How Line Managers can shape their Employees' Innovative Behavior through (In)formal Mechanisms and Behaviors

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ABSTRACT

Purpose - This thesis aims to study the interaction effect of innovative climate and line manager behavior on employees' innovative behavior, focusing on a set of informal mechanisms and behaviors and providing an informative and explanatory overview on their interaction.

Methodology and Findings - After a thorough review of the literature, four informal mechanisms are found and reviewed. Line managers can create and maintain an innovative climate and hence shape employees' innovative behavior by *empowering* them with a *sense of ownership*, *enabling social interactions and networks*, creating a feeling of *participative safety* and *support for innovation*. Moreover, *recognition, encouragement, motivation, trust* and *fairness* are line manager behaviors which can have a direct effect on employees' innovative behavior, but will have a stronger influence when combined with the aforementioned mechanisms. A matrix showing the interactions between the mechanisms and behaviors is provided and can be used as a guideline by line managers when trying to shape the innovative behavior of employees.

Research Limitations - Different individuals are likely to have idiosyncratic interpretations due to different backgrounds, values, needs or capabilities. Therefore, the main limitation is that employees' perceptions of these mechanisms and behaviors are often subjective leading to different reactions in behaviors, which prevents this thesis from making generalized conclusions.

Practical Implications - This literature review emphasizes the (sometimes underestimated) value of the line manager's function, which is - next to mere supervision - also the potential to contribute to an organization's strategic direction such as innovation. The line manager can create and maintain an innovative climate through formal and informal mechanisms in which employees are willing to innovate. It is argued that employees' innovative behavior can be increased even more by combining these with specific line manager behaviors. Further research should focus on empirically testing the proposed interactions, in order to urge organizations to increase their investment into the development of their line managers if they want to shape employees' innovative behavior.

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Keywords

Line manager behavior, innovative climate, innovative behavior, PSS, social exchange theory, innovation mechanisms, employee perceptions

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1. INTRODUCTION

"*In the present age of rapid change, organizations are facing greater demand from their environment to engage in innovative behaviors […] to stay competitive.*" (Ramamoorthy, Flood, Slattery & Sardessai, 2005, p. 142).

This quote by Ramamoorthy et al. (2005) stresses the importance of innovations in a dynamic business environment which almost all organizations are faced with nowadays. Firms with greater innovativeness will be more successful in responding to this environment, which is characterized by rapid technological change, globalization, shortening product life cycles, and unpredictable and continuous change (Gumusluoglu & Ilsev, 2009; Koberg, Detienne & Heppard, 2003).

In order for organizations to be innovative, they rely on their employees' innovative behavior and their ability to share knowledge, on which the Human Resource (HR) function is often cited to have a decisive influence (Cooke & Saini, 2010; Jiménez-Jiménez & Sanz-Valle, 2013). However, recent literature has placed its focus on the line managers, who are seen as the implementers of HR policies and practices, because they possess most of the operational responsibilities and are in direct and daily contact with their employees (Bos-Nehles, van Riemsdijk & Looise, 2013).

Employees often derive their innovative behavior from an appropriate climate. As climate is defined as the *perceptions* of formal and informal organizational policies, practices and procedures (Bowen & Ostroff, 2004; Reichers & Schneider, 1990), it can be assumed that it is employees' perceptions of their line manager's behavior which can really impact their innovative behavior (Amabile, Conti, Coon, Lazenby & Herron, 1996; Wright & Nishii, 2006). Therefore, the line manager can be seen as the most suitable person within an organization to create and maintain an innovative climate and enhance innovative behavior among employees.

However, as line managers are no HR professionals, they are often not equipped with sufficient knowledge on how to stimulate innovative behavior among their employees, which can pose severe problems for organizations relying heavily on these innovative individuals.

Consequently, this study is important because innovative organizations are in need of knowledgeable and competent line managers who can contribute to an innovative climate and stimulate employees' innovative behavior, as it is line managers and not senior management who have a strong impact on employees' behavior (Purcell & Hutchinson, 2007). Research on what shapes or enables individual innovative behavior is vital, as innovation is founded on creative ideas and it is organizations' employees who *"develop, carry, react to, and modify"* these (Van de Ven, 1986, p.592). Furthermore, the individual effects of innovative climate and line manager behavior on employees' innovative behavior have been studied by several researchers (Amabile, 1988; Bhatnagar, 2014; Chen & Huang, 2007; Purcell & Hutchinson 2007). However, the interaction effect between the two independent variables on innovative behavior represents a gap in the current literature.

The research goal of this literature review is to provide line managers with guidelines on how to stimulate and increase innovative behavior among their employees. This will be done by analyzing several line manager behaviors and mechanisms to foster an innovative climate, which are both necessary to create an increased level of innovative behavior among employees. The research question which this thesis tries to seek an answer to is as follows: *How can line managers shape the innovative behavior of their employees?*

In order to answer the research question, the thesis is divided into five main sections. Section 2 defines and explains the interrelationships between the concepts of knowledge, innovation and innovative behavior. Section 3 outlines the role of the line manager and his/her relationship to employees with a focus on perceptions. Section 4 explains the core elements of an innovative climate while section 5 analyzes several informal mechanisms, which are elements contributing to this climate and can be used by the line manager to shape the innovative behavior of employees. Section 6 presents five line manager behaviors which can potentially affect employees' innovative behavior. The thesis ends by discussing the interaction between the informal mechanisms and line manager behaviors, followed by the limitations, suggestions for further research and the conclusion.

1.1 Methodology

The research design of this study is based on a thorough literature review, in which the key concepts (line manager behavior, innovative climate and innovative behavior of employees) are defined and analyzed in order to discuss their interactions to shape employees' innovative behavior.

In the process of searching for suitable publications for this literature review, the databases of four search engines were used, being Scopus, Google Scholar and the online university libraries of the University of Twente and Linköping. The following search terms were used: "Innovative Behavior", "Line Manager AND Innovation", "Perceived Supervisor Support" and "Innovative Climate". Rather than further specifying the search terms, the snowball principle was used, scanning interesting articles and seeking further references within those articles to find additional literature. Because the innovation literature is dispersed (218,027 hits on Scopus), but studies which address the relationships between the aforementioned key concepts are sparse, the search terms remained broad to not potentially neglect further interesting publications.

During the process of selecting suitable articles for the literature review, the title, abstract, introduction and conclusion were scanned for the aforementioned key concepts and excluded if they did not sufficiently refer to the interrelationships between them. Most articles were included when they referred to at least two of the key concepts or when they studied mechanisms or behaviors which could enhance employees' innovative behavior in general.

Literature from as early as the 1960s, 70s and 80s was used, mainly to underline arguments with long established theories (such as the social exchange theory, climate conceptions and the social capital theory), combined with present literature (until 2014) in order to enhance the relevance and currency of the results for line managers and their organizations. No language restrictions were employed; however, a focus was placed on journals and articles in the English language. Moreover, most journals or books used for this literature review were either related to innovation or creativity, Human Resource Management (HRM), (strategic) management, organizational behavior, leadership and very often psychology due to the focus on employee perceptions or perceived line manager behavior.

After the selection of suitable literature the information was sorted into five literature matrices for the five main sections of this thesis, which summarized the information and outcomes of several studies used for this paper. This method facilitated a better overview and enabled a direct comparison between different opinions of researchers and outcomes of studies, which could then be evaluated according to frequency,

relevance and importance and used for the assumptions made in this thesis.

2. CONCEPTIONS IN THE INNOVATION LITERATURE

2.1 Knowledge and Innovation

The aim of this section is not to summarize the knowledge management literature, not least because of its depth. Rather, the connections and overlaps between knowledge and innovation management are sought to be illustrated and introduced in order to facilitate the understanding of what innovative behavior means. All three concepts have similarities and are often used interchangeably and simultaneously in the literature.

There is a general agreement among scholars and business leaders that intangible assets, such as innovativeness and the effective sharing of knowledge are valuable for an organization's performance and for obtaining a competitive advantage (Barney, 1991; Cho & Pucik, 2005; Evans, Pucik & Björkman, 2011; Grant, 1996; Jiménez-Jiménez & Sanz-Valle, 2013). Due to the fast industrial and technological shifts knowledge can be seen as one of the core resources for a business to be able to maintain continuous operations. Innovative behavior of employees leads to innovations, and innovations emerge from a process of knowledge acquisition, knowledge sharing with other organizational units and members and the rapid application of this knowledge to new technologies, products or services (Evans et al., 2011; Grant, 1996; Schlegelmilch & Penz, 2002; Spender, 1996). Hence, the effective management of knowledge can help to increase employees' innovative behavior. Recent literature has emphasized the role of human resources as antecedents of knowledge management (Currie & Kerrin, 2003; Edvardsson, 2008; Minbaeva, Foss & Snell, 2009; Oltra, 2005), because "*the firm's capacity to create new knowledge resides in their employees' abilities to learn and in their motivation to share their knowledge with their colleagues"* (Jiménez-Jiménez & Sanz-Valle, 2013, p. 29). Therefore, it is important for companies to increase employees' willingness to create, share and implement knowledge and thereby enhance their innovative behavior.

More specifically, there are two kinds of knowledge, explicit (codified) knowledge and tacit knowledge. Explicit knowledge can be found in a company's manuals, databases and systems and is seen as objective, formal and relatively easy to pass on to others. In contrast, tacit knowledge is defined as personal, context-specific knowledge which is often embedded in individual experiences and quite hard to formalize and communicate (Nonaka & Takeuchi, 1995; Polanyi, 1966). Through the mentioned differences it becomes obvious that tacit knowledge is shared with more difficulty among employees than explicit knowledge (Teece, 2000; Tsai, 2002), providing another imperative for this thesis to determine mechanisms for line managers which can contribute to the effective sharing of both tacit and explicit knowledge between employees, hence increasing innovative behavior and the chance of new innovations arising in the organization.

While used everywhere in the literature, there is still no widely accepted definition of innovation. In their book 'Managing and shaping innovation', Steve Conway and Fred Steward (2009) summarize a number of key elements that most definitions share: novelty, process- and output-related, the exploitation of new possibilities, and the embracement of a full range of activities from discovery and invention, through to development and commercialization. From this synthesis of definitions, it is understandable why innovation is often expressed as being comprised of two stages: initiation and implementation (de Jong & Den Hartog, 2007). The first stage includes the generation of creative ideas while the second involves the application and implementation thereof (West, 2002). Therefore, especially in the first stage high levels of creativity - the production of novel and useful ideas (Amabile et al., 1996) - are needed. In contrast, the second stage is characterized by higher levels of efficiency (March, 1991), where possible alternatives of ideas are generated, selected, and implemented (Hammond, Neff, Farr, Schwall & Zhao, 2011; Shipton, West, Dawson, Birdi & Patterson, 2006). Consequently, creativity by individuals and teams can be seen as an initial starting point for and the root of innovation (Amabile et al., 1996). Linking this to the next section, innovative behavior also differs from employee creativity, where the former is intended to produce some kind of innovative output and benefit, while the latter can be seen as a part of innovative behavior which is most evident in the first phase of the innovation process (de Jong & Den Hartog, 2007). This is important to have in mind for the remainder of the thesis, as both creativity and innovation research was used to identify potentially relevant line manager behaviors and mechanisms. Given this information on the interrelationship between knowledge and innovation, the next section attempts to describe the main elements of the innovative behavior concept.

2.2 Innovative Behavior

In order for organizations to be innovative, they rely on their employees to be innovative with regards to processes, methods and operations. Hence, employees must engage in innovative behaviors if organizations want to benefit from them (Ramamoorthy, Flood, Slattery & Sardessai, 2005; Van de Ven, 1986; Woodman, Sawyer & Griffin, 1993). Similar to the concept of innovation, there are various definitions of innovative behavior. Most of the definitions describe innovative behavior also as a process which is comparable to the process of innovation as described in the previous section. Drawing on the ideas from Janssen (2000, 2004), Scott and Bruce (1994) and West and Farr (1989), innovative behavior can be seen as a multi-stage process, including the generation of ideas or solutions, the seeking of support and sponsorship for an idea (promotion), and the final implementation of the idea by developing a prototype or model of the innovation that can be produced and later diffused (realization). These discrete tasks involved in the innovation process provide the basis for the definition of innovative behavior used in this paper. They imply that an individual can and should exercise different behaviors through all stages of innovation (Scott, 1993; Scott & Bruce, 1994).

Examples of innovative behavior include the creation of new ideas for difficult issues, searching out new working methods, techniques, technologies or instruments, identifying performance gaps, mobilizing support for innovative ideas and the transformation of innovative ideas into useful applications (de Jong & Den Hartog, 2007; Janssen, 2000; Kheng & Mahmood 2013). In order for these behaviors to occur, effective knowledge and innovation management is necessary, which is most often designed by senior management but carried out on the line.

Finally, the literature stresses that innovative behavior is often regarded as discretionary, indicating employee actions which go beyond prescribed role expectations and are not directly acknowledged by formal rewards or written in contracts (Janssen, 2000). Hence, employees' innovative behavior depends heavily on their interactions with others, especially team members and the line manager, who are in daily contact

with them and can be a powerful source of influence on their innovative behavior (de Jong & Den Hartog, 2007; Yukl, 2002).

3. LINE MANAGER AND EMPLOYEES

In this section, the research and theories on the role of the line manager, general employee perceptions, social exchange and perceived supervisor support (PSS) are used to explore why the perceived behaviors of the line manager are so important in shaping employees' innovative behavior.

3.1 The Role of the Line Manager

Line managers work at the lowest level within an organization's management team, where they manage and supervise a team of operating employees on a daily basis and are responsible for performing HR activities (Bos-Nehles, 2010). The position of the line manager is often referred to as the "*first level of management to whom non-managerial employees report*" (Hales, 2005, p. 473).

Known as devolvement (Brewster & Larsen, 1992; Guest, 1987), line managers' responsibilities have shifted from traditional supervisory duties to being implementers of HR practices, next to a range of additional managerial responsibilities, such as people management, translating strategy into operations and strategic business management (Chen, Hsu & Yip, 2011; Hales, 2005; Harney & Jordan, 2008; McGuire, Stoner & Mylona, 2008; Purcell & Hutchinson, 2007). Line managers' responsibilities have been extended because they are able to react more immediately and appropriately to local issues and questions as they are operating alongside the people they manage, while they are also able to increase employees' motivation, commitment and control (Budhwar & Sparrow, 1997; Whittaker & Marchington, 2003). Therefore, line managers have not only become HRM implementers, but are also provided with an opportunity to contribute to an organization's strategic direction (such as innovation), by being closest to and most influential on employees.

However, the literature also stresses that line managers are often not performing very well in their role, being seen as reluctant (Hall & Torrington, 1998; Harris, Doughty, & Kirk, 2002; Lowe, 1992), and not capable (Hope Hailey, Farndale, & Truss, 2005) to carry out their role properly and more extensively than the mere supervising role would suggest. Nevertheless, innovative organizations are in need of competent line managers who know how to shape their employees' innovative behavior, as it is them and not senior management who can have a strong impact on employees' behavior (Purcell & Hutchinson, 2007). The developments in the function of line managers illustrate the vital role they can potentially play in supporting an organization's strategic direction and business performance and in being a decisive factor on how innovative an organization (through its employees) will be. Consequently, they must be knowledgeable about how their behaviors will be perceived by employees, which impact these behaviors have on their employees and how they can contribute to an innovative climate and increased innovative behaviors within the organization. The next two sections will describe these relationships in more detail.

3.2 General Employee Perceptions

Previous research provides evidence that employees' interpretations of their work environment created by their line manager, specifically referring to perceptions of support, relate to their creativity and innovative behavior (Amabile, Schatzel, Moneta & Kramer, 2004; Oldham & Cummings, 1996; Scott & Bruce, 1994). Perceptions are "*the psychological meaning that respondents attach to events in their organizations, their organizational units, and their work groups*" (Amabile et al., 1996, p. 1157).

The variances in the implementation of HR practices through line managers lead to employees having different, idiosyncratic perceptions than maybe desired and intended by upper management (Purcell & Hutchinson, 2007; Whittaker & Marchington, 2003). Based on these perceptions, employees will react in some way which is represented through distinct attitudes and behaviors, e.g. innovative behavior (Wright & Nishii, 2006). Line managers can have different relationships with different employees, ranging from friendly, close and personal to more distinct, distant and formal relationships (Liden, Bauer & Erdogan, 2004). This means that they must take into account how they behave in each of these relationships as different behaviors might be perceived differently by employees and have contrasting effects on their innovative behavior. Line managers' behaviors should also be taken into account because they can send out clear messages to employees through their attitudes, conversations and body language (Bos-Nehles, 2010; Gratton & Truss, 2003). Consequently, the line manager plays a crucial role in shaping the perceptions and hence behaviors of employees and is a suitable person within an organization to increase innovative behavior.

However, the subjective nature of employee perceptions and line manager behaviors is clearly a limitation of this thesis, as it is very difficult for a line manager to always show the most appropriate behavior towards each individual employee to ensure increased innovative behavior. This limitation will be addressed and further elaborated upon in the last chapter of this thesis. The aim of this literature review is to provide general guidelines for line managers to increase the chances of their employees engaging in innovative behaviors.

3.3 Social Exchange Theory and Perceived Supervisor Support

Shaped by Blau (1964) and Emerson (1976), the social exchange theory is today viewed as a two-sided, mutually contingent and rewarding process based on transactions (exchanges). This process is a reciprocal flow of valued behaviors between the participants (Gouldner, 1960).

The line manager and his employees are in a continuous social exchange relationship, in which employees' positive perceptions of organizational investments in them - communicated through line manager behavior- will have an effect on their willingness to engage in high levels of innovative behavior. When employees perceive that the organization (through the line manager) values their contributions and trusts them they will have a feeling of indebtedness and be motivated to show desired attitudes and behaviors (in this case for innovation) (Alfes, Truss, Soane, Rees & Gatenby, 2013; Kuvaas & Dysvik, 2010; Settoon, Bennett & Liden, 1996).

Furthermore, it is interesting to see that according to social exchange theory, employees actually engage in behaviors which are usually neither required by contract nor formally rewarded, referring back to section 2.2 where innovative behavior was described as discretionary. Rousseau (1990) has written about this phenomenon in his psychological contract literature, defining a psychological contract as "*an individual's beliefs regarding reciprocal obligations*" (p. 390). It is proposed that in an exchange relationship between the employee and the line manager perceived met expectations and a perceived obligation to innovate will positively affect employees' innovative behaviors (Bhatnagar, 2014; Janssen, 2004; Ramamoorthy et al., 2005).

A current study by Bhatnagar (2014) found that the psychological contract was a strong mediator between perceived supervisor support (PSS) and innovation. These results are valuable for the assumptions made in this thesis, as they indicate that when employees feel supported by their line manager they are likely to engage in (extrarole) innovative behaviors to fulfill reciprocal obligations. The PSS concept was first developed by Kottke and Sharafinski (1988) and is derived from organizational support theory (Eisenberger, Huntington, Hutchison & Sowa, 1986; Eisenberger, Stinglhamber, Vandenberghe, Sucharski & Rhoades, 2002). It is described as employees having global perceptions about the degree to which their immediate line manager values their contributions and cares about their well-being. This perceived support is reflected for instance in line managers answering employees' questions, giving advice, listening to concerns, opinions and ideas, supporting career development and various other ways (Ng & Sorensen, 2008). Moreover, PSS is believed to be an antecedent to perceived organizational support (POS), because employees interpret line managers' behavior as representing their organization (Stinglhamber & Vandenberghe, 2003) and they understand that line managers' evaluations of them will ultimately be reported to senior management (Eisenberger et al., 2002). Additionally, studies by Janssen (2005) and Leung, Huang, Su and Lu (2011) resulted in the conclusion that perceived support for innovation was positively related to employees' innovative performance.

These findings emphasize the view that the line manager plays an important role in the organizational life of employees, but also that he/she represents a useful and effective opportunity for organizations to influence large numbers of employees' innovative behavior. Consequently, based on arguments from social exchange theory and perceived supervisor support, when employees have the perception of being treated well, they will feel increased obligations to reciprocate by supporting line managers in attaining their goals, such as enhanced innovative behavior.

4. INNOVATIVE CLIMATE

The main group of factors supporting or preventing innovation are people, structure, organizational environment and climate (King & Anderson, 1995; Susanj, 2000). This study aims to examine two of these factors, being people (the line manager) and innovative climate. In this thesis innovative climate is seen as one of the two independent variables (next to line manager behavior) which can affect innovative behavior of employees. Elements which characterize such a climate will be presented in this section.

Literature distinguishes between two types of climate, psychological and organizational climate. Psychological climate is the one used in this paper, as it refers to how *individual* employees perceive their work environments, including organizational attributes, such as policies, procedures and also HR practices carried out by the line manager (James & Jones, 1974; James, James & Ashe, 1990; Neal, West & Patterson, 2005; Reichers & Schneider, 1990). Moreover, psychological climate is described as the psychological meaning and significance (valuations) an individual attaches to its work environment (James, 1982; James, Choi, Ko, McNeil, Minton, Wright & Kim, 2008; Reichers & Schneider, 1983). Individuals are said to respond to these environments in terms of how they perceive them and what kind of psychological impact these have on their own well-being (James & James, 1989). In addition, Endler and Magnusson (1976) stated that "*the meaning (perception) that an individual assigns to a situation appears to be the most influential situational factor affecting his or her behavior"* (p. 967), indicating the significant association psychological climate perceptions can have with individual attitudes and behaviors (Bowen & Ostroff, 2004; Jones & James, 1979; Scott & Bruce, 1994). This emphasizes the importance of creating an appropriate climate which can foster the innovative behavior of employees.

Unfortunately, a challenge with creating an appropriate climate is that individuals can perceive the same work environment differently (Ekehammer, 1974; James, Hater, Gent & Bruni, 1978; James & Sells, 1981). Bowen and Ostroff (2004) have reacted to this challenge with the concept of climate strength which they see as important in avoiding idiosyncratic interpretations. A strong climate would most likely lead to consistency in individual behaviors and uniform expectations regarding the most appropriate response pattern (in this paper innovative behavior) (Mischel, 1973). However, it must be critically mentioned that different individual backgrounds might still lead to idiosyncratic perceptions despite a strong climate (James & Sells, 1981), which will be further explained in the limitations of this thesis.

Schneider and Reichers (1983) wrote that *"to speak of organizational climate per se, without attaching a referent, is meaningless*" (p. 21), which highlights the need for characterizing an innovative climate for the purpose of this paper. A number of studies have proposed that climate may have an influence on innovation and that the degree to which employees perceive a climate as supportive of innovation would affect their innovative behavior (Amabile, 1988; Kanter 1988; Scott & Bruce, 1994). Summarizing the literature, an innovative climate is characterized by risk-taking, trialing, experimentation, creativity, results-orientation and challenge (Nystrom, 1990; Shadur, Kienzle & Rodwell, 1999; Shalley & Gilson, 2004; Wallach, 1983; West & Wallace, 1991; Yu, Yu & Yu, 2013), free thinking and open communication of opinions and ideas (Edmondson, 1999; Chen & Huang, 2007; Jaw & Liu, 2003), active participation and interaction (Hoegl, Parboteeah & Munson, 2003), independence and autonomy (Hellriegel & Slocum, 1974), training and immediate feedback (Hartmann, 2006), a sense of security and no fear of failure (Cabrera & Cabrera, 2005; Kheng & Mahmood, 2013, Yu et al., 2013) and valuing contributions and encouragement to create and share knowledge (Fu, Yu, Cheng & Chou, 2007; Yu et al., 2013). As can be seen, there appears to be no definitive list of elements that typify a climate to be innovative. However, the mentioned characteristics provide with an illustrative idea of how an innovative climate looks like and can be created. Section 5 will refer back to these elements by transforming them into four mechanisms which a line manager can make use of to contribute to an innovative climate and hence shape the innovative behavior of employees.

5. MECHANISMS TO SHAPE EMPLOYEES' INNOVATIVE BEHAVIOR

As organizations rely on their employees, it is vital for them to understand the mechanisms which are driving their innovative behavior (Sanders, Moorkamp, Torka, Groeneveld & Groeneveld, 2010; Schermuly, Mayer & Dämmer, 2013). Moreover, it is not education and personality types which influence individual innovative capabilities, but the need for driving forces and encouragement by someone who is able to help employees in overcoming the challenges associated with creative and innovative work (Hammond et al., 2011). It is believed that this someone is the employees' direct supervisor or line manager (Liden et al., 2004; Uhl-Bien, Graen & Scandura, 2000).

These mechanisms can be divided into formal and informal mechanisms. Formal mechanisms include explicit HR practices and policies designed for innovation carried out by the line manager. Literature has identified these to be teamwork and diversity (Amabile et al., 1996; Anderson & West, 1998; Hosseini, Azar & Rostamy, 2003; King & Anderson, 1995; Shalley & Gilson, 2004), resources (budget) (Amabile et al., 1996; de Jong & Den Hartog, 2007; Hammond et al., 2011; Shalley & Gilson, 2004), training and development programs (Dysvik & Kuvaas, 2012; Hosseini et al., 2003), rewards and incentives (Amabile et al., 1996; de Jong & Den Hartog, 2007; Hosseini et al., 2003; Ramamoorthy et al., 2005; Shalley & Gilson, 2004), and performance appraisals and feedback (de Jong & Den Hartog, 2007; Den Hartog, Boselie & Paauwe, 2004; Shalley & Gilson, 2004). There is a general agreement that these formal mechanisms can contribute to increased innovative behavior of employees when carried out appropriately by the line manager. Even though it would be interesting to analyze further how specifically a line manager would have to implement these formal mechanisms, they remain a suggestion for further research due to the limited scope of this paper. What follows is an elaboration on a set of *informal* mechanisms which a line manager can make use of regardless of his/her actual implementation of formal HR practices and policies.

Informal mechanisms include empowerment and ownership (Amabile et al., 1996; Conway & Steward, 2009; Hammond et al., 2011; James & James, 1989; Ramamoorthy et al., 2005; Schermuly et al., 2013), social interactions and networks (Chen & Huang, 2007; Conway & Steward, 2009; de Jong & Den Hartog, 2007, 2010; Xerri & Brunetto, 2011), participative safety (Amabile et al., 2004; de Jong & Den Hartog, 2010; West, 1990), support for innovation (Amabile et al., 1996; Hammond et al., 2011; Hosseini et al., 2003; Janssen, 2005; Susanj, 2000; West, 1990) and clear goals and visions (Amabile et al., 1996; de Jong & Den Hartog, 2007; Shalley & Gilson, 2004; West, 1990). After a thorough review of the literature it was decided to put the focus on the following four informal mechanisms; *empowerment and ownership, enabling social interactions and networks, participative safety and support for innovation*. These four mechanisms were chosen and preferred over the others because they were most frequently mentioned in the literature, related most to the innovative climate elements mentioned in section 4 and were, according to the authors above, stressed to be particularly important (for line managers) to increase employees' innovative behavior. The following four sections will explain and elaborate upon each of the mechanisms in order to provide line managers with a more illustrative idea of how these mechanisms can be carried out.

5.1 Empowerment and Ownership

Empowerment and providing with a sense of ownership is important to allow employees room and time for creative activities. Both can be described as the freedom to decide which work to do, a sense of control over one's tasks and being able to decide how to carry out certain projects (Amabile et al., 1996). The terms autonomy, independence, responsibility, freedom and challenge are often associated with this mechanism in earlier and recent literature, which were also the elements of an innovative climate pointed out in section 4 (Amabile et al., 1996; Hammond et al., 2011; James & James, 1989; Nonaka & Takeuchi, 1995; Ramamoorthy et al., 2005; Schermuly et al., 2013; Scott & Bruce, 1994; Shalley & Gilson, 2004).

Research has found that autonomy relates to both creative and innovative behavior. Already in 1976, Edwin Locke found that employees value and desire challenging work, independence and responsibilities for certain tasks and also Kanter (1983) characterized innovative and creative organizations by employees who are *"functioning independently in the pursuit of new ideas"* (Scott & Bruce, 1994, p. 583). Moreover, Scott and Bruce (1994) distinguish between low- and high-quality relationships between line managers and their employees and portray the latter one with high levels of autonomy and decision freedom, of which both have been proven to be important for innovative behavior. This means that line managers should give their employees sufficient freedom to work on the tasks that they are allocated and avoid rules and procedures to which they have to adhere. Conway and Steward (2009) call this a *'light touch style of management'* (p. 301), emphasizing a relationship built on mutual trust and employee independence.

Autonomy has also been said to foster creativity and to enhance employees' motivation to create new knowledge, while at the same time increasing the possibility of serendipity and unexpected opportunities arising in the organization (Amabile et al., 1996; Nonaka & Takeuchi, 1995). A good example of a company providing employees with autonomy is Google and its 20% time rule, which allows employees to spend one day per week working on company-related things which interest them personally. Providing employees with time for their own ideas can therefore foster their creativity and increase the possibility of new innovations at Google. Innovations originating from the 20% time are for example Gmail, Google News and the Google shuttle buses which bring people to work at the company's headquarter (Mediratta, 2007). Next to Google, companies like 3M, Atlassian and Intuit also provide employees with free time to spend on innovative projects (Birkinshaw, 2013; Gallagher, 2011), showing that a variety of companies have used this mechanism in striving towards higher levels of innovativeness.

Additionally, Hammond et al.'s (2011) study confirmed their hypothesis that autonomy was positively correlated with innovative performance, meaning that line managers should allow their employees choice in how and when they do their work and avoid pre-determined rules and regulations. Employees are said to have more opportunities to test and implement their ideas when provided with sufficient freedom and autonomy to do so (Schermuly et al., 2013). As innovation often involves successes and failures, job autonomy allows employees to engage in 'trial and error' to find more effective and efficient ways to do their work (Ramamoorthy et al., 2005).

Empowered employees can add value to an organization by contributing ideas and innovations that would otherwise not be developed (Paul, Niehoff & Turnley, 2000). Besides, the empowering line manager has been found to be able to create an innovative climate (Frischer, 1993) and to positively influence employees' innovative behavior (Janssen, Schoonebeek & Van Looy, 1997). Furthermore, a sense of ownership and control over one's work and own ideas and the perception to have a choice in how to carry out a certain task will lead to individuals producing more creative work (Amabile et al., 1996). Therefore, the empowerment of employees and the provision of a sense of ownership is a powerful mechanism to increase employees' innovative behavior and should be used whenever it is possible and appropriate for the line manager in order to allow employees more autonomy, freedom, independence, challenge and responsibility. However, it should be critically mentioned that a good balance should always be kept with clear goals being communicated to employees. Too much freedom can lead to relatively high ambiguity in roles and tasks which may lead to a loss of focus and unproductivity because employees might not know which targets they are working towards (Amabile, 1999; Conway & Steward, 2009; Kanter, 1985). Thus, the challenge for a line manager is to find a

balance between empowerment and the establishment of clear boundaries and objectives. Moreover, he/she should look at individual characteristics of employees and evaluate whether delegating high levels of responsibility to them is actually appropriate with regards to their history.

5.2 Enable Social Interactions and Networks

Already in 1986, Van de Ven observed that while inventions might be derived from *individual* innovative ideas, innovations would require *collective* and collaborative efforts. In addition, the researchers Subramaniam and Youndt (2005) argue that "*unless individual knowledge is networked, shared and channeled through relationships, it provides little benefit to organizations in terms of innovative capability"* (p. 459). This section basis its arguments on the social capital theory, including perspectives on social interactions and networks, in order to illustrate the importance of informal relationships for increasing the innovative behavior of employees.

Social capital can be defined as the knowledge lying within, available through and used by interactions among employees and their networks of interrelationships (Nahapiet & Ghoshal, 1998). Knowledge is seen as being developed and shared through relationships and networks rather than individuals or organizational structures and processes. Referring back to section 2.1, tacit knowledge was described to be shared and communicated with larger difficulties than explicit knowledge, turning it into one of the most strategically significant and valuable intangible resources for organizations to achieve sustainable competitive advantage (Barney, 1991; Nonaka & Takeuchi, 1995). The mechanism suggested in this section to facilitate the sharing of tacit knowledge is to enable increased informal social interactions and networks which lead employees to communicate and collaborate, exchange ideas and information and develop new knowledge which are all important elements of innovative behavior and an innovative climate. Contributing to this notion is that through social capital, knowledge evolves through interactions among employees who are not following prescribed rules to access or transfer information (Subramaniam & Youndt, 2005), which is the essence of how tacit knowledge sharing can be facilitated (Chen & Huang, 2007; Johanson & Vahlne, 2009). Moreover, social capital theory suggests that knowledge sharing can be favorably influenced through high levels of trust within a social network (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998; Xerri & Brunetto, 2011), therefore highlighting the importance of high-quality relationships between the line manager and his/her employees and among the employees themselves.

Prior research has recognized the significance of social interactions for facilitating knowledge management behavior among employees (Chen & Huang, 2007; Hoegl et al., 2003; Nahapiet & Ghoshal, 1998; Tsai, 2002). There is also evidence which underlines that social networking is essential for enhancing the innovative behavior of employees (de Jong & Den Hartog, 2007, 2010; Xerri & Brunetto, 2011). Conway and Steward (2009) stress the importance of social networks and interactions to the sourcing and sharing of information and knowledge by even going so far as to say that "Knowwho" is beginning to replace "Knowhow".

Furthermore, Chen and Huang (2007) successfully incorporate the social interaction perspective into the knowledge management literature by demonstrating that social interaction is positively related to knowledge sharing and application. Moreover, the authors confirm another hypothesis, stating that social interactions within an organization can be increased through a more innovative and cooperative climate which encourages employees to work together on challenging tasks and be more creative. Accordingly, organizations with strong innovative climates provide employees with the perception that it is desirable to create interaction networks to share knowledge and ideas.

However, it must be critically mentioned that despite their effectiveness for stimulating knowledge sharing, social interactions and networks among employees can also lead to less efficiency in for example implementing new innovations, as they can distract employees from focusing on their tasks. Moreover, the type of organizational culture, strategy or structure could possibly restrict the line manager in enabling social interactions and networks, as for example mechanistic structures are seen as inhibitors of innovation activities (in contrast to organic organizational structures) (Chen & Huang, 2007). In addition, Conway and Steward (2009) stress the importance for organizations to work in the dual mode, suggesting that organic structures facilitate the idea generation process but could inhibit the implementation stage in the innovation process, whereas mechanistic structures are seen as beneficiary and more efficient for the latter but not the first stage.

Concluding from this, line managers have to recognize that the degree to which their employees interact and network with each other can have an effect on their innovative behavior. While accepting that they cannot force relationships to come into existence, however, they can create a climate and conditions which facilitate the development of informal communications and exchanges of ideas. Line managers can for example encourage employees to come into contact with others by composing project teams or by designing areas where employees can have informal meetings (Shalley & Gilson, 2004). Additionally, the line manager should also try to bring the employees in contact with other functional areas. When provided with a variety of insights from different departments, employees will be able to better understand the part they play within an organization and see how ideas fit together (the bigger picture). It has been argued that the best and most ideas come from work groups with high degrees of diversity as employees are exposed to a greater variety of unusual ideas which has a positive effect on their creative thinking (Amabile, 1988; Amabile et al., 1996; Kanter, 1988; Morrison, 2002; Shalley & Gilson, 2004).

5.3 Participative Safety

'Participative Safety' is a mechanism adopted from West's (1990) four-factor theory of innovation, which proposes that four factors (vision, participative safety, support for innovation and task orientation) are important predictors of an organization's innovativeness. West (1990) characterizes participation and safety as "*a single psychological construct in which the contingencies are such that involvement in decision-making is motivated and reinforced while occurring in an environment which is perceived as interpersonally non-threatening"* (p. 311). Both employee participation and psychological safety are constructs that have been related to innovative climate (see section 4) and behavior in the literature.

Involving employees in decision making is a key element in achieving positive employee perceptions (Shadur et al., 1999) and innovative behavior (Amabile et al., 2004; de Jong & Den Hartog, 2010; West & Anderson, 1996). If employees have the feeling that their views and ideas are appreciated, they will be more willing to participate and invest their energy in innovative activities. In addition, the more employees perceive they have influence in the workplace; the more likely they are going to interact with other employees, share information and generate, promote and implement innovative ideas for improved ways of

working than when they think that they are unlikely to make a difference (de Jong & Den Hartog, 2010; Janssen, 2005; West, 1990). In a study by de Jong and Den Hartog (2007) one interviewee stated that employees "*are usually less motivated for another person's idea unless they are able to reshape it. If I just order an employee to do something, I cannot expect a high-quality outcome.*" (p. 52). This highlights the importance of involving employees in decisions and to motivate their innovative behavior by giving them the opportunity to share and shape ideas.

Making employees feel safe at work is another important way to generate innovative behavior and ideas. A psychologically safe climate can be described as one where failure is tolerated, risk-taking encouraged, uncertainty not avoided and where employees are not judged but trusted and cared about. All these characteristics are said to make employees more likely engage in innovative behaviors, produce creative ideas and try out new things, as they know that they will not be punished or judged for them (Anderson & West, 1998; Edmondson, 1999; Hammond et al., 2011; Shalley & Gilson, 2004; Susanj, 2000). Moreover, risk-taking and the tolerance of failure are especially important in the idea generation phase of innovative behavior, because employees must feel that they can make mistakes and tell their line managers about them. If this mechanism is not given by the line manager, it is unlikely that the innovation process will even start as employees will fear that they are constantly judged for wrong-doings or failures.

Therefore, participative safety is a vital mechanism for line managers to show employees that their ideas are valued and expected and that they will not be punished for taking risks. Line managers should involve employees in everyday decisions as often as possible to give them the feeling that their opinions matter to them and the organization. Moreover, when employees experience failure with one of their projects or tasks line managers should tolerate this and focus on motivating the employees rather than criticizing or even punishing them.

Even though literature does not discuss the disadvantages of this mechanism extensively, it can be assumed that next to the advantages of participative safety there are also disadvantages, such as the longer time it takes for decisions to be made and consensus to be sought as all employees involved might have different opinions and goals. Moreover, when employees feel too safe in their working environment, they might also take too high risks costing the organization high amounts of money, or they might feel safe enough to not engage in innovative behaviors at all but only work on what they are most interested in, leading to lower levels of efficiency. Consequently, a good balance must always be found by line managers when carrying out this but also the other mechanisms. Too much or too little of one mechanism can lead to extreme, contrasting or no outcome at all and a variety of perceptions among employees. Hence, an appropriate equilibrium should be created which is of course difficult for line managers and therefore also related to the subjective nature of these mechanisms and behaviors. Further research should investigate under which circumstances the mechanisms will work most effectively and find out the limit after which a mechanism will not result in the desired outcome (innovative behavior) anymore. Consequently, it is suggested that if employees perceive a good balance of participative safety from the side of the line manager, they are more likely to engage in innovative behaviors.

5.4 Support for Innovation

This mechanism relates back to section 3.3, where perceived supervisor support was explained to contribute to employees' innovative performance and will therefore be kept short to avoid repetition. It is also adopted from West's (1990) four-factor theory of innovation, because it has since then been stressed in the literature until today.

Due to their sociopolitical nature, innovations are often resisted by organizational members who prefer to stay with existing routines and procedures. Therefore, employees need to find supporters (friends, backers and sponsors) who can develop, protect and realize their ideas and help in succeeding in their innovative courses of action (Dougherty & Heller, 1994; Kanter, 1988). As the line manager is the representative of upper management in most direct and regular contact with an employee, he also appears to be the person who can provide with sufficient support for employees to not only continue with but also to excel in their innovative projects. Consequently, employees are dependent on their line managers for information, resources and (sociopolitical) support (Kanter, 1988). Without line managers' backing employees' innovative ideas are unlikely to survive, as line managers control the transfer of these ideas to higher-level actors and, hence, the future of them. As mentioned in section 3, when employees perceive their supervisors to be supportive of innovation, they will feel encouraged to perform innovative activities at the workplace (Janssen, 2005; Leung et al., 2011). Therefore, line managers can be seen as key actors with an ability to allow or deny employees *"the support necessary for the further development, protection, and application of their ideas in an environment that has numerous built-in resistors to innovation"* (Janssen, 2005, p. 578).

Several studies have considered 'support for innovation' as an important mechanism in fostering the innovative behavior of employees and creating an innovative climate (Amabile et al., 1996; Hammond et al., 2011; Hosseini et al., 2003; Janssen, 2005; Susanj, 2000). These studies have characterized line manager support as: being fair and open when submitting an idea, careful listening, willingness to support valuable ideas, quick, prioritized and effective handling of ideas (Saunders, Sheppard, Knight & Roth, 1992), trust and goal facilitation (James & James, 1989), harmony, friendship, collaboration, encouragement and sociability (Shadur et al., 1999). Moreover, line manager support can increase both employees' interest at work and their intrinsic motivation to innovate (Oldham & Cummings, 1996).

Line managers must show support towards innovative ideas if they want their employees to experience an innovative climate and show increased innovative behavior. If employees do not perceive that their efforts and creativity will be supported by the line manager, they are unlikely to engage further in their innovative projects. It must be critically mentioned though that unless employees' innovative ideas will not be supported and given the permission to realize by senior management, line manager support will only stimulate employees to generate new ideas but will prevent them from being able to implement them. Therefore, line managers must be realistic in their support and always consider broader organizational criteria, such as the resources and budget to finance a new innovative project, when listening to their employees submitting ideas. Nevertheless, general encouragement, sociability, harmony and trust can be assumed to be suitable behaviors when dealing with employees and stimulating their innovative behaviors.

6. LINE MANAGER BEHAVIORS

According to the results of a study by Amabile et al. (2004), who researched the relationship between leader behaviors and perceived leader support, employees' positive or negative perceptions of their line manager's actions were often conveyed more by *how* (behavior) something was done rather than *what*

(mechanisms) was done. Employee perceptions and behaviors are strongest and most immediately influenced by line manager behaviors (Yukl & Van Fleet, 1992). Therefore, line managers must know how to behave in order to ensure increased innovative behaviors of their employees.

There are many behaviors line managers can exercise to stimulate discretionary effort of employees. However, some line manager behaviors can be more or less important in relation to employees' innovative behavior. For this literature review five behaviors were chosen for two reasons. First, when studying the aforementioned informal mechanisms these five behaviors were most often found to be connected with them in the literature. Secondly, they were identified to be important behaviors when scanning articles about the relationship between line managers and innovation in general: *Recognition* (Amabile et al., 2004; Bhatnagar, 2014; de Jong & Den Hartog, 2007; Yukl 2002), *Encouragement* (Amabile et al., 1996; Amabile et al., 2004; Conway & Steward, 2009), *Motivation* (Amabile, 1999), *Trust* (Conway & Steward, 2009; de Jong & Den Hartog, 2007; Xerri & Brunetto, 2011) and *Fairness* (Janssen, 2000, 2004; Shalley & Gilson, 2004). The following sections will explain each behavior shortly.

6.1 Recognition

The literature describes recognition as a behavior of showing appreciation (e.g. a lunch), being positive to employees proposing new ideas, giving compliments, awards (e.g. certificates, bonuses or increased autonomy), ceremonies (e.g. celebrations of employees of the month/year), promotions, challenging assignments or training and development opportunities (Amabile et al., 2004; Bhatnagar, 2014; Yukl, 2002). Moreover, studies highlight that line managers who recognize employees' innovative behavior may stimulate both their idea generation and implementation behavior (de Jong & Den Hartog, 2007). It is proposed that if the line manager recognizes an employee's innovative behavior, this employee will perceive this and be more intrinsically motivated to pursue innovative projects. Unlike financial rewards which stimulate extrinsic motivation, recognition by the line manager is a reward that can encourage employees intrinsically to be innovative.

6.2 Encouragement

Literature frequently links encouragement to support and is proposed to be the feature which line managers have most direct control of. It is characterized as efficient and fair monitoring, consulting on important decisions, emotional support, recognizing individual contributions, setting appropriate goals and showing confidence in employees (Amabile et al., 2004; Amabile et al., 1996). Moreover, Im, Montoya and Workman (2013) state that encouragement to take risks by line managers means that occasional failures are accepted as part of normal business practices, hence stimulating divergent thinking among employees which helps them to generate unique and outside-the-box ideas.

6.3 Motivation

If employees experience motivation from their line managers, they will feel stimulated to contribute to their organization, by engaging in innovative behaviors and hence, supporting overall organizational objectives (Boxall & Purcell, 2003). Amabile (1999) stresses the importance of motivation to foster employees' creativity, which is important for the idea generation phase of the innovation process. Next to expertise and creative thinking skills, she points out that without the necessary motivation employees are unlikely to achieve their highest creativity potential. When employees are intrinsically motivated they will engage in innovative behaviors because of the challenge and satisfaction of them. It is assumed that line manager motivation as a behavior can lead to the same outcome on the employees' side, namely employees motivated to be innovative. Employees require much more than control, punishment and financial rewards in order to be motivated. They generally have a need and desire to work, learn, develop and contribute to the organization given the right environment and treatment. This right treatment is reflected in providing employees with recognition and encouragement, responsibility and accountability, learning and opportunities for advancement (Herzberg, 2003; McGregor, 1960). These factors would increase employees' commitment to the organization's objectives (in this case innovation) and motivate them more to engage in innovative behaviors than if they were only extrinsically motivated through financial rewards and control.

6.4 Trust

Mutual trust is central to the survival of any social exchange (Agarwal, 2014). The relationship between a line manager and his/her employees can have a crucial effect on employees' innovative behavior, as employees will only reciprocate when they feel that they are treated accordingly and can trust the line manager (Blau, 1964). Trustworthiness is a behavior which is central to the maintenance and development of such a relationship and which can contribute to its quality, while fairness can be described as an antecedent of trustworthiness. Trust is the expectation that the other person will act reliably, fairly and with goodwill (Conway & Steward, 2009). Hence, when employees experience fairness from the line manager in procedures as well as distributions, they are more likely to trust him/her (Agarwal, 2014). Additionally, trusting relationships are associated with greater willingness to exchange and disclose information and (tacit) knowledge (Conway & Steward, 2009), thereby leading to greater knowledge sharing which is especially important for the idea generation phase of the innovation process.

6.5 Fairness

Fair line manager behavior can be viewed as enabling employees to focus on their tasks while knowing that decisions will be made in a just manner and individuals treated equally (Shalley & Gilson 2004). Relating back to social exchange theory and general perceptions of the line manager, employees' perceived fairness of the ratio between effort spent and reward received affects how positively line manager behaviors are viewed and whether the line manager can influence employees' innovative behavior and attitudes (Janssen, 2000; Stinglhamber, De Cremer & Mercken, 2006). Social exchange is based on employees trusting that the organization (through the line manager) will act fairly towards them, leading to employees reciprocating with desired discretionary behaviors. Therefore, the (un)fairness of a line manager towards his/her employees can potentially inhibit or facilitate employees' (discretionary) innovative behaviors. Bowen and Ostroff (2004) have referred to three types of fairness line managers can engage in, being procedural, distributive and interactional justice. For example, employees who experience unfair procedures will have less trust in and commitment to the exchange process and will feel uncertain about fair reciprocity with regard to the demanded innovative behaviors (Janssen, 2004).

Figure 1 shows the concepts dealt with in this paper depicted in a framework. Both innovative climate and line manager behaviors have individual effects on the innovative behavior of employees. However, the interaction between an innovative climate (including sets of formal and informal mechanisms) and certain line manager behaviors are argued to have an even

stronger effect on the innovative behavior of employees. Unfortunately, due to the restricted scope of this thesis the formal mechanisms could not be examined and present a suggestion for further research. In the following section the interaction between the four informal mechanisms and the five line manager behaviors will be further discussed by linking them to each other in the form of a matrix, providing line managers with an overview on how to behave when carrying out certain mechanisms and aiming to increase employees' innovative behavior.

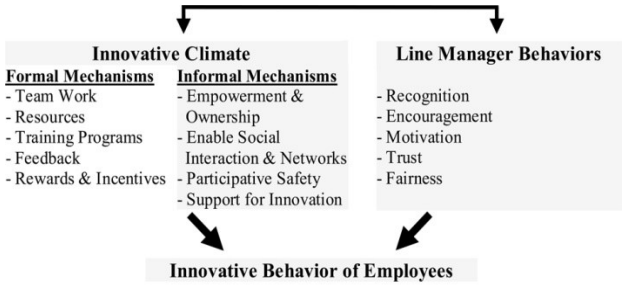

Figure 1: The interaction between an innovative climate and line manager behavior as facilitators of increased innovative behavior of employees.

7. DISCUSSION: THE INNOVATIVE BEHAVIOR MATRIX

This section discusses the results of the literature review by linking the informal mechanisms and line manager behaviors and illustrating their interaction with each other. Researchers have already studied the individual effects of innovative climate and line manager behavior on employees' innovative behavior (Amabile, 1988; Bhatnagar, 2014; Chen & Huang, 2007; Janssen, 2004; Kanter 1988; Purcell & Hutchinson 2007; Ramamoorthy et al., 2005; Scott & Bruce, 1994; Xerri & Brunetto, 2011). However, the interaction effect between the two independent variables on innovative behavior has so far been untouched. This thesis extends current results by arguing that the impact on employees' innovative behavior will even be stronger and more effective when there is an interaction and fit between an innovative climate and line manager behavior. Consequently, the line manager behaviors from section 6 were linked to the informal mechanisms from section 5 (Table 1) to provide line managers with guidelines and recommendations on how to behave when carrying out the mechanisms. The matrix not only summarizes the findings of the literature review but also links them together to show the interaction effect on employees' innovative behavior, thereby contributing to the existing body of knowledge.

It must be said that the mechanism 'support for innovation' used in this thesis has not only been stated as an element of an innovative climate in the literature, but also presents a line manager behavior, which can therefore lead to potential conceptual overlaps when discussing the interactions within the matrix. Moreover, it must be critically mentioned that when using this matrix, line managers need to decide for themselves which mechanisms and behaviors are most suitable for their organizations and employees. Ways of working can vary according to e.g. cultures, sectors, labor markets, technologies used, competition, history of the organization or individual characteristics of employees. Therefore, some behaviors or mechanisms can be more or less effective than others under different circumstances and line managers should evaluate each of them for their appropriateness and perhaps even modify them to their own needs.

Overall, line managers have to keep in mind that their behaviors have a large influence on whether the informal mechanisms will prove viable and lead to employees willing to reciprocate with innovative behaviors.

Table 1: The interaction between line manager behaviors and informal mechanisms to shape employees' innovative behavior.

Informal Mechanisms / Line Manager Behaviors	Empowerment & Ownership	Enabling Social Interactions & Networks	Participative Safety	Support for Innovation
Recognition	Recognize employees for working independently and taking responsibility. When they perceive that this way of working is appreciated by their line managers they will more often seek to do so which will eventually affect their innovative behavior. Assign more challenging assignments because it empowers employees with responsibility for a certain task. When employees own a task they will perceive to be challenged much more than if they were under constant supervision.	Recognize employees for being social and constantly creating new relationships as this can lead to increased knowledge sharing between them and the opportunity of new ideas or innovations arising within the organization. Employees must perceive that being socially engaged is appreciated and recognized by the line manager to actually create informal relationships and exchange information. Line managers can do this by for example complimenting and rewarding employees who have derived new innovative ideas through interacting with colleagues.	Recognize employees by for example being very positive towards new ideas and trying to promote them as often as possible because this will lead to employees feeling that they are involved in the progress of their organization. Moreover, give compliments, awards or opportunities for development to make the employees feel safe because they know someone is investing in their future and wants to not only retain them but also increase their potential for the business.	Recognizing employees by showing appreciation, providing awards, ceremonies, promotions or development opportunities is likely to increase employees' perceived supervisor support (PSS). Moreover, the psychological contract and recognition are strong mediators between PSS and innovation (see section 3.3). Recognizing and supporting behaviors of the line manager will contribute to both phases of the innovation process. They will stimulate employees' creativity and lead to more ideas being generated and at the same time increase employees' willingness to actually implement and realize their ideas.
Encouragement	Encourage employees to take over responsibility and have control over their own tasks. Show confidence in employees by empowering them to work independently without close supervision. This will make them aware of the fact that their line manager has sufficient confidence to let them work by themselves.	Encourage employees to engage in social interactions by being a role model and doing the same. Be social, extend your network and talk about new ideas with colleagues and subordinates. When employees perceive this encouragement they are likely to do the same as they will know that it is a desired behavior. Next to encouraging social interactions and networks, also ensure that employees are regularly exposed to a variety of external sources which provide them with in-flows of new ideas, information and knowledge.	Participative safety is only likely to be perceived by employees if they are encouraged by the line manager to participate and do this with no fear of making a mistake. Do this by appreciating individual contributions and turning failures into learning opportunities.	As mentioned before, this thesis treats 'support for innovation' as a mechanism to create an innovative climate, but can also be a line manager behavior to stimulate employees' innovative behavior. A feeling of support will be increased if employees are constantly encouraged by their line manager. Encouragement will contribute to both phases of the innovation process. Employees are more likely to generate new ideas and actually implement them when they are encouraged and supported to do so by their line manager.

Motivation	Employees are more intrinsically motivated when given the feeling that they have a responsibility for a certain task and can work on it by themselves. Moreover, employees will perceive intrinsic motivation when they are challenged, which is exactly what this mechanism does. Motivation from the side of the line manager is also required when employees experience difficulties in their progress and need support and inspiration to continue their task.	Motivate employees to engage in social interactions and extend their networks because the more relationships are formed the more knowledge can be shared, which is especially important in the idea generation phase of the innovation process. For example, rewarding innovations which come from employees from different departments within an organization can increase their motivation to form new interdepartmental relationships.	Motivate employees intrinsically to participate in decision-making by treating them well and rewarding them (e.g. with praise, compliments, awards) for good inputs. Especially when employees experience failure motivation from the line manager is vital to maintain high levels of participation and prevent employees from backtracking.	Perceived supervisor support (PSS) will be increased when combined with line manager motivation. When employees are motivated by their line managers they will at the same time feel increased support to innovate. Ideas are more likely to be generated but also implemented when there is sufficient motivation and support for them as the realization of ideas requires a lot of discretionary effort. Without the necessary motivation, employees are unlikely to achieve their highest creativity potential, which makes it a vital behavior for the line manager to shape employees' innovative behavior.
Trust	A condition for letting an employee work independently on a task without close supervision by the line manager is trust. If there is no trust between the line manager and the employee, the line manager is unlikely to empower the employee with high levels of autonomy and freedom. When employees experience that their line manager trusts them by allocating challenging tasks, they will feel motivated and show their appreciation with increased innovative behavior. Moreover, when employees experience difficulties during their projects they can see their line managers and ask for advice as they know they can trust him/her and will not be punished for making a mistake.	Behave trustworthy in order to create informal relationships among employees. Trust is a pre-condition for this mechanism, as high-quality relationships with strong ties are based on high levels of trustworthiness and result in increased knowledge sharing. Despite more effective communication, line managers must also take into account that as such a network group becomes more cohesive, it can also become increasingly inward-looking which can have a negative influence on innovative behavior and creativity. Moreover, demonstrating innovative behavior can be considered risky and when outcomes are not positive, a line manager who has developed relationships based on trust will transform mistakes into opportunities to learn and therefore further shape the development of innovative behavior.	Employees will only participate in decision making when they trust that the line manager will appreciate their inputs and will provide them with safety if any of their suggestions result in negative outcomes. Moreover, employees are more likely to engage in innovative behavior if they can trust the line manager that they will not be punished for it, knowing that he/she will be there when problems arise. Being engaged in innovative behaviors is a risk which employees take to the extent that they feel psychologically safe, and this feeling derives primarily from trust to co-workers and their line manager.	Employees will only attempt to be innovative and share their knowledge with their colleagues if they trust them and their line manager and feel that they will be supported. The term trust was used when this mechanism was characterized in section 5.4, highlighting the importance of this line manager behavior to support employees and shape their innovative behavior. Show employees trust by using their ideas and trying to develop them together. If employees experience this support from their line managers, their intrinsic motivation to engage in innovative behavior will increase in both phases of the innovation process. Therefore, a relationship based on trust and support can facilitate both idea generation and implementation in the innovation process.
Fairness	Fairness was not found to be specifically correlated with this mechanism. Obviously, when providing an employee with high degrees of freedom and challenges the possibility of this employee making a mistake or experiencing difficulties is relatively high. Therefore, it is important that the employee knows that the line manager will behave fairly towards him/her when in doubt or in need of help.	Generally, it can be assumed that relationships and networks are best formed when there is perceived fairness on both sides. Moreover, fair treatment can create the expectation among employees that future and long-term relationships will be fair too which will in turn generate positive (innovative) behaviors towards the source of justice, the line manager. In contrast, employees are unlikely to share their knowledge if they know that the line manager will behave unfairly towards them, by for example stealing their ideas and reporting them (as their own) to senior management.	Employees are likely to experience fairness when line managers seek their views in determining the methods by which outcome decisions are made, such as involving employees in the design of performance appraisals (procedural justice), but also openly explaining reasons behind certain decisions and distribution of outcomes (interactional justice). Moreover, employees will sense distributive justice when the line manager clarifies to them how individual pay increase decisions were made when not all employees received the same pay rise.	The term fairness was also used when this mechanism was characterized in section 5.4, highlighting the importance of this line manager behavior to support employees and shape their innovative behavior. Be fair to employees when they submit ideas and treat all of them equally when evaluating them. When employees perceive that everyone is treated fairly, feelings of being supported and cared about will be elicited and hence employees will not hesitate to present innovative ideas. Therefore, a relationship based on fairness and support can increase employees' innovative behavior.

8. CONCLUSION, LIMITATIONS AND FURTHER RESEARCH

8.1 Limitations and Further Research

Although this literature review provides interesting insights into how the interaction of an innovative climate and line manager behaviors can influence employees' innovative behavior, the findings should be assessed against the limitations of this study. First, the main limitation of this literature review is its subjective nature as all results depend on *individual* perceptions of line manager behaviors. The psychological meaning individuals assign to specific line manager behaviors may often lead to idiosyncratic interpretations, which might occur because employees have different backgrounds, needs, values, capabilities or learning experiences (James & Sells, 1981). For example, employees who found themselves exploited by a company in the past are likely to have a different perception of a participative system than employees who are used to a trusting relationship with their company (Wright & Nishii, 2006). A response to this limitation could be to recommend line managers to increase their consistency and always use a standard set of mechanisms and behaviors towards all employees to ensure shared perceptions (Bowen & Ostroff, 2004), which could be an appeal to the HR function to increase the monitoring of their line managers. However, due to the aforementioned reasons, employees simply differ in what they judge to be empowering, encouraging, motivating, fair, social, involving, safe or supportive of innovative behavior. Therefore, although consistency is vital for a line manager, it is also important to take into account that each individual differs, to apply the mechanisms and suggested behaviors carefully by maybe even going so far as to define and evaluate the most suitable line manager mechanism/behavior for each employee (James & Sells, 1981).

Second, another limitation is the restricted nature of the results of a literature review, as empirical research would be needed to test the relationships suggested in the framework and to find out which mechanisms, behaviors or interactions are most important in shaping innovative behavior, for example through a survey among employees. However, much information used in conducting this literature review was based on the results of empirical studies.

Third, the limited scope of this thesis made it impossible to study more line manager mechanisms and behaviors which could influence employees' innovative behavior. Even though the most important ones were chosen according to the literature and hence no differences in results would be expected, it could be assumed that a more holistic view could be achieved by extending the repository of mechanisms and line manager behaviors. For example, goal-orientation, communication, vision or support (as a behavior rather than a mechanism) were additional mechanisms and behaviors found in the literature (Amabile et al., 2004; Anderson & West, 1998; Conway & Steward, 2009; de Jong & Den Hartog, 2007; Shadur et al., 1999; Shalley & Gilson, 2004). A recommendation for further research would be to also study the aforementioned formal mechanisms and find out how line managers should behave when carrying out these. The aforementioned required balance between consistency and variation in behaviors when carrying out the mechanisms is another interesting and important area of research.

Finally, future research could extend the current framework by including other contingency factors which can affect employees' innovative behavior (and maybe testing their interactions with line manager behaviors or innovative climate), such as organizational structure or culture. Organizational structure has an effect on knowledge sharing, where for instance the degree of formalization and centralization are negatively related to social interactions, which would make it difficult for a line manager to enable these despite restricting organizational structures (Chen & Huang, 2007). Future research should also find out whether the suggested mechanisms and behaviors can be more or less effective in different circumstances, by investigating an organization's strategy, sector, competition or history. This could be done by developing hypotheses about potential relationships and testing them in different contexts, such as in organizations operating in rather stable or turbulent environments, having organic or mechanistic structures and following differentiation or cost-leadership strategies. It can be assumed that organizations striving to be innovative would operate in rather unstable environments with organic organizational structures and offensive strategies to achieve radical innovations. However, it would be interesting to know how the opposite type of organizations would want their line managers to operate to achieve higher levels of innovative behavior. The testing of the hypotheses could be done by e.g. carrying out interviews or surveys with senior managers, line managers *and* employees, to ensure that the opinions of all sides (the designer (intended), sender (actual) and receiver (perceived) of behaviors and mechanisms) are taken into account. Hence, line managers could be interviewed and asked about their behaviors and how they intend to affect employees' innovative behaviors, while interviewing employees would reveal how they actually perceive their line manager's behaviors and whether they feel that these result in desired outcomes. All in all, future researchers are encouraged to investigate the proposed interactions, mechanisms and behaviors further, as this specific constellation represents a research gap in the current literature.

8.2 Conclusion

Organizations rely on their employees' innovative behavior and capabilities in order to be innovative. In this study the line manager was found to represent the most suitable person within an organization to shape employees' innovative behavior through an innovative climate and his/her own behaviors. The goal was to provide with an inventory of line manager mechanisms and behaviors that may influence employees' innovative behavior. Drawing on a literature review, four informal mechanisms were identified which are said to contribute to an innovative climate and innovative behavior. Line managers can shape employees' innovative behavior by *empowering* them with a *sense of ownership*, *enabling social interactions and networks* among them, providing *participative safety* and sufficient *support for innovation*; all of this within a climate that is supportive of innovation. Moreover, five line manager behaviors; *recognition, encouragement, motivation, trust* and *fairness,* were identified to be important when shaping employees' innovative behavior. As behaviors have a direct effect on employees' perceptions and hence their innovative behavior, it is important *how* line managers behave when carrying out the mechanisms. This is why the behaviors were linked to the four mechanisms to provide line managers with a profound overview on how to shape employees innovative behavior.

Furthermore, a specific focus was placed on employee perceptions, as line managers differ in their behaviors and employees in their perceptions, which makes it difficult to draw conclusions which are generalizable for practitioners. The assumptions made in this thesis are in line with social exchange theory, which suggests that line managers who are able to create a feeling of reciprocity (through the mechanisms and behaviors) will evoke positive attitudinal and behavioral outcomes (innovative behavior) from employees. All in all, employees' perception of their line manager's behavior is positively related to their innovative behavior. A perceived innovative climate, including the four presented mechanisms carried out by the line manager, can also have a positive effect on innovative behavior of employees.

The academic relevance of this literature review was to fill the research gap between line managers and their employees with regards to innovative behavior, as no study has so far attempted to study the interaction effect between (perceived) line manager behavior and innovative climate on employees' innovative behavior (Hosseini et al., 2003). Moreover, neither the innovation nor the leadership field provides a set of specific mechanisms and behaviors that line managers can use in an innovative climate to stimulate innovative behavior of employees. This literature review demonstrates that it is important to consider how line managers' behaviors can affect both employees' perceptions of an innovative climate and their line managers and hence their willingness to reciprocate with innovative behaviors.

With regards to the practical implications of the proposed framework, a set of line manager mechanisms and behaviors to enhance employees' innovative behavior are identified for practitioners to use. Creating a highly innovative workforce has become a significant focus for many organizations, such as Google, Dropbox, Netflix or Nike (Safian, 2014). This thesis emphasizes the value and potential of the line manager's function, which is not merely supervision but also bringing out the maximum potential in each employee by creating and maintaining a climate in which employees are willing to innovate. Consequently, next to spending high amounts of money on innovation and R&D, organizations should consider investing into the development and training of their line managers, as they present a valuable asset which can most directly affect employees' innovative behavior. Moreover, line managers who are given the assignment of making their employees more innovative can use the developed matrix and try to implement the suggestions into their everyday work life and see whether they result in increased innovative behavior of their employees.

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10. REFERENCES

1. Adler, P., & Kwon, S. (2002). Social capital: Prospects for a new concept. *Academy of Management Review*, 27(1), 17-40.

2. Agarwal, U. A. (2014). Linking justice, trust and innovative work behavior to work engagement. *Personnel Review*, 43(1), 41.73.

3. Alfes, K., Truss, C., Soane, E. C., Rees, C., & Gatenby, M. (2013). The relationship between line manager behavior, perceived HRM practices, and individual performance: Examining the mediating role of engagement. *Human Resource Management,* 52(6), 839-859.

4. Amabile. T. M. (1988). *A model of creativity and innovation in organizations*. In B. M. Staw and L. L. Cummings (Eds.), Research in organizational behavior (pp. 123-167). Greenwich, CT: JAI Press.

5. Amabile, T. M. (1999). How to kill creativity. *Harvard Business Review*, 76(5), 76-87.

6. Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154-1184.

7. Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly*, 15(1), 5-32.

8. Anderson, N. R., & West, M. A. (1998). Measuring Climate for Work Group Innovation: Development and Validation of the Team Climate Inventory. *Journal of Organizational Behavior*, 19(3), 235-258.

9. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

10. Bhatnagar, J. (2014). Mediator analysis in the management of innovation in Indian knowledge workers: the role of perceived supervisor support, psychological contract, reward and recognition and turnover intention. *The International Journal of Human Resource Management*, 25(10), 1395-1416.

11. Birkinshaw, J. (2013, September 24). Three Principles For Making Innovation A Reality In Your Company. Retrieved May 10, 2014, from http://www.forbes.com/sites/lbsbusinessstrategyreview/2013/09/24/three-principles-for-making-innovation-a-reality-in-your-company/

12. Blau, P. (1964). *Exchange and Power in Social Life*. New York: Wiley.

13. Bos-Nehles, A. C. (2010). *The line makes the difference: Line managers as effective HR partners,* Zutphen,The Netherlands: CPI Wöhrmann Print Service.

14. Bos-Nehles, A. C., van Riemsdijk, M. J., & Looise, J. K. (2013). Employee perceptions of line management performance: Applying the AMO theory to explain the effectiveness of line manager's HRM implementation. *Human Resource Management*, 52(6), 861-877.

15. Bowen, D. E., & Ostroff, C. (2004). Understanding HRM firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review*, 29(2), 203-221.

16. Boxall, P. F., & Purcell, J. (2003). *Strategy and human resource management*. Houndmills, Basingstoke: Palgrave Macmillan.

17. Brewster, C., & Larsen, H. H. (1992). Human resource management in Europe: evidence from ten countries. *The International Journal of Human Resource Management*, 3(3), 409-434.

18. Budhwar, P. S., & Sparrow, P. R. (1997). Evaluating levels of strategic integration and devolvement of human resource management in India. *The International Journal of Human Resource Management*, 8(4), 476-494.

19. Cabrera, E. F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *International Journal of Human Resource Management*, 16(5), 720-735.

20. Chen, C., & Huang, J. (2007). How organizational climate and structure affect knowledge management – The social interaction perspective. *International Journal of Information Management*, 27(2), 104-118.

21. Chen, Y., Hsu, Y., & Yip, F. W. (2011). Friends or rivals: comparative perceptions of human resource and line managers on perceived future firm performance. *The International Journal of Human Resource Management*, 22(8), 1703-1722.

22. Cho, H.-J., & Pucik, V. (2005).Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal*, 26(3), 555-575.

23. Conway, S., & Steward, F. (2009). *Managing and shaping innovation.* New York: Oxford University Press.

24. Cooke, F. L., & Saini, D. S. (2010). (How) Does the HR strategy support an innovation-oriented business strategy? An investigation of institutional context and organizational practices in Indian firms. *Human Resource Management*, 49(3), 377– 400.

25. Currie, G., & Kerrin, M. (2003). Human resource management and knowledge management: enhancing knowledge sharing in a pharmaceutical company. *International Journal of Human Resource Management*, 14(6), 1027-1045.

26. De Jong, J. P. J., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behavior. *European Journal of Innovation Management*, 10(1), 41-64.

27. De Jong, J. P. J., & Den Hartog, D. N. (2010). Measuring innovative work behavior. *Creativity and Innovation Management*, 19(1), 23-36.

28. Den Hartog, D. N., Boselie, P., & Paauwe, J. (2004). Performance Management: A model and research agenda. *Applied Psychology: An International Review*, 53(4), 556-569.

29. Dougherty, D., & Heller, T. (1994). The illegitimacy of successful product innovation in established firms. *Organization Science*, 5(2), 200–218.

30. Dysvik, A., & Kuvaas, B. (2012). Perceived supervisor support climate, perceived investment in employee development climate, and business-unit performance. *Human Resource Management*, 51(5), 651-684.

31. Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383.

32. Edvardsson, I. R. (2008). HRM and knowledge management. *Employee Relations*, 30(5), 553-561.

33. Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology,* 71(3), 500-507.

34. Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I. L., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87(3), 565-573.

35. Ekehammar, B. (1974). Interactionism in personality from a historical perspective. *Psychological Bulletin,* 81(12), 1026-1048.

36. Emerson, R. M. (1976). Social Exchange Theory. *Annual Review of Sociology*, 21(1), 335-362.

37. Endler, N. S., & Magnusson, D. (1976). Toward an interactional psychology of personality. *Psychological Bulletin*, 83(5), 956-974.

38. Evans, P., Pucik, V., & Björkman, I. (2011). *The Global Challenge: International Human Resource Management*. (2nd ed.). New York: McGraw-Hill Irwin.

39. Frischer, J. (1993). Empowering Management in New Product Development Units. *Journal of Product Innovation Management*, 10(5), 393–401.

40. Fu, H.-Y., Yu, K.-D., Cheng, Y.-P., & Chou, C.-H. (2007). The study on the relationship among organizational culture, knowledge sharing and organizational innovation knowledge types as moderator in the shipping industry. *Chinese Maritime Research Institute*, 16, 1-16.

41. Gallagher, D. (2011, June 13). Why Giving Employees Paid, Unstructured Time Pays Off. . Retrieved May 10, 2014, from http://sloanreview.mit.edu/article/why-giving-employees-paid-unstructured-time-pays-off/

42. Gouldner, H. P. (1960). Dimensions of Organizational Commitment. *Administrative Science Quarterly*, 4(4), 468–490.

43. Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(7), 109-122.

44. Gratton, L., & Truss, C. (2003). The three-dimensional people strategy: putting human resource policies into action. *Academy of Management Executive*, 17(3), 74-86.

45. Guest, D. E. (1987). Human Resource Management and Industrial Relations. *Journal of Management Studies*, 24(5), 503-521.

46. Gumusluoglu, L., & Ilsev, A. (2009). Transformational Leadership and Organizational Innovation: The Roles of Internal and External Support for Innovation. *The Journal of Product Innovation Management*, 26(3), 264-277.

47. Hales, C. (2005). Rooted in supervision, branching into management: Continuity and change in the role of first-line manager. *Journal of Management Studies,* 42(3), 471-506.

48. Hall, L., & Torrington, D. (1998). Letting go or holding on—The devolution of operational personnel activities. *Human Resource Management Journal*, 8(1), 41–55.

49. Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 90-105.

50. Harney, B., & Jordan, C. (2008). Unlocking the Black Box: Line Managers and HRM Performance in a Call Centre Context. *International Journal of Productivity and Performance Management*, 57(4), 275–296.

51. Harris, L., Doughty, D., & Kirk, S. (2002). The devolution of HR responsibilities—Perspectives from the UK's public sector. *Journal of European Industrial Training*, 26(5), 218–229.

52. Hartmann, A. (2006). The role of organizational culture in motivating innovative work behavior in construction organizations. *Construction Innovation*, (6)3, 159-172.

53. Hellriegel, D., & Slocum, J. W. (1974). Organizational Climate: Measures, Research and Contingencies. *The Academy of Management Journal,* 17(2), 255-280.

54. Herzberg, F. (2003). One more time: how do you motivate employees? *Harvard Business Review*, 81(1), 87-96.

55. Hoegl, M., Parboteeah, K. P., & Munson, C. L. (2003). Team-level antecedents of individuals' knowledge networks. *Decision Sciences*, 34(4), 741–770.

56. Hope Hailey, V., Farndale, E., & Truss, C. (2005). The HR department's role in organizational performance. *Human Resource Management Journal*, 15(3), 49–66.

57. Hosseini, H. K., Azar, A., & Rostamy, A. A. A. (2003). The intervening role of innovative climate: A study of middle managers in manufacturing organizations in Iran. *Public Organization Review: A Global Journal*, 3(2), 151–170.

58. Im, S., Montoya, M. M., & Workman, J. P. (2013). Antecedents and consequences of creativity in product innovation teams. *Journal of Product and Innovation Management*, 30(1), 170-185.

59. James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, 67(2), 219-229.

60. James, L. A., & James, L. R. (1989). Integrating Work Environment Perceptions: Explorations into the Measurement of Meaning. *Journal of Applied Psychology*, 74(5), 739-751.

61. James, L. R., Hater, J. J., Gent, M. J., & Bruni, J. R. (1978). Psychological climate: Implications from cognitive social learning theory and interactional psychology. *Personnel Psychology*, 31(4), 781-813.

62. James, L. R., & Sells, S. B. (1981). *Psychological climate: Theoretical perspectives and empirical research*. In D. Magnusson (Ed.), Toward a psychology of situations: An interactional perspective (275-295), Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

63. James, L. R., James, L. A., & Ashe, D. K. (1990). *The meaning of organizations: The role of cognition and values.* In B. Schneider (Ed.), Organizational climate and culture (40-84). San Francisco: Jossey-Bass.

64. James, L. R., & Jones, A. P. (1974). Organizational climate: A review of theory and research. *Psychological Bulletin*, 81(12), 1096-1112.

65. James, L. R., Choi, C. C., Ko, C. E., McNeil, P. K., Minton, M. K., Wright, M. A., & Kim, K. (2008). Organizational and psychological climate: a review of theory and research. *European Journal of Work and Organizational Psychology*, 17(1), 15-32.

66. Janssen, O., Schoonebeek, G., & Van Looy, B. (1997). Cognities van empowerment als de schakel tussen delegerend leiderschap en innovatief gedrag van werknemers. *Gedrag en Organisatie*, 10, 175–194.

67. Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behavior. *Journal of Occupational and Organizational Psychology*, 73(3), 287-302.

68. Janssen, O. (2004). How fairness perceptions make innovative behavior more or less stressful. *Journal of Organizational Behavio*r, 25(2), 201-215.

69. Janssen, O. (2005). The joint impact of perceived influence and supervisor supportiveness on employee innovative behavior. *Journal of Occupational and Organizational Psychology*, 78(4), 573-579.

70. Jaw, B. S., & Liu, W. (2003). Promoting organizational learning and self-renewal in Taiwanese companies: The role of HRM. *Human Resource Management*, 42(3), 223-241.

71. Jimenéz-Jiménez, D., & Sanz-Valle, R. (2013). Studying the effect of HRM practices on the knowledge management process. *Personnel Review*, 42(1), 28-49.

72. Johanson, J., & Vahlne, J. (2009). The Uppsala internationalization process model revisited: From liability of foreignship to liability of outsidership. *Journal of International Business Studies*, 40(9), 1411-1431.

73. Jones, A. P., & James, L. R. (1979). Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. *Organizational Behavior and Human Performance*, 23(2), 201-250.

74. Kanter, R. M. (1983). *The change masters: Innovations for productivity in the American corporation*. New York: Simon and Schuster.

75. Kanter, R. M. (1985). *The change masters: Corporate Entrepreneurs at work*, London: Taylor and Francis.

76. Kanter, R. M. (1988). *When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations*. In B.M. Staw & L.L. Cummings (Eds.), Research in organizational behavior (pp. 169-211). Greenwich, CT: JAI Press.

77. Kheng, Y. K., & Mahmood, R. (2013). The relationship between pro-innovation organizational climate, leader-member exchange, and innovative work behavior: A study among the knowledge workers of the knowledge intensive business services in Malaysia. *Business Management Dynamics*, 2(8), 15-30.

78. King, N., & Anderson, N. (1995). *Innovation and change in Organizations*. London: Routledge.

79. Koberg, C. S., Detienne, D. R., & Heppard, K. A. (2003). An empirical test of environmental, organizational, and process factors affecting incremental and radical innovation. *Journal of High Technology Management Research*, 14(1), 21–45.

80. Kottke, J. L., & Sharafinski, C. E. (1988). Measuring perceived supervisory and organizational support. *Educational and Psychological Measurement*, 48(4), 1075-1079.

81. Kuvaas, B., & Dysvik, A. (2010). Exploring alternative relationships between perceived investment in employee development, perceived supervisor support and employee outcomes. *Human Resource Management Journal*, 20(2), 138-156.

82. Leung, K., Huang, K., Su, C., & Lu, L. (2011). Curvilinear relationships between role stress and innovative performance: Moderating effects of perceived support for innovation. *Journal of Occupational and Organizational Psychology*, 84(4), 741-758.

83. Liden, R. C., Bauer, T. N., & Erdogan, B. (2004). The role of leader-member exchange in the dynamic relationship between employer and employee: Implications for employee socialization, leaders, and organizations. *The employment relationship: Examining psychological and contextual perspectives*, 226-250.

84. Locke, E. A. (1976*). The nature and causes of job satisfaction*. In M. D. Dunnette (Eds.), Handbook of industrial and organizational psychology (pp. 1297-1349). Chicago: Rand McNally.

85. Lowe, J. (1992). *Locating the line: The front-line supervisor and human resource management*. In P. Blyton & P. Turnbull (Eds.), Reassessing human resource management (pp. 148–168). London, UK: Sage.

86. March, J. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87.

87. McGregor, D. (1960). *The Human Side of Enterprise*, McGraw-Hill, Maidenhead.

88. McGuire, D., Stoner, L., & Mylona, S. (2008). The role of line managers as Human Resource agents in fostering organizational change in public services. *Journal of Change Management*, 8(1), 73-84.

89. Mediratta, B. (2007, October 21). The Google Way: Give Engineers Room. Retrieved May 10, 2014, from http://www.nytimes.com/2007/10/21/jobs/21pre.html?_r=0

90. Minbaeva, D., Foss, N., & Snell, S. (2009). Bringing the knowledge perspective into HRM. *Human Resource Management*, 48(4), 477-83.

91. Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80(4), 252-283.

92. Morrison, E. W. (2002). Newcomers' relationships: The role of social network ties during socialization. *Academy of Management Journal*, 45(6), 1149-1160.

93. Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital and the organizational advantage. *Academy of Management Review*, 23(2), 242-246.

94. Neal, A., West, M. A., & Patterson, M. G. (2005). Do organizational climate and competitive strategy moderate the relationship between human resource management and productivity? *Journal of Management*, 31(4), 492-512.

95. Ng, T. W. H., & Sorensen, K. L. (2008). Toward a further understanding of the relationships between perceptions of support and work attitudes: A Meta Analysis. *Group Organization Management*, 33(3), 243-268.

96. Nonaka, I., & Takeuchi, H. (1995). *The knowledge creating company: How Japanese companies create the dynamics of innovation.* New York: Oxford University Press.

97. Nystrom, H. (1990). *Organizational innovation*. In M. S. West, and J. L. Farr (Eds.), Innovation and creativity at work: Psychological and organizational strategies (pp. 143–162). New York: Wiley.

98. Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39(3), 607–634.

99. Oltra, V. (2005). Knowledge management effectiveness factors: the role of HRM. *Journal of Knowledge Management*, 9(4), 70-86.

100. Paul, R. J., Niehoff, B. P., & Turnley, W. H. (2000). Empowerment, expectations, and the psychological contract-managing the dilemmas and gaining the advantages. *Journal of Socio-Economics*, 29(5), 471-485.

101. Polanyi, M. (1966). *The tacit dimension*. London: Routledge and Kegan Paul.

102. Purcell, J., & Hutchinson, S. (2007). Front-line managers as agents in the HRM-performance causal chain: theory, analysis and evidence. *Human Resource Management Journal*, 17(1), 3-20.

103. Ramamoorthy, N., Flood, P. C., Slattery, T., & Sardessai, R. (2005). Determinants of innovative work behavior. *Creativity and Innovation Management*, 14(2), 142-150.

104. Reichers, A. E., & Schneider, B. (1990). *Climate and culture: An evolution of constructs*. In B. Schneider (Eds.), Organizational climate and culture (pp. 5–39). San Francisco: Jossey-Bass.

105. Rousseau, D. M. (1990) New hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior*, 11(5), 389–400.

106. Safian, R. (2014, February 10). Most Innovative Companies 2014. . Retrieved May 27, 2014, from http://www.fastcompany.com/section/most-innovative-companies-2014.

107. Sanders, K., Moorkamp, M., Torka, N., Groeneveld, S., & Groeneveld, C. (2010). How to support innovative behaviour? The role of LMX and satisfaction with HR practices. *Technology and Investment*, 1(1), 59-68.

108. Saunders, D. M., Sheppard, B. H., Knight, V., & Roth, J. (1992). Employee voice to supervisors. *Employee Responsibility and Rights Journal*, 5(3), 241–259.

109. Schermuly, C. C., Meyer, B., & Dämmer, L. (2013). Leader-Member Exchange and Innovative Behavior. *Journal of Personnel Psychology*, 12(3), 132-142.

110. Schlegelmilch, B. B., & Penz, E. (2002). Knowledge management in marketing. *The Marketing Review*, 3(1), 5-19.

111. Scott, S. G. (1993). *The influence of climate perceptions of innovative work behavior: a model of individual innovation in the workplace.* (Unpublished doctoral dissertation). University of Cincinnati, Cincinnati, OH.

112. Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607.

113. Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social Exchange in Organizations. Perceived organizational support, Leader-Member exchange, and employee reciprocity. *Journal of Applied Psychology*, 81(3), 219-227.

114. Shadur, M. A., Kienzle, R., & Rodwell, J. J. (1999). The relationship between organizational climate and employee perceptions of involvement: The importance of support. *Group and Organization Management,* 24(4), 479-503.

115. Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly*, 15(1), 33-53.

116. Shipton, H., West, M. A., Dawson, J., Birdi, K., & Patterson, M. (2006). HRM as a predictor of innovation. *Human Resource Management Journal*, 16(1), 3-27.

117. Spender, J. C. (1996). Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal*, 17(10), 45–62.

118. Stinglhamber, F., De Cremer, D., & L. Mercken (2006). Perceived support as a mediator of the relationship between justice and trust. A multiple foci approach. *Group & Organization Management*, 31(4), 442-468.

119. Stinglhamber, F., & Vandenberghe, C. (2003). Organizations and supervisors as sources of support and targets of commitment: a longitudinal study. *Journal of Organizational Behavior*, 24(3), 251-270.

120. Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*, 48(3), 450-463.

121. Susanj, Z. (2000). Innovative climate and culture in manufacturing organizations: differences between some European countries. *Social Science Information*, 39(2), 349-361.

122. Teece, D. J. (2000). Strategies for managing knowledge assets: The role of firm structure and industrial context. *Long Range Planning*, 33(1), 35–54.

123. Tsai, W. (2002). Social structure of "coopetition" within a multiunit organization: Coordination, competition, and intra-organizational knowledge sharing. *Organization Science*, 13(2), 179–190.

124. Uhl-Bien, M., Graen, G. B., & Scandura, T. A. (2000). Implications of leader-member exchange (LMX) for strategic human resource management systems: Relationships as social capital for competitive advantage. *Research in Personnel and Human Resource Management*, 137-186.

125. Van de Ven, A. (1986). Central problems in the management of innovation. *Management of Science*, 32(5), 590-607.

126. Wallach, E. (1983). Individuals and organizations: The cultural match. *Training and Development Journal*, 37(2), 29-36.

127. West, M. A. (1990). *The social psychology of innovation in groups*. In: West, M. A. & Farr, J. L. (Eds.) Innovation and Creativity at Work: Psychological and Organizational Strategies (pp. 4-36), Wiley, Chichester.

128. West, M. A. (2002). Sparkling fountains or stagnant ponds: an integrative model of creativity and innovation implementation in work groups. *Applied Psychology: An International Review*, 51(3), 355-87.

129. West, M. A., & Anderson, N. R. (1996). Innovation in top management teams. *Journal of Applied Psychology*, 81(6), 680–693.

130. West, M. A., & Farr, J. L. (1989). Innovation at work: Psychological perspectives. *Social Behavior*, 4(1), 15-30.

131. West, M. A., & Wallace, M. (1991). Innovation in health care teams. *European Journal of Social Psychology*, 21(4), 303-315.

132. Whittaker, S., & Marchington, M. (2003). Devolving HR responsibility to the line: threat, opportunity or partnership? *Employee Relations*, 25(3), 245–261.

133. Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18(2), 293-321.

134. Wright, P. M., & Nishii, L. (2006). *Strategic HRM and organizational behavior: Integrating multiple levels of analysis*. Working paper 06-05. Ithaca, NY: CAHRS Cornell University.

135. Xerri, M. J., & Brunetto, Y. (2011). Fostering the innovative behavior of SME employees: a social

capital perspective. *Research and Practice in Human Resource Management*, 19(2), 43-59.

136. Yu, C., Yu, T., & Yu, C. (2013). Knowledge sharing, organizational climate and innovative behavior: A cross-level analysis of effects. *Social Behavior and Personality*, 41(1), 143-156.

137. Yukl, G. A. (2002). *Leadership in Organizations*. 5th ed., Prentice-Hall, Englewood Cliffs, NJ.

138. Yukl, G. A., & Van Fleet, D. D. (1992). *Theory and research on leadership in organizations.* In M. D. Dunnette & L. M. Hough (Eds.), Handbook of industrial and organizational psychology (pp. 147-197). Palo Alto: Consulting Psychologists Press.