee change efficacy (Armenakis & Harris, 2002). Indeed, Jones et al. (2005) reported a positive relationship between human relations values and readiness for change. This finding has been echoed in previous research investigating change readiness in the Norwegian police (Kværne, 2018; Motland, 2018) Thus, this study predicts:

H1a: There is a positive direct effect of the Human Relation Model on Readiness for Change.

Organizations that favor internal process values emphasize precise communication and information management strategies, with the objective of maintaining stability and continuity for employees. A focus on precise communication is likely to align with some components of an effective change message, in particular discrepancy and appropriateness.

However, there is reason to believe that internal process values are misaligned with employee perceptions of need for change and organizational change capability. First, Zammuto and O'Connor (1992) argue that organizations with control-oriented values are less likely to successfully implement changes. Second, employees in organizational climates characterized by bureaucratic values, which is assumed to be consistent with police climate and culture, are less likely to respond positively to organizational change (Yilmaz, 2013). Third, while precise communication might resonate with the change beliefs of discrepancy and appropriateness, there is reason to believe that internal process values might actually misalign with what usually constitutes discrepancy: external factors. Patterson et al. (2005) argues that organizations with internal process values will attempt to minimize or ignore external influences to maintain stability and tradition in the organization. Thus, this study predicts:

H1b: There is a negative direct effect of the Internal Process Model on Readiness for Change.

Similar to a Human Relations Climate, organizations with open systems values emphasize flexibility. Furthermore, the primary objectives typically associated with this quadrant are to facilitate growth, innovation and development, by adapting to external influences. In addition, open systems values align towards facilitating change (Kuenzi, 2008; Patterson et al., 2005) As previously noted, flexible organizational structures has been associated with successful change implementation (Zammuto & O'Connor, 1992).

The Norwegian police organization is under pressure to become more knowledge-based (Chen & Edgington, 2005), and the public expects a more service-oriented police force (Yilmaz, 2013). Furthermore, an important requirement of the Norwegian police reform the recognition of the organization as a learning organization (Difi, 2017; NOU2009:12, 2009; NOU2012:14, 2012; NOU2013:9, 2013). Implementing these changes aligns with the open systems values of adapting and responding to the external environment (Kuenzi, 2008). In addition, it is likely that the focus on innovation and organizational growth aligns with important aspects of the change message. For instance, by focusing the discrepancy between the organization and the external environment, and the appropriateness of change efforts (Armenakis & Harris, 2002). Thus, this study predicts:

H1c: There is a positive direct effect of the Open Systems Model on Readiness for Change.

The Rational Goal Model shares similarities with the Open Systems Model in that it also emphasizes responding to the external environment (Kuenzi, 2008). For the Norwegian police, this entails responding to new types of crime and technological innovations, as well as meeting the demands of and interacting with the public (Yilmaz, 2013). It is likely that adapting to these demands requires planning and goal setting, dimensions that are consistent with rational goal values (Patterson et al., 2005). Furthermore, having clear goals for the organization might also entail a focus on the discrepancy between the current status quo of the organizations, and its desired end-state, which is an important aspect of creating an effective change message (Armenakis & Harris, 2002). Zammuto and O'Connor (1992) argue that control-oriented organizations are less likely to implement change successfully. However, it is likely that the rational goal values of planning for external demands, having organizational objectives and facilitating productivity and efficiency are important predictors of change. Thus, this study predicts:

H1d: There is a positive direct effect of the Rational goal model on Readiness for Change.

Competing Values Framework and Training Climate (Peer Support for Training)

Research by Kuenzi (2008) provides some indication that the Competing Values Framework is associated with training climate. Her study found a strong relation between departmental training climate (a modified version of Tracey and Tews' (2005) organizational support dimension of their General Training Climate Scale) and Internal Process Climate. Furthermore, she found a moderate association between departmental training climate and

Rational Goal Climate. Kuenzi argues that these findings might be a result of how the items in the departmental (organizational) training climate scale are worded, which resonated particularly with specific CVF climate types. This suggests that specific dimensions from the General Training Climate Scale may be related to specific types of CVF climates.

Specifically, the values of the Human Relation Model should be particularly aligned with Peer Support for Training, as this quadrant emphasizes human resource development and training. Furthermore, human relations values are associated with facilitating positive relationships among employees, as well as providing a supportive work environment (Kuenzi, 2008). Thus, this study predicts:

H2a: There is a positive direct effect of the Human Relation Model on Training Climate (Peer Support).

Research by Kuenzi (2008) suggest that there might be a positive relationship between Internal Process values and Training Climate. Specifically, the Internal Process Model was found to predict organizational support for training, which in The General Training Climate Scale is related to rewards for knowledge acquisition (Tracey & Tews, 2005). Kuenzi (2008) argues that training is a formal and structural process, and thus contends that organizational support for training is related to internal process values. While the organizational support scale is more procedure-oriented, the Peer Support scale emphasizes positive relationships among coworkers. Although these scales are both intended to measure Training Climate, it is possible that they are somewhat conceptually different, which makes it difficult to predict, but conceivable, that internal process values might affect these dimensions differently. Correspondingly, imperative internal process values such as maintaining tradition, rules and procedures might be misaligned with the acquisition of new skills and competencies, if training efforts results in changes in procedures. Additionally, external influences such as new types of crime requires the Norwegian police to implement new specialized skills and competencies, as well as new approaches to police work and systems (NOU2013:9, 2013). Considering its emphasis on minimizing external influences, it is possible that an Internal Process Climate affects peer support for skill acquisition negatively in the Norwegian police. Thus, this study predicts:

H2b: There is a negative direct effect of the Internal Process Model on Training Climate (Peer Support).

Open Systems Climates encourages organizational growth, resource acquisition and innovation. Additionally, open systems values are aligned with a focus on maintaining

congruence with the external environment, and it is imperative to adapt to any changes from external influences (Kuenzi, 2008). The Norwegian police reform requires police officers to adapt to the external environment through the acquisition of specialized competencies and skills, in addition to implementing new and alternative approaches to police work and systems (NOU2013:9, 2013). In order to achieve and maintain new skills and knowledge, employees depend on the support from coworkers, as this has been shown to be imperative for the motivation to transfer (Martin, 2010). Thus, this study predicts:

H2c: There is a positive direct effect between of Open Systems Model on Training Climate (Peer Support).

Learning organizations are recognized as dynamic systems that respond to external and internal influences through the facilitation and support of continuous learning. In addition, learning organizations emphasize planning and evaluation to expedite efficiency and performance (Argyris & Schön, 1978; Senge, 1990; Slater & Narver, 1995). Bates and Khasawneh (2005) contend that an organizational learning culture that promote learning and acquisition of new skills is reflected in a supportive training transfer climate. In addition, training efforts has consistently been linked to increased performance and productivity (Aguinis & Kraiger, 2009; Bryan, 2006). Thus, rational goal values such as an emphasis on productivity, quality and efficiency (Patterson et al., 2005) should align with a facet-specific climate that supports the acquisition of skills and competencies to increase performance. In addition, it is imperative for the Norwegian police to support the acquisition of specialized competencies and skills as a means to respond and adapt to new types of crime (NOU2013:9, 2013). Indeed, market oriented values are an important characteristic of learning organizations (Slater & Narver, 1995), and is also consistent with rational goal values (Kuenzi, 2008). Thus, this study predicts:

H2d: There is a positive direct effect of the Rational Goal Model on Training Climate (Peer Support).

Training Climate (Peer Support) and Readiness for Change

Research by Pedersen (1999) revealed a positive relationship between readiness for change and organizational learning climate. The Organizational Learning Climate Scale (Bartram, Foster, Lindley, Brown, & Nixon, 1993) contains seven subscales, some of which might resonate with the Peer Support dimension of Training Climate. High scores on the subscale “Team Style” is an indication of an environment characterized by opportunities to

learn and receive support from colleagues, in addition to sharing information. The subscale "Autonomy and responsibility" reflects whether an employee is given the freedom to take charge of their own learning, while the subscale "Contentedness" is a measure of the social work environment. Pedersen found that employees with high scores on the Organizational Learning Climate Scale were more likely to expect that their employer would be able to successfully implement change. Pedersen argues that a work environment that encourages and supports employees in their efforts to learn and develop is likely to strengthen employee self-efficacy, which also might help them feel more prepared for change. This is also consistent with two beliefs assumed to predict and create Readiness for Change: efficacy and principal support. Specifically, Armenakis et al. (2007) emphasize that the change message must facilitate employee perceptions of being able to implement change. This sense of efficacy is in turn is affected by perceptions of support, resources and information from management and peers.

Previous studies have yielded some support for a link between general social support and readiness for change. A study by Cunningham et al. (2002) demonstrated relationship between social support (a measure consisting of both supervisor and colleague support) and readiness for change. Although these variables were found to only be weakly correlated, the authors argued that support from coworkers is paramount in facilitating coping with the stress of organizational change. Furthermore, several studies have demonstrated the link between training and organizational change. For example, Kappelman and Richards (1996) found that training gave employees a sense of empowerment and motivation, which in turn helped them feel more prepared for and satisfied with current change in their organization. Additionally, Jacobs (2002) argue that effective change implementation and institutionalization requires new and updated competencies to meet new expectations. Finally, Schraeder, Tears, and Jordan (2005) contend that training might facilitate a sense of participation in the change process. Thus, this study predicts:

H3: There is a positive direct effect of Training Climate (Peer Support) on Readiness for Change.

Indirect effects

Based on the previous discussions that argue in favor of a relationship between the components of the CVF and Readiness for Change, the CVF and Training Climate and Training Climate and Readiness for change, the following is hypothesized:

H4a: There is a positive indirect effect between the Human Relation Model and Readiness for Change, through Training Climate (Peer support).

H4b: There is a negative indirect effect the between the Internal Process Model and Readiness for Change, through Training Climate (Peer support).

H4c: There is a positive indirect effect between the Open Systems Model and Readiness for Change, through Training Climate (Peer support).

H4d: There is a positive indirect effect between the Rational Goal Model and Readiness for Change, through Training Climate (Peer support).

Method

The project

This study was conducted as part of a collaboration between the Work and Organizational Psychology group at the Department of Psychology at the University of Oslo, and the research department at The Norwegian Police University College. The objective of the collaboration is to investigate the relationship between organizational climate and organizational change.

Data collection

Data was collected prior to this thesis, over two weeks in May 2018. The survey was distributed through an online questionnaire and consisted of 146 items, in addition to items on demographics such as age, gender, tenure and service unit (e.g. investigation or operative unit).

Sample

An invitation to complete the survey, along with information from the unit leader for the district (Politimester) and the project manager, was sent out to 1005 employees in one police district in May 2018. 216 employees completed the survey, indicating a response rate of about 21 percent. However, considering that inactive employees received the survey, as well as employees on vacation and on short-term sick leave, it is likely that the response rate is somewhat higher. 43 percent of the respondents were female. About 29 percent of the respondents reported that they had some form of managerial responsibility.

Measures

Six different scales were used in this study for measuring the constructs of interest: human relation model, internal processes model, open systems model, rational goal model, co-worker support for training and readiness for change. The peer support measure has been developed especially for this study. All the measures were rated on a 5-point Likert scale, ranging from definitely false (1) to definitely true (5). The middle value (3) was "neither true nor false", which allowed for neutral responses. Some of the questions in the survey were negatively worded; these were reverse coded in the analysis. For a full list of the items used in this study, see Appendix 1.

Competing values framework. The items that make up the Human Relation (HR) Model, the Internal Process (IP) Model, the Open Systems (OS) Model and the Rational Goal (RG) Model in this thesis are obtained from Kuenzi (2008). The Work and Organizational Psychology research group at the University of Oslo has translated the scale, originally 7-point Likert scales. Furthermore, Koritzinsky (2015) validated the scale as part of an instrument with the objective of measuring police climate. The translated scales all originally consisted of eight items for the HR model, and seven items for the IP model, OS model and RG model. Examples of items from each CVF quadrant are: *"We develop supportive, positive work relationships at our unit"* (HR), *"Generally, established guidelines and procedures govern how we solve our job responsibilities at our unit"* (IP), *"We are flexible enough to assume new assignments as they arise at our unit"* (OS), and *"It is important that the employees at our unit plan for the future"* (RG).

Training climate (peer support). The scale used to measure peer support for training was developed especially for the survey used in this study, as a fourth dimension of training climate. (The three other scale dimensions are managerial support, job support and organizational support). The scale consisted of five items. One of the questions originates from the initial General Training Climate Scale developed by Tracey et al. (1995): "*Coworkers encourage each other to use new knowledge and skills on the job."*

Readiness for change. The items that make up the Readiness for Change scale originally consisted of seven items. Six of these items were developed by Vakola (2014), and

were translated and validated by Koritzinsky (2015). The final question of the Readiness for Change scale, *"I am confident that I will be able to quickly adapt to changes in my unit",* originates from Holt et al. (2007), and was included to examine change efficacy.

Preliminary analysis

As recommended by Kline (2011), a brief preliminary analysis was conducted in preparation of the SEM analysis. The preliminary analysis was conducted using IBM SPSS Statistics 25.0. First, the data was evaluated for normality, examining the degree of skewness and kurtosis. Kline (2011) recommends that the absolute value for problematic skewness and kurtosis should be >3.0 and >10.0, respectively. None of the indicators from the data had values indicating problematic skewness or kurtosis. In addition, the data was assessed for linearity and collinearity, by examining the scatterplots between the sum scores of each construct, and the variance inflation factor (VIF) values, respectively. Both were satisfactory.

Structural Equation Modeling

The 13 hypotheses were examined and tested by using structural equation modeling (SEM). The objective of a SEM-analysis is to determine whether a hypothesized theoretical model reflects the observed data (Lei & Wu, 2007). This procedure allows for testing of multiple relationships between latent variables simultaneously. SEM-analysis is a combination of confirmatory factor analysis and regression analysis (Schreiber, Nora, Stage, Barlow, & King, 2006) and allows for better estimates of effect sizes between constructs, as it controls for the unique variance in indicators not attributable to their common latent factor. The software IMB SPSS AMOS 25.0 was used to conduct the SEM-analysis. In order to obtain the 95 % confidence interval of the effects, maximum likelihood estimation and bootstrapping were used.

Bootstrapping is a nonparametric resampling procedure, frequently used to test mediation that does not impose the assumption of a normal distribution in the sample. The procedure involves repeatedly sampling from the data set, and entails estimating the indirect effect in each resampled data set. By repeating this process a thousand times, it produces an approximation of the distribution, which is used to make confidence intervals for the effects. This method is often preferred over the Sobel test or causal test approach, because it has

higher power and maintains more control over the Type 1 error rate (Hair, Black, Babin, & Anderson, 2014; Kline, 2011; Preacher & Hayes, 2008)

A vital part of the conduction of the SEM-analysis is to split the theorized model into a measurement model and a structural model. While the measurement model ascribes the relationship between indicators and their respective latent factors (know as a confirmatory factor analysis), the structural model describes the relationship between the latent factors (the hypothesized relationships) (Hoe, 2008; Kline, 2011).

By using several estimates from the SEM-analysis, it is possible to evaluate how well the theorized model fits with the observed data. The overall model, or global fit, is inspected by using different goodness-of-fit (GOF) indices, which all indicate how well the model is able to reproduce the observed covariance matrix (Lei & Wu, 2007). For this thesis, the following indices are used: chi-square, CFI, RMSEA and SRMR are used, as recommended by Kline (2011).

The chi-square ($\chi 2$) index is used to assess the absolute fit by evaluating whether the specified model is significantly different form the observed covariance matrix. A non-significant chi-square ($p>.05$) indicates a good fit. It can be difficult, however, to obtain a good model fit, as the chi-square index is very sensitive to sample size and models with many indicators (Kline, 2011).

The Comparative Fit Index (CFI) is an index ranging from 0 to 1, where values closer to 1 indicates a good fit. The CFI examines how well the specified model fits the observed data compared to a null model where all the indicators are uncorrelated. A CFI close to .95 indicates good global fit (Hu & Bentler, 1999).

The Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Residual (SRMR) both indicate badness-of-fit, where values close to zero indicates good absolute fit (Schreiber et al., 2006).

In addition to global fit, local fit of the theorized model must be examined to identify potentially problematic parts of the model that should be modified. Whereas global fit indices give an indication of the overall fit of the model, local fit indices help specify parts of the model that can be adjusted to achieve better global fit. To determine poor local fit, the factor loadings, modification indices and standardized covariance residuals are examined (Hair et al., 2014; Kline, 2011).

Reliability and validity

Reliability describes the extent to which a variable consistently measure what it is intended to measure. In a SEM-analysis, internal consistency is estimated by calculating the scales composite reliability (CR). CR represents the ratio of explained variance over total variance, and values from .70 are usually deemed acceptable (Hair et al., 2014). Furthermore, to achieve internal consistency, correlations between constructs should not be above .85.

Composite reliability is also a measure of a scale's convergent validity (Hair et al., 2014). Validity describes the extent to which the scores measure what they are indented to measure. Correspondingly, validity is also concerned with whether measures or scores do not measure anything they are *not intended* to measure. These assumptions are reflected in construct validity, which consists of convergent validity (meaning that a particular construct should share a substantial amount of variance) and discriminant validity (the construct should be distinct from other constructs). To determine discriminant validity, the correlations between constructs are inspected (Hair et al., 2014). Another indicator of convergent validity is the average variance extracted (AVE). AVE values above .50 are considered acceptable indication of convergent validity (Henseler, Ringle, & Sarstedt, 2015). Finally, discriminant validity was determined by inspecting correlations between constructs in the measurement model.

Sample size

Recommendations regarding acceptable sample size for conducting a SEM-analysis vary (Hair et al., 2014). An important prerequisite of the SEM-analysis however, is that the analysis requires somewhat larger sample sizes compared to other types of multivariate analyses. This is largely due to the algorithms and programs used to conduct a SEM-analysis, addition to avoiding error and bias, which smaller sample sizes are prone to be affected by (Kline, 2011)

A sample size of N: >200 are often recommended for a SEM-analysis, while Hair et al. (2014) suggests a minimum sample size of 100 for models with five or fewer constructs. An alternative approach is to consider ratios, for example having 5, 10 or 20 as many observations compared to variables. The ratio for this study is approximately 5:1, which meets the minimum requirement recommended by Hair et al. (2014), although a bigger ratio is preferable (for example 10:1). Hence, the results of this study should be interpreted with caution, considering that the sample size only meets the minimum ratio requirement.

Ethical considerations

The information collected for this study was anonymized. The project was reported to and approved by the Norwegian Centre for Research Data (NSD) in September 2017. All participants received an e-mail with information about the purpose of the study and how the data would be processed and stored. Furthermore, it was communicated that participation in the study was voluntary, and that the content disclosed by the participants would not be traced back to them.

Results

Preliminary and descriptive analysis

The means, standard deviations and zero-order correlations of the six constructs are presented in Table 1. All the constructs demonstrated weak to large correlations. Readiness for change was the only construct that demonstrated weaker (<.30) correlations with several constructs (human relation model, internal process and co-worker support). All the variables had a mean above the response scale center (3).

Table 1

Mean (M), Standard Deviation (SD), Cronbach's Alpha (α) and Zero-Order Correlations for all constructs

Construct	M	SD	α	1.	2.	3.	4.	5.	6.
1. Human Relation	3.846	.635	.866	1					
2. Internal Process	3.679	.690	.876	.792**	1				
3. Open Systems	3.757	.639	.883	.774**	.761**	1			
4. Rational Goal	3.437	.688	.868	.745**	.783**	.785**	1		
5. Training Climate	3.756	.609	.735	.577**	.489**	.619**	.616**	1	
6. Readiness for Change	3.775	.586	.853	.265**	.262**	.363**	.404**	.281**	1

Note. N = 216

**Correlation is significant at the 0.01 level (2-tailed).

Hypothesis Testing – Structural Equation Modeling

Measurement model. The first step of the SEM-analysis is to conduct a confirmatory factor analysis, to establish a measurement model. The initial analysis included all the items (Model 1 in Table 2), but did not meet all the criteria for good model fit. To achieve better model fit, several steps and alterations are suggested. First, the factor loadings were examined. Bagozzi and Yi (1988) argue that items with factor loadings under .50 should be removed from the measurement model. Two items in the model had factor loadings under .50: CHA4 and TRA4. Upon inspection of these items, it appeared that they were somewhat conceptually different from the other items in their respective component. Item CHA4 "*I think I am more prepared to accept changes than other employees at my unit"* differs from the other items in that it requires the respondents to compare themselves to other employees. Item TRA4 "*When my immediate manager adopts new or updated competencies, it is often met with skepticism from employees"* appears conceptually different from the other items. The item is concerned with whether employees support their immediate manager in developing and updating skills and competencies. In contrast, the remaining questions from the scale focus on how employees support their co-workers in developing and updating skills and competencies.

Furthermore, after examining the modifications indices in AMOS' text output, several error terms of some items were allowed to covary. As these items had similarly worded phrases and/or were in consecutive order, it is reasonable that they shared some unique variance due to their similarity. However, acceptable fit was not achieved after altering the model based on AMOS' suggestions (see Model 2 in table 2).

The following estimation of the modified structural model revealed several (six) Heywood cases, suggesting problems with multicollinearity in the dataset/sample. Heywood cases in a SEM solution imply error variance estimates of less than zero. Thus, it also suggest that more than 100 percent of the variance in an item or construct is explained (Hair et al., 2014). The paths considered problematic had regression weights ranging from + 2.83 to – 2.54, and involved every component from the Competing Values Framework, except the Open Systems Model (see Appendix 3). This suggests a serious problem with the theoretical model. A possible solution to this problem is to examine whether there is problematically high covariance between variables that are not supposed to correlate. In this sample, the covariances between the components from the Competing Values Framework were all over the recommended value of > .80 (Kline, 2011). To determine whether particular items were

contributing to these high covariance values, an exploratory factor analysis (EFA) was conducted in SPSS. A total of six analyses were conducted in which each construct was paired with another construct to detect items with potential cross loadings or other statistical issues.

The pattern matrices (Appendix 4) revealed that some items consistently loaded higher to other factors than the ones originally hypothesized, based on the theoretical model. From the construct measuring the Human Relations Model, two items consistently displayed high cross-loadings: HR7 and HR8. The first six items in the scale is assumed to measure how employees co-operate and relate to one another. In contrast, items HR7 ("*Every organizational employee has an opportunity for development at my unit"* and HR8 ("*Every organizational employee has an opportunity for professional development at my unit")* are not related to how employees interact on the job, but rather if employees are given the chance to grow in the organization. Thus, it can be argued that these items appear to measure something different than the other six items, which explain why these items consistently showed lower factor loadings.

From the Internal Process Model scale, three items were considered problematic in the EFA, due to high cross-loadings. These were IP5 ("*Employees at my unit have a reputation of doing their job efficiently"),* IP6 ("*We consistently perform work of high standards at my unit)* and IP7 ("*We work to achieve maximum efficiency at my unit").* These items seem to reflect how employees in an organization view their work duties in terms of productivity and effectiveness. However, the remaining four items in the IP scale appears to measure how guidelines and rules govern employee responsibilities.

Table 2

Measurement model Goodness of Fit statistics

Model	χ2	df	χ2/df	CFI	RMSEA [CI]	SRMR	Comments
1	1715.242	764	2.245	.816	. 076 [.071, .081]	.074	*All items are included*
2	1242.682	682	1.822	.887	.062 [.056, .067]	.063	*Items CHA4 and TRA4 are excluded*
3	745.820	479	1.557	.931	.051 [.051, .058]	.054	*Items CHA4, TRA4, IP5, IP6, IP7, HR7, HR8 and OS7 are excluded*

Finally, one item from the Open Systems Model was also viewed as problematic in the pattern matrices. This item, OS7 (*"Employees at my unit are encouraged to find new solutions to problems"),* inquires about how the organization supports its employees in realizing and developing their responsibilities. However, the remaining six items does not include questions about involvement from the organization or its managers, but rather about the existing behavior of employees.

It is worth noting that some of these items have been problematic in other samples. In previous research, items HR7, HR8 (e.g. Kværne, 2018; Motland, 2018) IP5, IP6 and IP7 (e.g. Kværne, 2018) have been removed from the structural model. It is therefore highly likely that these items *are* measuring a separate construct, considering their tendency to load on separate factors.

After identifying the items assumed to be problematic in terms of multicollinearity, the measurement model was again inspected for global fit. First, the aforementioned items were removed, in addition to the items with factor loadings under .50 (CHA4 and TRA4). The modification indices in the AMOS text output revealed that only the error terms belonging to RG1 and RG2 had a high value. These error terms were thus allowed to covary in the

measurement model. The model was once again evaluated for global fit, and revealed that all the fit indices had satisfactory values (model 3), indicating good fit.

In summary, the specification of the measurement model in the SEM-analysis involved some difficulties. The second model (see Table 2) revealed several Heywood cases among the CVF constructs, and an exploratory factor analysis was conducted to remedy the multicollinearity issue. This resulted in the removal of several items from the CVF constructs, after which acceptable model fit was achieved (Model 3).

Reliability and validity. Composite reliability (CR) was above .70 for all constructs: Human Relation Model CR= .85, Internal Process Model CR = .88, Open Systems Model CR= .88, Rational Goal Model CR= .87, Readiness for Change CR= .86 and Peer Support for Training CR= .72. Correspondingly, convergent validity was satisfactory for all the scales. However, while the CVF constructs and Readiness for Change all displayed acceptable AVE values, the AVE value for Training Climate (Peer Support) was lower than the cut-off of .50 (AVE = .40). This suggests that there is more error variance than explained variance for this construct, and thus variance for these items do not sufficiently converge into a single construct. Nevertheless, Fornell and Larcker (1981) argue that an AVE value of .40 can be accepted, given that construct composite reliability is above .60. The CR for Peer Support for Training was above this value, and thus the convergent validity of this construct is still adequate.

After modifying the measurement model, it should be noted, however, that the correlations between the CVF constructs were still quite high (ranging from .62 to .85), which indicates issues with discriminant validity. Nevertheless, to maintain content validity in the constructs, and to be able to test the entire framework, it was decided to keep the remaining items in the measurement model. Thus, it should be recognized that the discriminant validity in this model is not optimal, and could pose a serious limitation to this study.

Structural model. After demonstrating acceptable fit for the measurement model, the next step of the SEM-analysis is to specify the structural model. This is achieved by introducing the paths among the latent variables as specified in the hypotheses. The second structural model revealed that some of the paths had regression weights approaching zero. Specifically, the paths between the Human Relation Model and Readiness for Change and the Open Systems Model and Readiness for Change showed insignificant regression weights

close to zero. These paths may represent noise in the model, and their interference with the contributions from the remaining constructs limits the explanatory power of these constructs (as expected from a SEM-analysis model). Thus, by controlling for the contributions of HR and OS by setting the regression weights of these constructs to zero, the number of estimated parameters is reduced. This is consistent with the parsimony principle, which suggests that between two models with similar fit to the same data, the preferred model is the simpler one. Additionally, this will also increase degrees of freedom, which increases the possibility of retaining a model (Kline, 2011) (see Table 3).

Table 3

Structural model Goodness of fit statistics

Model	χ2	df	χ2/df	CFI	RMSEA [CI]	SRMR	Comments
4	745.873	481	1.551	.931	. 051 [.043, .058]	.054	*Items CHA4, TRA4, IP5, IP6, IP7, HR7, HR8 and OS7 are excluded. Regression weights for HR and OS → Change are set to zero.*

The complete theorized model, along with its measurement and structural elements, is displayed in Figure 2. The estimates between the latent variables and the indicators are interpreted as standardized regression coefficients (β), the estimates between the latent variables and the indicators are factor loadings and the estimates connected to the double-headed arrows are correlations.

Direct and indirect effects

Table 4 displays the direct, indirect and total effects of this study. The relationships between Rational Goal and Change Readiness and H1d: β =.794) and Internal Process (H1b: β

-.393) were found to be significant. In addition, there was a significant direct effect between HR and Training Climate (H2a: β =.612), IP and Training Climate (H2b: β = -.563) and RG and Training Climate (H2d: β =.854). A significant effect between Training Climate and Readiness for Change was not found, and thus, no indirect effects were detected.

Table 4

Estimates of Direct, Indirect and Total Effects between Latent Variables

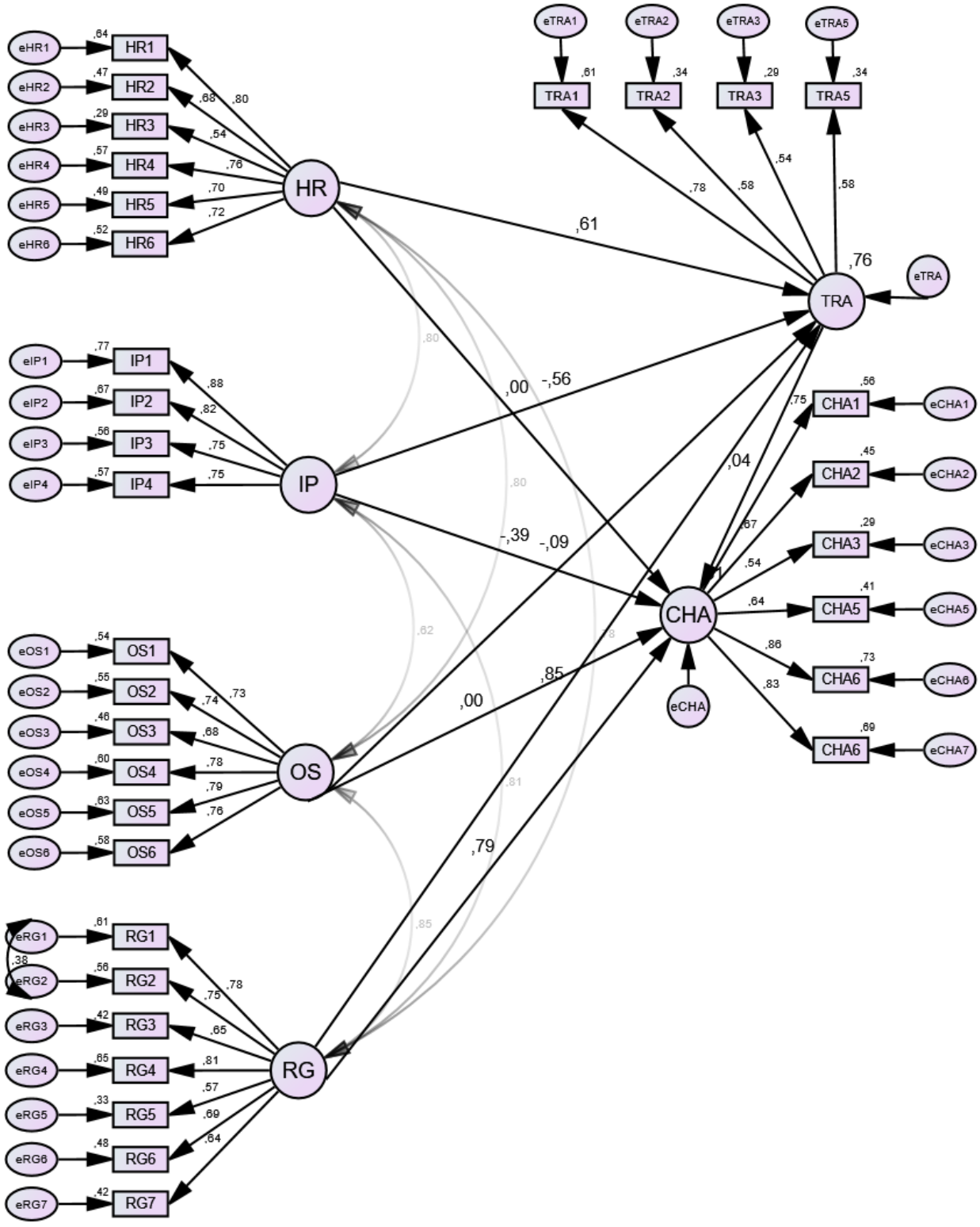
	Endogenous Variables						
	Training Climate			Readiness for Change			
Causal Variables	b	SE	β	b	SE	95% CI	β
Human Relation							
Direct	.506*	.429	.612*	.00	-	-	-
Indirect (by TRA)	-	-	-	.018	.139	[-.284, .376]	.024
Total	.506	.429	.612	.018	.139	[-.284, .376]	.024
Internal Process							
Direct	-.391*	.373	-.563*	-.249*	.134	[-.793, -.002]	-.393*
Indirect (by TRA)	-	-	-	-.014	.118	[-.377, .310]	-.022
Total	-.391	.373	-.563	-.263	.141	[-.802, -.028]	-.415
Open System							
Direct	-.095	.715	-.086	.00	-	-	-
Indirect (by TRA)	-	-	-	-.003	.150	[-.236, .191]	-.003
Total	-.095	.715	-.086	-.003	.150	[-.236, .191]	-.003
Rational Goal							
Direct	.757*	.580	.854*	.644**	.294	[.191, .1.480]	.794**
Indirect (by TRA)	-	-	-	.027	.231	[-.517, .478]	.033
Total	.757	.580	.854	.671	.193	[.456, 1.175]	.827
Training Climate							
Direct	-	-	-	.036	.237	[-.464, .455]	.039

Note. 95% CI = confidence intervals for unstandardized coefficients. SE = Standard error for unstandardized coefficients. Displaying unstandardized coefficients: b and standardized coefficients: β

*Coefficient significant at .05 level

**Coefficient significant at .001

Figure 2: Structural model



Discussion

The objective of this thesis was to examine the relationship between the Competing Values Framework, Training Climate (Peer Support) and Readiness for Change in the Norwegian Police. Specifically, it was investigated whether the four components of the Competing Values Framework directly affected peer support for training and readiness for change. 13 hypotheses were derived and presented in a structural equation model.

The first group of hypotheses were concerned with the relationship between the four components of the Competing Values Framework and readiness for change. Hypothesis 1a stated that the Human Relation Model would directly and positively predict readiness for change. The Open Systems Model and the Rational Goal model was also expected to have a positive direct effect on readiness for change, as stated in hypotheses 1c and 1d, respectively. Furthermore, it was assumed that the Internal Process model would negatively and directly predict readiness for change, as stated in hypothesis 1b. The analysis revealed that the regression weights between the Human Relation Model and Readiness for Change and the Open Systems Model and Readiness for change were close to zero, and not significant. Consistent with the parsimony principle, these values were fixed to zero in order to reduce noise and increase explanatory power for the model. The relationship between the Rational Goal Model and Readiness for Change, with a standardized regression coefficient of $\beta = .79$, was revealed to be significant. This result indicates that a Rational Goal climate, characterized by goal achievement, effort and quality, might help employees feel more prepared for change. In addition, the relationship between the Internal Process Model and Readiness for change was significant. As hypothesized, The Internal Process Model predicted Readiness for Change negatively (H1b: $\beta = -.39$). This result indicates that an Internal Process climate, which is characterized by tradition and the maintenance of rules and procedures, will most likely minimize the pressure from external forces to change and innovate, which in turn will decrease Readiness for Change. Accordingly, hypotheses 1b and 1d were retained.

The second group of hypotheses concerned the relationship between the Competing Values Framework and peer support for training. Parallel to the hypotheses concerning the relationship between the CVF and readiness for change, it was predicted that the Human Relation Model, the Open Systems Model and the Rational Goal Model would all affect Peer support for training positively and directly. Furthermore, it was assumed that the Internal Process model would predict peer support for training in a negative direction. The analysis produced significant coefficients for the Human Relation Model ($\beta = .61$) the Internal Process

Model (β = -.56) and the Rational Goal Model (β = .85). Consequently, Hypothesis 2a, 2b and 2d were retained. This suggest that both Human Relation values and Open Systems values are important for the acquisition of skills and knowledge, and for facilitation of training transfer. Conversely, Internal process values appear to be misaligned with perceptions of a supportive training climate.

Hypothesis 3 suggested that peer support for training would positively and directly predict readiness for change. It was theorized that if employees are encouraged by their peers to develop their competencies and skills, it could help them feel better equipped and ready for change, especially considering that organizational change may require new skills and competencies. However, the analysis revealed that the regression coefficient between peer support for training and readiness for change was close to zero (β = .04), and the regression coefficient was not significant.

Finally, the last group of hypotheses suggested that all four components of the Competing Values Framework would indirectly affect Readiness for Change through peer support for training (hypotheses 4a to 4d). Specifically, a positive indirect effect was predicted for the Human Relation Model, the Open Systems Model, and the Rational Goal Model, while a negative indirect effect was predicted for the Internal Process Model. The standardized regression coefficients were all close to zero, and were also not statistically significant, which indicates that there are no indirect effects between the Competing Values Framework constructs and Readiness for Change, through Training Climate.

In summary, these findings in this study indicate that two types of climate are influential in terms of helping employees in the Norwegian police feel ready for organizational change. Specifically, a Rational Goal Climate appears to facilitate Readiness for Change, while an Internal Process Climate appears to decrease Readiness for Change. In addition, this study provides evidence that the Competing Values Framework influence how employees support each other in updating their competencies and skills. Peer support for training appears to be positively influenced by Human Relations Climate and Rational Goal climate, and negatively influenced by Internal Process Climate. Finally, no evidence was found for a relationship between Peer Support for Training (Training Climate) and Readiness for Change, and correspondingly, no indirect effects were found between the Competing Values Framework and Readiness for Change through Peer Support. These findings have interesting theoretical and practical implications.

Implications

Theoretical implications

Overall, this thesis contributes to psychological research, and research on the Competing Values Framework, by demonstrating that parts of the framework can facilitate Training Climate (Peer Support) in the Norwegian police. The results of this study thus support Kuenzi (2008) prediction that an integrated model of molar climate is associated with facet-specific climates.

Furthermore, this study provides an answer to the call of using the entire framework to test its climate-impact on Readiness to Change. Specifically, the inclusion of all four climate types is more likely to capture the entire organizational climate range in the Norwegian police (e.g. Johnsen, 2018; Koritzinsky, 2015; Kværne, 2018). Additionally, Hartnell et al. (2011) argue that the interaction among the quadrants in the framework is more likely to reflect the entire organization. This rejects the idea of a "competing" climate/culture type, with most organizations emphasizing aspects from the entire framework. The results of this study support the recognition of the framework quadrants as coexisting and interacting, rather than competing.

The CVF and readiness for change. The results of this study revealed that the Rational Goal Model strongly predicts Readiness for Change in the Norwegian police. Although this type of CVF climate is characterized by control (an orientation which has been argued by Zammuto and O'Connor (1992) to predict organizational change failure) it is likely that its external focus plays an important role in this relationship. Specifically, the dimensions that resonate with the Rational Goal Model aligns with the ideal of a police force that interacts with and meets the demands of the public (e.g. Salmi, Voeten, & Keskinen, 2005). Additionally, as the environment in which the police operate changes, and new types of crime emerge (NOU2013:9, 2013; Yilmaz, 2013), it is imperative that the organization has clear goals and plans to meet these external challenges. Rational goal values such as having a clear vision for the organization in terms of the discrepancy between the current situation and desired end-state, might be an important aspect of creating readiness for change (Armenakis et al., 1993)

Conversely, the negative relationship between Internal Process Climate and Readiness for Change is consistent with how this climate type emphasizes adherence to established rules, guidelines and procedures. Consistent with the emphasis on tradition regarding how things are done in the organization, and attempts to minimize or ignore external influences (Patterson et

al., 2005), an Internal Process Climate is likely to negatively influence Readiness for Change. Furthermore, Zammuto and O'Connor (1992) report that employees in organizations with control-oriented values are more likely to resist change.

This study found no evidence for a link between Human Relations Climate and Readiness for Change, and Open Systems Climate and Readiness for Change. Conversely, both the Internal Process Model and the Rational Goal Model appeared to have an effect on the endogenous variable. The explanation for this finding may be due to the high correlations between the CVF constructs. These correlations suggest that there are problems with multicollinearity in the model. In a SEM-analysis, multicollinearity increases the risk of making Type II errors. Type II errors entails concluding that there is no relationship between variables, when in fact a relationship actually exists. The risk of making this error increases when exogenous variables display high correlations with each other, as the unique contribution of each variable will be close to zero. When the common contribution of two variables is controlled for in a SEM-analysis model, one of these variables will display non-significant regression weights and/or regression weights close to zero (Grewal, Cote, & Baumgartner, 2004). The Human Relation Model and the Internal Process Model share an underlying value dimension, internal focus, in the Competing Values Framework (r = .81). Similarly, the Open Systems Model and the Rational Goal Model have the value dimension of external focus in common (r =.85). Thus, it is likely that when the unique contributions of the Internal Process Model and the Rational Goal Model are controlled for in the analysis, there is no explanatory power left for the remaining constructs. Consequently, it is possible that both a Human Relations Climate and an Open Systems Climate does affect Readiness for Change, even if a relationship between these variables were not detected in this study.

In this study, it was predicted that a Human Relations Climate would positively predict Readiness for Change. However, there is also a possibility of a negative relationship between these variables. Hartnell et al. (2011) report that the cohesiveness of a strong HR climate might facilitate groupthink, which can obstruct opportunities for innovation and changes. This is also consistent with the internal focus dimension of a Human Relations Climate. Thus, although issues with multicollinearity in this study made it impossible to detect any effects of HR Climate on change readiness, it should be noted that there is a possibility of a negative relationship between these variables.

The CVF and training climate. The findings concerning the relationship between the Competing Values Framework and Training Climate is consistent with research by Kuenzi (2008), who used her integrated model to predict facet-specific climates, among them Training Climate. The results indicated that three of the four CVF climate types predicted Training Climate, which supports previous research suggesting that the framework can predict facet-specific climates (e.g., Kuenzi, 2008)

Three of the four hypotheses concerning the CVF and Training Climate were supported. The positive relationship between the Human Relation Model and Training Climate is to be expected, considering the emphasis this quadrant places on human resource development, training efforts, and positive relationships between employees. Although Kuenzi (2008) reported that she found no association between Human Relations Climate and Training Climate (Departmental support), she argues that the items in the scale were more related to the procedure-oriented aspects of Internal Process and Rational Goal Climate. Conversely, the items reflecting the Peer Support scale appear to be more directed at human resource development and cohesion among employees (Patterson et al., 2005).

Furthermore, (Kuenzi, 2008) predicted that an Internal Process Climate might be associated with Training Climate, considering that training might be viewed as a formal and structured process. This finding was not supported in this study. However, the consideration that there might be conceptual differences between the organizational support and peer support dimension might explain the negative association between IP and peer support for training. Furthermore, it is possible that the perception of climate differs at the organizational and employee level, and across organizational units (Koritzinsky, 2015). Employees might believe that internal process values such as minimizing external influences and upholding and maintaining traditional procedures (Patterson et al., 2005)obstructs support for the acquisition of new skills and competencies in the Norwegian police.

The positive relationship between the Rational Goal Model and Training Climate in the Norwegian Police is consistent with how this climate type emphasizes efficiency, performance and productivity. In addition, it resonates with the recognition of the Norwegian police as a learning organization. By definition, a learning organization can be thought of as a dynamic system that facilitates and supports learning as a means to respond to external influences (Senge, 1990). A clear vision and objectives that aligns with an understanding of the market, helps organizations learn and adapt, which is consistent with optimal and effective planning in learning organizations (Slater & Narver, 1995). An important aspect of the Police

Reform is that new types of crime requires specialized skills and competencies (NOU2013:9, 2013). Finally, the market orientation values of the Rational Goal Model is consistent with the objectives of developing learning organizations (Kuenzi, 2008; Slater & Narver, 1995)

Finally, a relationship between the Open Systems Model and Training Climate was not detected in this study. A positive association was expected due to the open systems values of growth, innovation and development. However, it cannot be ruled out that the undetected relationship is the result of multicollinarity. Hence, the unique contributions of the three remaining climate types might have diminished the explanatory power of the Open Systems Climate (Grewal et al., 2004).

The competing values framework. In this thesis, there is no indication of a competing relationship between the quadrants in the CVF, a finding which is also supported in literature (e.g. Hartnell et al., 2011; Kuenzi, 2008). This is most likely due to the use of normative scales in this study, and measurement through ipsative scales would most likely produce different results. A possible problem with measuring the CVF through ipsative scales is that the forced-choice format constrains intercorrelations, and thus creates artificial interdependence between constructs (Baron, 1996). Hence, it is possible that ipsative measurement would misrepresent organizational climate in the Norwegian police, considering that most organizations place emphasis across all quadrants at the same time. By using normative scales in this study, the interactions between the quadrants is considered (Hartnell et al., 2011) which might account for the entire range of the climate in the Norwegian police.

Furthermore, the strong intercorrelations among the CVF climate types does suggest that global climate could be measured as one general climate construct, as opposed to having four measures of climate. However, the differing effects of the climate types on the endogenous variables (i.e. the positive relationship between RG climate and change readiness, and the negative relationship between IP climate and change readiness) indicate that a second-order structure could potentially undermine findings and the frameworks' impact on i.e change readiness (Kalliath et al., 1999; Kuenzi, 2008).

Training climate and readiness for change. In this sample, no evidence was found for a connection between Peer Support for Training (Training Climate) and Readiness for Change. Although several studies (e.g., Kappelman & Richards, 1996) have demonstrated a positive relationship between organizational change and training, this connection does not appear to

transfer to the relationship between Training Climate and Readiness for Change. However, this is concurrent with the literature on facet-specific climates, which reports that facet-specific climates primarily only predict outcomes related to the domain of the climate type (e.g. Kuenzi, 2008). Additionally, this finding explains why no indirect effects was detected in this study.

Nevertheless, it should be noted that training, and being supported in training efforts, might be important later in the change process. Jacobs (2002) contend that the acquisition of new skills and competencies is imperative for successful implementation and institutionalization of organizational change. According to Martin (2010), effective motivation to transfer and maintain new skills and knowledge is largely dependent on support from coworkers. Finally, Cunningham et al. (2002) argues that support from coworkers is paramount in facilitating coping with the stress in the implementation and institutionalization of the change process.

Practical implications

The practical implications in this study primarily concern the facilitation of change readiness, and how to successfully implement change and learning organization values in the Norwegian police. First, measures should be taken to implement the best approach to organizational change in the police. This study revealed that the Rational Goal Model might be the best predictor of change readiness in the Norwegian police. This entails adapting to the demands of the external environment, and having clear goals through the change process, as well as planning for possible changes in the environment (Kuenzi, 2008). Thus, it is possible that Rational Goal values should be important determinants of change in the Norwegian police organization, and that these values are imperative at this particular time of the reform process. Although this implies that a planned approach to change is advantageous for the Norwegian police, flexibility should also be considered. Change readiness might not rely on particular constructs or values at any given time during the change process, but may vary depending on the context in which the change is implemented (Burnes, 2004, 2009). Correspondingly, Yilmaz (2013) argue that reform efforts should be tailored to the organizational change context, which requires analyzing and identifying what facilitates change in a specific organization.

Second, this study supported findings suggesting that supporting employees in their efforts to train is an important aspect of the development of learning organizations (e.g., Bates

& Khasawneh, 2005). Although this study did not implicate the learning organization approach directly, there is reason to believe that characteristics of organizational climate might facilitate aspects of learning organizations. Specifically, the relationship between the Rational Goal Model and Training Climate suggests that planning and evaluation are important in the development of learning organizations. In order to develop specialized skills and competencies to respond to external demands, new perspectives must be considered in terms of planning and evaluating training efforts. In addition, it is paramount that the acquisition and maintenance of specialized skills and competencies is supported in the organization and among employees, to facilitate adaption to the new challenges Norwegian police officers face in their working environment. In terms of facilitating training transfer, flexible policies, human resource development and cohesion should be emphasized in the Norwegian police. This might help employees achieve successful implementation and maintenance of skills, which is an important requirement in the Police Reform.

In summary, the findings in this study suggest that Rational Goal values are important determinants of successful change in general in the Norwegian police. In addition, Rational Goal values should be emphasized as to facilitate the recognition of the police as a learning organization.

Limitations

The present study has several limitations that need to be addressed. First, this is a cross-sectional study, meaning all variables are measured simultaneously and only once, which makes it impossible to draw causal inferences regarding the relationship among variables. These findings are primarily concentrated on the status of the organization in the reform process at the moment the data were collected, and should not be interpreted as a static indicator of the organizational climate, training transfer, or readiness for change. Although the findings in this study demonstrate indications of a relationship between these variables, it does not account for confounding variables (Mann, 2003).

Second, the validity and reliability of self-report measures can be threatened by Common Method Variance (CMV), which refers to method bias causing uncontrolled and/or random variance to be combined with the systematic trait variance of a construct. This suggests that the variance detected in this study might be due to the fact that all constructs were measured using the same method (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). For

this analysis, all the data was collected using a self-report measure, which can be prone to potential biases and limitations. For example, social desirability bias is a common source of CMV in self-report measures. Social desirability bias refers to the tendency for respondents to answer questionnaires in a way that presents them in a favorable light, which could impact the effects between variables. However, while this problem may arise in surveys intended to measure individual behavior or personality (Podsakoff et al., 2003), it might not be an issue in this study. This is because the scales in this study encompass the behavior and intensions of the organization, and not individuals. Another source of CVM that might be an issue in this study is acquiescence bias, which refers to the tendency "for respondents to agree (or disagree) with statements independent of their content" (Podsakoff et al., 2003, p. 882). This type of bias might cause spurious relationships between constructs (Podsakoff et al., 2003) and might be an issue in this study, given the length of the questionnaire.

Third, the data used in this study comes from a self-report web survey of considerable length. The survey consisted of 146 items, in addition to items about demographic variables. A number of studies on questionnaire length suggest that longer surveys are associated with lower response rates (Galesic & Bosnjak, 2009; Heberlein & Baumgartner, 1978). Furthermore, respondents appear to process items close to the end of a long questionnaire differently compared to items at the beginning of the survey. Specifically, the last items of a questionnaire are more prone to "don't knows", and uniform answers. Given the length of this survey, the risk of response fatigue is conceivable, which may have affected the quality of the responses (Galesic & Bosnjak, 2009).

The Competing Values Framework

Three issues must be addressed regarding the findings concerning the Competing Values Framework. First, previous studies have requested research implicating the entire framework to test its effect on change readiness, which was done in this study. Specifically, it was argued that the entire framework might account for the entire range of climate in the Norwegian police. However, due to the issues with multicollinearity in the model, it was impossible to draw any conclusions concerning the effects of Human Relations Climate and Open Systems Climate on Readiness for Change when the entire framework was implemented. It is possible that these constructs are affected by Type II errors, and future research should account for and remedy multicollinarity issues, if testing the entire framework on an outcome variable.

The second issue is whether the Competing Values Framework is suitable for measuring climate in the Norwegian police. The framework was originally developed to measure effectiveness in competing organizations (Quinn & Rohrbaugh, 1981, 1983), and might thus not be applicable for the Norwegian police, as it is not a competing organization. However, it is imperative for the police to adapt to the expectations of the public, which relates to the Rational Goal Model. This study found evidence for a relationship between Rational Goal values and Change Readiness (and Training Climate), which suggests that this type of climate is prevalent in the Norwegian police. This indicates that the CVF accounts for climate in the Norwegian police.

Finally, it should be noted that several items from the CVF measure was removed in this study. Specifically, several items was removed from the Human Relations scale (HR7 and HR) and the Internal Process Scale (IP5, IP6 and IP7), which is consistent with previous findings in other samples (Johnsen, 2018; Kværne, 2018). This suggests that these items are conceptually different from the remaining items. The HR7 and HR8 items appear to be related what is referred to as "means", while the removed IP items appear to be targeting "ends" (Quinn & Rohrbaugh, 1981, 1983). Contemporary scales measuring the CVF do not account for the means-ends dimension (Cameron & Quinn, 1999), and this raises questions of whether they should be included in the scales. Nevertheless, due to the exclusion of these items, the results in this thesis should be interpreted carefully.

Readiness for Change

Two limitations should be considered regarding the Readiness for Change scale used in this study. First, consistent with the comments on questionnaire length and response fatigue, it is possible that the responses to these items produced lower quality data. The seven items in this scale are the very last questions in the distributed survey, and answers on this scale may thus be of lower quality, due to boredom and response fatigue (Galesic & Bosnjak, 2009).

Second, while the first six questions in the Readiness for Change scale in this study originates from Vakola (2014), and was translated and validated by Koritzinsky (2015), the scale also contains a seventh item, which is adapted from Holt et al. (2007). The entire measure should be validated again to determine whether this question brings something different to the scale.

Training Climate

The Peer support scale used in this study was developed especially for the survey. While the original General Training Climate scale included question targeting peer support (Tracey et al., 1995), subsequent validation and factor analysis resulted in the convergence of three factors: managerial, job and organizational support (Tracey & Tews, 2005). The inclusion of a Peer Support dimension in the survey might be useful considering that this type of support might be especially prevalent in the Norwegian police. However, the analysis revealed that the validity value of this scale close to unacceptable. While the translation of the entire General Training Climate Scale might be somewhat different from the original due to context, the entire translated scale should be investigated to determine whether these scales converge into four distinct factors.

Generalization

Finally, issues with the generalizability of these findings must be addressed. The findings in this study only cover one out of 12 police districts, and it is thus difficult to determine whether these findings are applicable to the entire organization. As pointed out by Koritzinsky (2015), different sub-climates may exist within the police organization, and it cannot be ruled out that the findings in this study are not transferable to other police districts. Furthermore, given the distinct nature of police culture, which is greatly influenced by its occupational tasks and challenges (Christensen & Crank, 2001), it is difficult to generalize these findings across organizations.

Future research

Some considerations should be made considering future research, based on the findings and limitations in this study. First, consistent with the findings of Eby et al. (2000), Tetenbaum (1998) and Vakola (2014), future research should investigate whether the Local Police Reform aligns with employee perceptions of values and characteristics of the Police organization to determine if the change effort has been successful. Specifically, these authors argue that organizational change is only successful if it is consistent with the values and characteristics (i.e. climate and culture) of the organization.

Second, the variables implemented in this study should be subject to other research methods, such as longitudinal studies, to determine potential causality, which was not possible in this study. Furthermore, a mixed-methods approach might provide a deeper

understanding of perceptions of climate in the Norwegian police, and how climate relates to the reform process.

Third, this study did only account for one police district (out of twelve), which limits the generalizations of these findings. Future research should attempt to implicate several districts, to determine whether there are differences in perceptions of climate across districts in the organization.

Finally, while the findings of this study supported the idea that the constructs of the Competing Values Framework are interacting, rather than competing (Hartnell et al., 2011), using normative scales might have facilitated this finding. Comparing ipsative and normative scales, using the same sample might be interesting to further determine whether these values are paradoxical or interacting.

Conclusion

This study provides an answer to call of implicating the entire Competing Values Framework to test its effects on Readiness for Change in the Norwegian police. In addition, it inspects the relationship between the framework and Training Climate.

In the aftermath of the terror attacks on Oslo and Utøya on the 22th of July 2011, the police was subject to massive critique regarding how they managed the internal crisis. Evaluations of the incident pointed out problems with leadership, planning, cooperation and communication as reasons for operational failure during the attacks. These considerations facilitated a large-scale organizational change in the Norwegian police, the local police reform. This reform reduced the number of police districts from 27 to 12, and emphasized the importance of specialized competencies and skills, as well as new and alternative approaches to police work and systems. The ongoing reform process is highly relevant for research, as it raises questions regarding what constitutes effective organizational change in the police. This study investigated the impact of climate on change readiness, an important antecedent of successful change (Armenakis et al., 1993; Holt et al., 2007). The results provided interesting findings in terms of what predicts readiness for change in the Norwegian police. Specifically, the study suggests that a Rational Goal Climate is prevalent in this organizational context, and that it facilitates change readiness and transfer of training. In contrast, internal process values appear to decrease change readiness and the support of training efforts in the Norwegian police. The results also revealed that Training Climate does not predict Readiness for Change,

which supports previous research on facet-specific climates (Kuenzi, 2008). Consequently, no indirect effects were found in the study.

Hopefully, the findings in this thesis can contribute to the climate and change literature by demonstrating the effects of competing values on change readiness. In addition, it might be an important contribution to the facilitation of learning organizations, by finding some support for a relationship between rational goal values and a supportive learning environment in the Norwegian police. Finally, this study supports earlier research suggesting that the relationship between the quadrants of the Competing Values Framework might be characterized by interaction, rather than competition.

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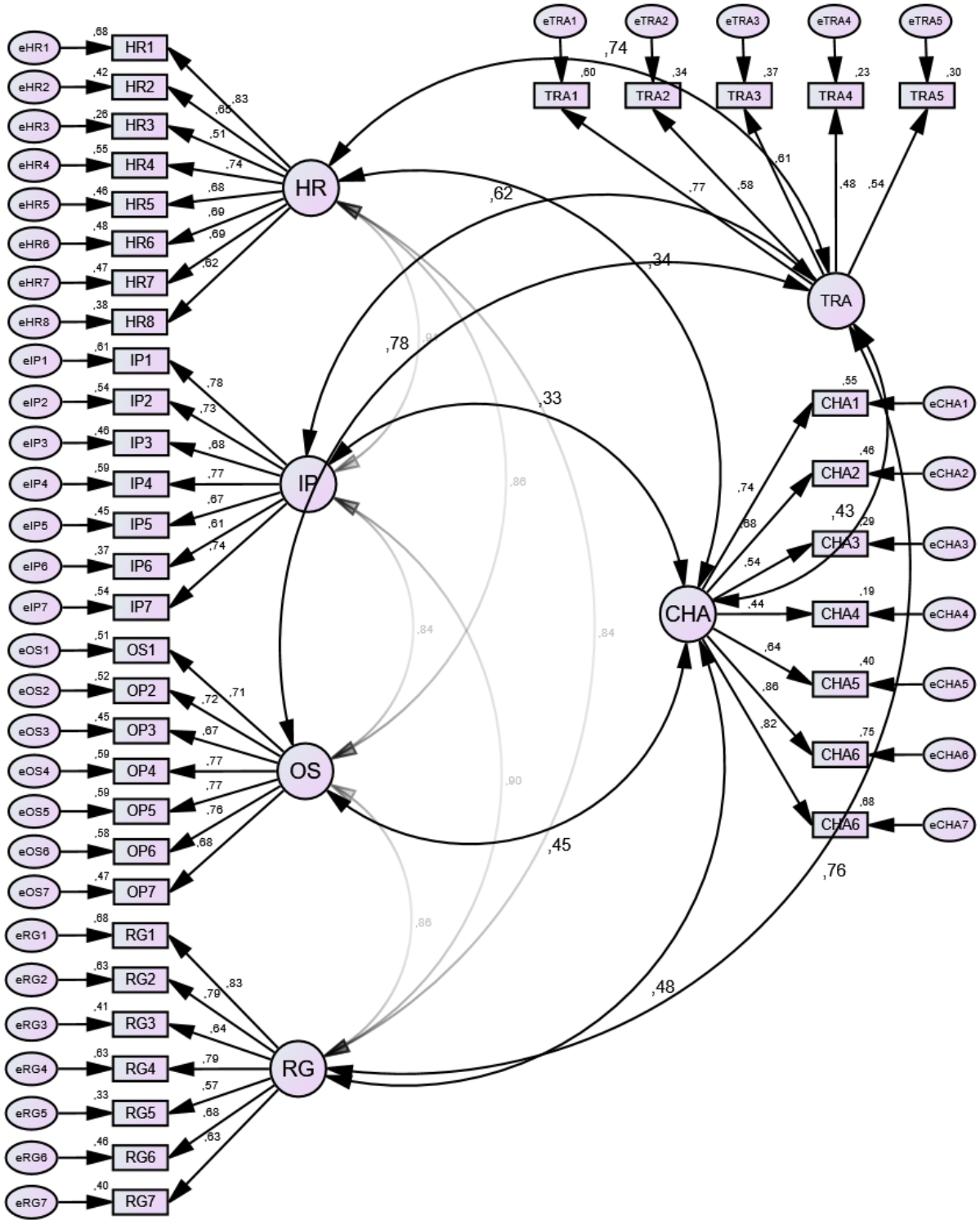
APPENDIX 1: Measures in Norwegian

Construct	Item name	Item statement
Human Relations Climate	HR1	Vi utvikler støttende, positive arbeidsforhold her på enheten
	HR2	Arbeidsmiljøet er sånn at vi på enheten kommer godt overens med hverandre
	HR3	Vi har lite konflikt mellom oss på enheten
	HR4	Vi er forpliktet til hverandre her på enheten
	HR5	Det er høy moral blant ansatte på enheten
	HR6	På min enhet hjelper vi ansatte hverandre når det trengs
	HR7	Hver ansatt har mulighetter for utvikling her på enheten
	HR8	Hver ansatt har muligheter for faglig utvikling her på enheten
Internal Process Climate	IP1	Regler og retningslinjer er tydelig kommunsert til oss her på enheten
	IP2	Etablerte prosedyrer og retningslinjer styrer generelt hvordan vi løser våre arbeidsoppgaver her på enheten
	IP3	Vi på enheten blir oppfordret til å følge vår stilllingsinstruks/stillingsbeskrivelse
	IP4	Vi på enheten passer på at arbeidsoppgaver er organisert og forutsigbare
	IP5	Vi er kjent for å gjøre jobben vår effektivt her på enheten
	IP6	Vi utfører arbeid som alltid er av høy standard her på enheten
	IP7	Vi jobber for å oppnå maks effektivitet her på enheten

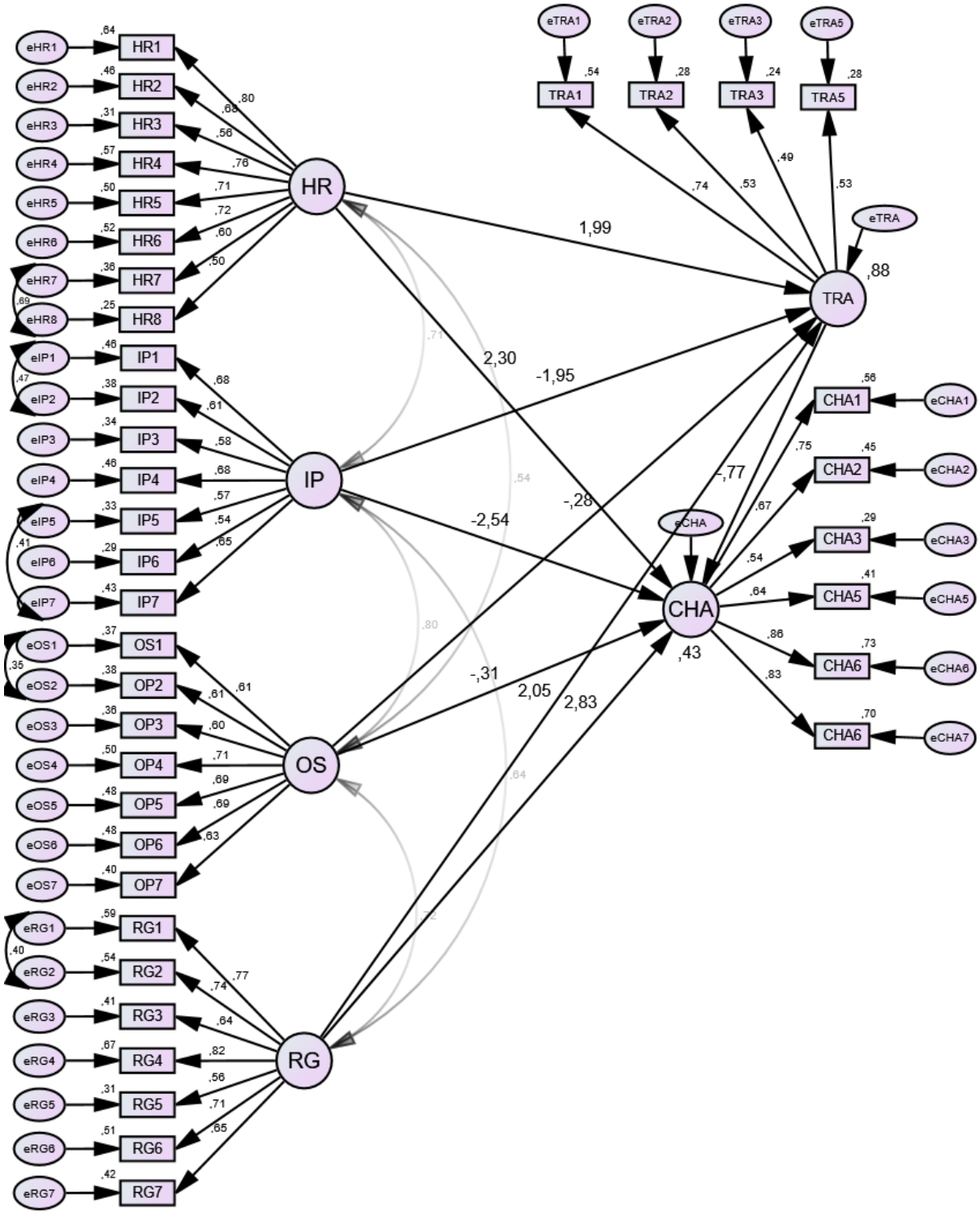
Construct	Item name	Item statement
Open Systems Climate	OS1	På denne enheten er vi i stand til å tilpasse oss nye krav når de oppstår
	OS2	Vi er fleksible nok til å ta på oss nye oppgaver etter hvert som de oppstår her på enheten
	OS3	Endring blir godt tatt imot på denne enheten
	OS4	Vi er i stand til å gjøre endringer på driftsrutiner som kreves her på enheten
	OS5	Vi er alltid klare for å ta tak i nye utfordringer her på enheten
	OS6	På min enhet er vi opptatt av å holde oss oppdatert med utviklingen i samfunnet
	OS7	Vi blir oppmuntret til å holde oss oppdatert med utviklingen i samfunnet
Rational Goal Climate	RG1	Det er viktig for oss på enheten å nå våre satte mål
	RG2	Vi legger vekt på å sette mål for enheten
	RG3	Det er viktig at vi på enheten planlegger for fremtiden
	RG4	Vi her på enheten har alltid planer om å gjøre forbedringer
	RG5	Vi blir belønnet for å nå mål her på enheten
	RG6	Vi her på enheten leter etter nye måter å gjøre ting på
	RG7	På min enhet er vi kjent med de langsiktige planene og retningene for Politiet

Construct	Item name	Item statement
Training Climate (Peer support)	TRA1	Medarbeidere på denne enheten oppmuntrer hverandre til å ta i bruk nye kunnskaper og ferdigheter
	TRA2	Medarbeidere på denne enheten anser det som verdifullt å delta på trening eller kurs
	TRA3	Når medarbeidere på denne enheten prøver å ta i bruk nye ferdigheter og fra trening eller kurs, møtes dette ofte med skepsis fra kollegaer
	TRA4	Når nærmeste leder tar i bruk ny eller oppdatert kompetanse, møtes dette ofte med skepsis fra medarbeidere
	TRA5	Har noen deltatt på trening eller kurs, blir innholdet senere diskutert med kollegaer på enheten
Readiness for Change	CHA1	Når endringer skjer på min enhet tror jeg at jeg er klar for å takle dem
	CHA2	Jeg prøver vanligvis å overbevise folk på min enhet om å akseptere endring
	CHA3	Når endringer skjer på min enhet pleier jeg å klage på dem heller enn å gjøre noe med dem
	CHA4	Jeg tror at jeg er mer klar for å akseptere endring enn mine kollegaer på enheten
	CHA5	Jeg er ikke bekymret for endrigner på min enhet fordi jeg tror at det er en måte å tankle dem på
	CHA6	Når endringer skjer på min enhet har jeg stort sett til hensikt å støtte dem
	CHA7	Jeg er sikker på at jeg raskt vil kunne til.passe meg endringer på min enhet

APPENDIX 2: Measurement model before modification



APPENDIX 3: Structural model 1 – Heywoodcases/Multicollinearity



APPENDIX 4: Pattern matrices from exploratory factor analysis between CVF constructs

Pattern Matrix

	Factor		
	1	2	3
HR1	.425		
HR2	.385		
HR3	.368		
HR4	.410	.331	
HR5	.550		
HR6	.707		
HR7			1.045
HR8			.781
IP1		.894	
IP2		.961	
IP3		.725	
IP4		.481	
IP5	.839		
IP6	.841		
IP7	.815		

Pattern Matrix

	Factor	
	1	2
HR1	.383	.502
HR2		.727
HR3		.695
HR4		.722
HR5		.663
HR6		.692
HR7	.756	
HR8	.847	
RG1	.696	
RG2	.780	
RG3	.559	
RG4	.661	
RG5	.640	
RG6	.658	
RG7	.656	

	Factor		
	1	2	3
HR1		.631	
HR2		.746	
HR3		.595	
HR4		.864	
HR5		.524	
HR6	.484	.460	
HR7			.815
HR8			.954
OS1	.825		
OS2	.779		
OS3	.645		
OS4	.638		
OS5	.784		
OS6	.600		
OS7		.469	

	Factor	
	1	2
IP1		.904
IP2		.896
IP3		.79
IP4		.592
IP5	.689	
IP6	.695	
IP7	.688	
OS1	.763	
OS2	.867	
OS3	.636	
OS4	.620	
OS5	.828	
OS6	.675	
OS7		.621

	Factor	
	1	2
IP1		.981
IP2		.873
IP3		.772
IP4		.535
IP5	.779	
IP6	.796	
IP7	.856	
RG1	.602	
RG2	.372	.493
RG3	.546	
RG4	.540	
RG5		.400
RG6	.458	
RG7		.337

	Factor	
	1	2
OS1	.725	
OS2	.725	
OS3	.618	
OS4	.721	
OS5	.891	
OS6	.577	
OS7		.663
RG1		.843
RG2		.975
RG3	.343	.347
RG4	.327	.522
RG5		.526
RG6		.472
RG7		.524

Note. Extraction method: Maximum Likelihood.

Rotation method: Promax with Kaizer Normalization.

APPENDIX 5: Measurement model after modifications