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TAKING THE RISK OF LEARNING

A Pilot Study Exploring
Contextual and Behavioural Aspects of Organizational Learning
From the Motivational Perspective of Self-Determination Theory

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ABSTRACT

Organizational learning is considered a prerequisite for thriving in the organizational world of today. However, learning implies taking interpersonal risk. The present pilot aims at exploring the motivational aspects of learning-enhancing environments (a climate of psychological safety) and learning-oriented behaviour (voice). A web-based questionnaire was distributed to 59 employees in four different profit organizations in Sweden. Results indicated clear differences in the motivational characteristics of psychological safety and voice. Addressing psychological safety, the interpersonal relation between the leader and the employee was of great importance, as well as the fulfilment of the individual's need for belongingness. Addressing voice, the importance was instead on the individual's relation to the actual work performed, as well as to the more generally held values on what constitutes a job worth having. Implications for organizations are presented.

Keywords: self-determination theory, psychological safety, voice, risk-taking, work psychology, environmental support, organizational learning.

What risks are you willing to take today
in order to contribute to the learning of your organization?
And how willing is your organization to let you take those risks?

LEARNING – A CONTINUOUS PROCESS

Learning in organizations, and organizational learning specifically, is an actor with many faces. The concept has been researched on for decades, using a wide variety of research methods and different levels of analysis, as well as varying definitions (Edmondson & Moingeon, 1998, Shani & Docherty, 2003, Örtenblad, 2001). One approach to describing organizational learning is to view it as social interaction and individual actions that happen on a daily basis, thus sustaining an ongoing process of continuous learning, which aims at both structural and behavioural improvement and change (Sessa & London, 2006). By that definition, learning can only be said to have occurred if a change has actually taken place, be it on the behavioural or structural level. Edmondson & Moingeon (1998), as well as Sessa and London (2006), point to the importance of the learning process in today's organizations. In an environment characterized by uncertainty and change, flexibility is required in order to question, or even abandon, yesterday's knowledge in search of what will function today, or tomorrow. Thus, both organizations and individuals depend on the ability to learn for their endurance. However, learning also implies taking risks, and most of all interpersonal risks (Bushe, 2001; Edmondson, 1999; Sessa & London, 2006; Van Dyne, Ang, & Botero, 2003). At the individual level, admitting one has to learn is also admitting limited knowledge (Sessa & London, 2006). Learning is trying, and sometimes failing. In a very concrete way that exposes the individual to the risk of being criticized or negatively judged (Edmondson, 1999). Questioning a status quo could meet resistance in well established routines and hierarchies, possibly affecting one's own role in the organization (Van Dyne et al., 2003). Turning the perspective, an organization might be taking a risk when supporting continuous learning, as the employee who has started thinking critically not readily will accept a request of obedience (Sessa & London, 2006). A learning environment is thus risky for both individuals and organizations, but also offers possibilities for both: for the organization to be in tune with, and possibly ahead of, its time (Sessa & London, 2006), and for the individual to be able to speak her or his mind at the workplace (Edmondson, 1999; Van Dyne et al., 2003).

Defining learning as a process of social interaction and individual actions, the picture emerges of an arena where people must engage in behaviour that aim at a constant reformulation of the *what* and the *why* of their doings. This arena can be seen as being made up by a) the individuals perceptions of the possibility and the appropriateness of engaging in behaviour that foster learning, as described by the concept of psychological safety (Edmondson, 1999), and b) the actual behaviour enacted on the arena, as described in the concept of voice (Van Dyne & LePine, 1998). However, from the motivational perspective of self-determination theory (Deci & Ryan, 2000), one can expect people to be doing what they do for varying reasons. Simply put: they could engage in specific behaviour because they have to, or because they want to. This opens for the possibility of further understanding the qualitative differences in people's relation to the risks of learning.

THEORY AND RESEARCH

PSYCHOLOGICAL SAFETY
A CONTEXTUAL ASPECT OF ORGANIZATIONAL LEARNING

Psychological safety (Edmondson, 1999) was originally investigated at the individual- and group-level of analysis, focusing on either individual perceptions or at a shared belief amongst the members of a team about the risks of engaging in learning behaviour. The concept has also been successfully adopted to the organizational level of analysis (Baer & Frese, 2003), describing a climate of psychological safety in an organization as a whole. For the understanding of the following text, it is worth noting that the concept of psychological safety is herein mainly referred to on the level of individual perception, as the present pilot does not explore any intra-group relations.

Psychological safety describes a climate in which people feel safe to engage in certain process oriented behaviour that foster learning (Edmondson, 1999). This climate is, at the individual level, made up by perceptions of the possibility of taking the interpersonal risks that comes with learning at work. The reason why this would impose a risk to the individual is the assumption that we all, both consciously and unconsciously, are impression managers. Rosenfeld, Giacalone and Riordan (1995) define impression management as "the process whereby people seek to control the image others have of them" (p. 4). From the perspective of psychological safety, if we feel that certain behaviour might convey information which might put our image at risk, we will be less

prone to relax our guard (Edmondson, 2002b). Rosenfeld et al. (1995) consider impression management to be normal organizational behaviour, in itself neither good nor bad, as the intention behind the self-presentation lies with the individual. The behaviour is seen as universal and even evolutionary adaptive, as a mean of regulating social interactions. One of the most investigated aspects, and thus the most popular operationalization, of impression management is *self-monitoring*. Snyder (1974) define self-monitoring as differences in the way people observe and control, i.e. monitor, their expressive behaviour and self-presentation. At the heart of self-monitoring is the concern of social appropriateness. When that concern is high, the individual is more sensitive to the behaviour of others, using that information to manage her or his own self-presentation and expressive behaviour. When low, less attention is paid to these social cues, and control and monitoring of self-presentation is also lower. Gangestad and Snyder (2000) sum up on the theory of impression management by describing it as concerning "differences in the extent to which people value, create, cultivate, and project social images and public appearances" (p. 531).

Edmondson (2002b) describes impression managers as "reluctant to engage in behaviours that could threaten the image others hold of them" (p. 2). The behaviour that Edmondson describes as putting our image at risk, and promoting learning, are: asking questions; seeking feedback; experimenting; reflecting on results; discussing errors or unexpected outcomes of action; and proposing new ideas. In a work context perceived as low in psychological safety one will fear the risk of rejection, embarrassment, or punishment (Edmondson, 1999; Baer & Frese, 2003), as one might be seen as "ignorant, incompetent, negative or disruptive" (Edmondson, 2002b, p. 3). On the other hand, in a work context perceived as psychologically safe the image is not at stake. Or, as Edmondson puts it, in psychologically safe environments people have "a sense of comfort expressing their true selves" (2002b, p. 9).

Edmondson further stresses the central role of the leader in creating and maintaining a climate for learning (Edmondson, 2002b). Specific action that a leader can take to achieve this is 1) being accessible, which involves being easy to reach as well as personally involved in the team and the task of relevance; and 2) show tolerance with failure, which includes recognizing the good intention of a performance even if it turned out a failure, as well as the leader her- or himself engaging in self-disclosure (i.e. acknowledging own fallibility and also taking interpersonal risk). Rephrasing, one could describe it as being a model for the learning behaviour one aims at having in one's team.

Furthermore, drawing on goal-setting theory, Edmondson points to compelling goals as the primary motivator in the learning process. Psychological safety would have the function of a moderator, facilitating or inhibiting the positive effects of goals on learning. One way to understand that relation could be to describe the climate of psychological safety not as a *motivating* environment, but rather as a *motivated* environment. Thus, psychological safety could be understood as an individual perception of possible actions, describing a climate which has great impact on learning, a climate to a large extent modelled by the leader and affected by the individual perceptions of goals. Being to a large extent influenced by managerial actions and organizational structure, this individual perception can also vary across settings, so that one can feel safe in one setting, but not in another (Edmondson, 2002a).

VOICE
A BEHAVIOURAL ASPECT OF ORGANIZATIONAL LEARNING

As a construct voice has appeared in the organizational research with various definitions, lacking a universally accepted one (Premeaux & Bedeian, 2003). However, there are generally two conceptualizations found of the construct: a) as a structural phenomena, e.g. routines enhancing employee participation in decision making (Platow et al, 2006); or b) as a behavioural phenomena describing proactive actions that foster change (Van Dyne et al., 2003). The definition and operationalization herein is based on the work of Van Dyne and LePine (1998). They started their defining of the construct in 1995 and have then made repeated elaborations on their initial work (Van Dyne & LePine, 1998; Van Dyne et al, 2003), as well as research on the antecedents of Voice (LePine & Van Dyne, 1998). Voice is described as an extra-role behaviour, as it is "(1) not specified in advance by role prescriptions, (2) not recognized by formal reward systems, and (3) not a source of punitive consequences when not performed by job incumbents" (i.e. employees) (Van Dyne & LePine, 1998, p. 108). As a contrast, in-role behaviour is such that is required or expected, and which, if not performed, will have negative consequences for the employee. Voice behaviour is such that challenges the status quo, not merely with the purpose of complaining, but to contribute to improvement (LePine & Van Dyne, 1998), e.g. by presenting constructive suggestions, even when others disagree. Due to lingering misconceptions of the construct, as well as the need to further define it from the many similar constructs, Van Dyne et al (2003) have proposed the term pro-social voice. This elaboration puts emphasis on the different aspects of voice

behaviour, that it's intentional, proactive and other-oriented. Their final definition, to date, thus reads: "expressing work-related ideas, information, or opinions based on cooperative motives" (Van Dyne et al., 2003, p. 1371), which is well in line with their original definition and the initial intention with the construct (Van Dyne & LePine, 1998; Van Dyne et al., 2003)

Voice has also, like psychological safety, been shown to vary with levels of self-monitoring. Premeaux and Bedeian (2003) found support for their hypothesis that low self-monitors, with the increase of internal locus of control, self-esteem, top-management openness, and trust in supervisor, spoke up more often than did high self-monitors. Stating the likelihood that an organization always benefits from voice behaviour, Fuller, Barnet, Hester, Relyea, and Frey (2007) pointed to the different motives that might underlie it. Voice is not necessarily performed for the good of the group. Having more personal motives (e.g. making a good impression at one's supervisor) the individual might actually choose *not* to voice. Drawing on the differentiations of voice proposed by Van Dyne et al (2003) they conclude that the individual high in self-monitoring also is more prone to engage in defensive silence, cutting down on voice when performing poorly (Fuller et al, 2007). Interpreting their conclusion, one could say that, from a learning perspective, high self-monitors might actually be withholding information when it is most needed.

Bolino (1999) also points to the different motives to engage in pro-social behaviour, distinguishing altruistic reasons from impression management reasons. The former describes behaviour directed at helping others or contributing for non-egoistic reasons, the latter describes behaviour performed to influence the image others hold of the person. Bolino makes this distinction talking about Organizational Citizenship Behaviour (OCB). Van Dyne el al. (2003), citing Organ, claim that voice (speaking up and making suggestions for change) may be considered one of the most noble forms of OCB, as it involves taking a personal risk. This risk aspect is also addressed by Fuller et al. (2007) when emphasizing the need of organizations to reduce the risk associated with voice behaviour, as questioning the status quo and proposing changes might actually be perceived as threatening by others, especially if disturbing an order profitable to someone else (Van Dyne et al., 2003). From a learning perspective, both organizational traditions and individual attitudes that contribute to the maintaining of the status quo, inhibit learning and change (Edmondson, 2002b). Questioning the status quo by voice is, on the other hand, contributing to the continous learning of the organization, as it

describes behaviour aiming at recurring improvement (Van Dyne & LePine, 1998).

SELF-DETERMINATION THEORY
A MOTIVATIONAL APPROACH TO CONTEXT AND BEHAVIOUR

One of the central questions in psychology is the one of what it is that makes us do what we do, or in other words, what it is that *motivates* our behaviour (Kaufmann & Kaufmann, 2005). Most theories of motivation in the area of organizational psychology treat motivation as a matter of *more or less* (Gagné & Deci, 2005; Van den Broeck, De Witte, Vansteenkiste, and Lens, unpub). Contrary to this view, self-determination theory (SDT) is concerned with the matter of *what and why* (Deci & Ryan, 2000). Evolved over the past three decades, SDT is a motivational theory which, at the macro-level, aims at describing the development and functioning of personality within social contexts (Overview of Self-Determination Theory, n.d.). The human being is described as having a natural tendency towards the integration of experience into a coherent sense of self. Factors in the social environment may thwart or foster this tendency, be it in homes, schools or workplaces, thus resulting in different *types* of motivation. That is, different types of motivation which describe the reasons for why we do what we do, and the implications that has for us. The contextual and behavioural aspects of the risks in learning outlined above (psychological safety and voice) become interesting from the motivational perspective of SDT as one tries to understand why and when people would fell free to voice. In other words, why and when people would feel free to take the risk of learning.

Two distinctions are central to the understanding of the different types of motivation in SDT, as well as for the relevance of applying SDT to the work environment. These are a) extrinsic and intrinsic motivation; and b) controlled and autonomous motivation (Deci & Ryan, 2000; Gagné & Deci, 2005; Ryan & Deci, 2000). The two distinctions run along the same continuum, but work at different levels of explanation. Following is a description of the relevant components of SDT, beginning with a brief historical background describing a sub-theory which was the precursor of SDT, Cognitive Evaluation Theory (CET). This background is relevant for the understanding of the distinction of intrinsic and extrinsic motivation.

How it all began – cognitive evaluation theory

Extrinsic and intrinsic motivation

The model of extrinsic and intrinsic motivation at work was introduced by Porter and Lawler in 1968 (Gagné & Deci, 2005). They describe extrinsically motivated behaviour as such that is not inherently interesting but rather performed to attain some separable outcome. Intrinsically motivated behaviour is such performed out of pure joy for the task. The terms extrinsic and intrinsic themselves are etymologically French and can be defined as "not forming part of or belonging to a thing" and "belonging to the essential nature or constitution of a thing", respectively (Dictionary and Thesaurus – Merriam-Webster Online, n.d.). Porter's and Lawler's advice was to assure both extrinsic and intrinsic rewards in the organization, by creating a work environment which was both inherently interesting and clear in its external, or contingent, rewards (e.g. pay and promotion). Doing this would add up to a total job satisfaction, thus suggesting an additive hypothesis of motivation.

Questioning the additive hypothesis

Although much research supported Porter and Lawler's model there where anomalies questioning the additive hypothesis, stating that extrinsic rewards could actually undermine intrinsic motivation (Deci, 1971). In a meta-analysis of 128 laboratory experiments, Deci, Koestner and Ryan (1999) confirmed Deci's findings from 1971 that tangible rewards had a negative effect on intrinsic motivation when expected (e.g. performance based rewards), but not when unexpected, or when not contingent on task behaviour (e.g. salary) (see also Kaufmann & Kaufmann, 2005). Verbal reward (e.g. feedback) was also confirmed as having a positive effect on intrinsic motivation. Thus, instead of an additive relation between extrinsic and intrinsic motivation, an interactional relation was proposed. The findings were presented as CET, a sub-theory of SDT, explaining the effect of tangible rewards on intrinsic motivation as a shift in perceived locus of causality. That is, a shift in where one perceives that the cause of one's actions has its origin. The construct of perceived locus of causality was defined by DeCharms (1968, as cited in Deci & Ryan, 1985) and describes a distinction paralleling the one of intrinsic motivation (internal locus of causality) and extrinsic motivation (external locus of causality). Feedback and verbal rewards would yield an inner perceived locus of causality in relation to one's behaviour, while tangible rewards would yield an external perceived locus of causality.

Limitations of CET in the work environment

However, in organizations most activities can not be expected to be inherently interesting, although they may occur. Instead, extrinsic motivation would be the more readily expected form of motivation in such settings (Gagné & Deci, 2005). Thus, the formulation of CET opens for critique which on the one hand acknowledges the merits of intrinsic motivation, but on the other hand states that the organizational setting is an extrinsic one, where separable outcomes of behaviour are part of its very nature of profit and results. Addressing this critique opened up for a more elaborated and broader theory of motivation, SDT.

The state of the theory today – SDT

The formulation of SDT is primarily based on two theoretical developments (Gagné & Deci, 2005). Firstly, the explanation of how extrinsic motivation can become autonomous, or self-determined. This elaboration again made the work of Deci and Ryan interesting to the organizational environment. Secondly, research on individual differences in value orientation, which describes the role of more generally held beliefs.

Controlled and autonomous motivation

Addressing the first theoretical development mentioned above, a central aspect of SDT is the distinction between controlled and autonomous motivation. Controlled motivation refers to "acting with a sense of pressure, a sense of *having to* engage in the actions" (Gagné & Deci, 2005, p. 334), while autonomous motivation is described as "acting with a sense of volition and having the experience of choice" (Gagné & Deci, 2005, p. 333). Instead of focusing solely on how inherently motivated an individual is, SDT focuses on the level of self-determination in relation to a specific task, or set of tasks (e.g. the individual's job). Furthermore, just as is the case with psychological safety, where one can feel psychologically safe to exhibit interpersonal risk taking behaviour in one setting but not in another (Edmondson, 2002a), one can also be controlled in motivation towards one task, but autonomously motivated towards another (Ryan & Deci, 2000). From an impression-management perspective, referring to Bolino's (1999) description of different reasons to engage in voicing behaviour, SDT proposes a connection between reasons to voice and types of motivation (Gagné & Deci, 2005). Voicing for impression management reasons (i.e. trying to influence the image others hold of oneself) would be connected with controlled motivation, while voicing for altruistic reasons (e.g. helping

others) would be connected with autonomous motivation.

The construct of perceived locus of causality found in CET is still relevant in SDT, but has been complemented by types of behavioural *regulation*, a concept which should be understood as more state-like than trait-like (Gagné & Deci, 2005), adding depth to the understanding of the individual's reason to act. These regulations make up a sub-categorization of controlled and autonomous motivation, and along with the constructs of extrinsic and intrinsic motivation form a continuum, the self-determination continuum (Figure 1). The regulations which make up controlled and autonomous motivation are traditionally presented as five in number: external, introjected, identified, integrated, and intrinsic (Gagné & Deci, 2005; Ryan & Deci, 2000; Deci & Ryan, 2000). However, a recent validation study of the motivation at work scale (Gagné, Forest, Gilbert, Morin, & Malorni, unpublished manuscript) found no support for the regulation called integrated to form a factor of its own, suggesting an alternative categorization of the continuum where integrated as a regulatory style is removed. Several recent studies are using identified and integrated regulation as a unitary category, or even omitting the integrated regulational style (e.g. Lam & Gurland, 2008; Guay et al, 2006), for which reason the presentation below (Figure 1) will follow these lines and present the most recent categorization.

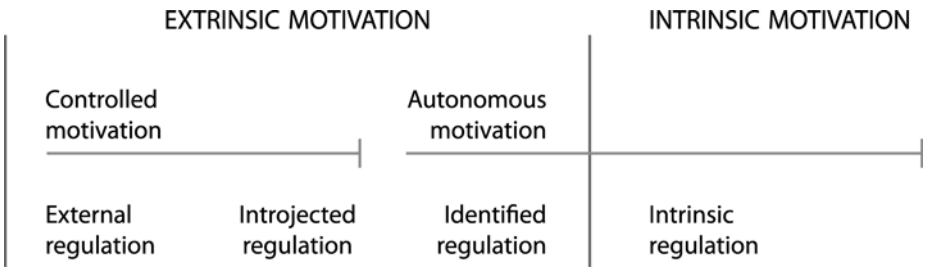

Figure 1. *The self-determination continuum, showing extrinsic and intrinsic motivation; controlled and autonomous motivation; and the different regulations.*

Internalization – climbing the ladder of autonomous motivation

The process by which controlled motivation becomes autonomous is referred to as *internalization*. The individual synthesizes and incorporates cultural and social values, demands and mores, which thereby become a more integrated part of the individual's

self (Deci & Ryan, 2000). This does not happen automatically. SDT describes the human being as having an inherent growth tendency, but it also states that environmental contingencies play a crucial role in satisfying the basic psychological needs which facilitate this growth. Looking back at the self-determination continuum (Figure 1), it could also be described as a continuum of internalization (Van den Broeck et al, unpub). The process of internalization is obtained through the satisfaction of the basic psychological needs (Deci & Ryan, 2000) and explains how external rules and mores can become personally valued goals. A Canadian study on voting behaviour demonstrated the difference between purely intrinsic motivation and autonomous forms of extrinsic motivation, in this case towards information seeking on political events, and voting (Koestner, Losier, Vallerand, & Carducci, 1996). Intrinsically motivated voters searched more information than the autonomously, but extrinsically, motivated voters. However, when analysing actual voting behaviour, this was more readily performed when being autonomously, but extrinsically, motivated. Being intrinsically motivated was associated with more information seeking, but less with the action of voting. Thus, only with more internalized forms of extrinsic motivation can one count on the motivation propelling not only self-fulfilling behaviour, but also more communitarian and pro-social behaviour.

Basic psychological needs and need satisfaction

The concept of basic psychological needs is one of the cornerstones of SDT. While much research has been done on the *strength* of needs, SDT focuses on the *satisfaction* of needs, also stating that the previous approach actually is dealing with *desires*, rather than needs (Baard, Deci, & Ryan, 2004). Basic psychological needs are those that, when satisfied, foster the inherent growth tendency in human beings and lead to well-being, and when thwarted have negative effects on well-being, resulting in controlled motivation, or even amotivation (Deci & Ryan, 2000).

There are three basic psychological needs in SDT: the need for 1) autonomy; 2) belongingness, and 3) competence (belongingness is also referred to as relatedness). Deci and Ryan (2000, p. 252) describe and define the three basic psychological needs in the following way: the need for autonomy is the need to "self-organize and regulate one's own behaviour […],which includes the tendency to work toward inner coherence and integration among regulatory demands and goals"; the need for belongingness is the need to "seek attachments and experience feelings of security, belongingness, and intimacy with others"; the need for competence is the need to engage in "optimal

challenges and experience mastery or effectance in the physical and social worlds".

The satisfaction of the basic psychological needs is dependent on conditions in the individual's environment, both in the present and in the past. To display vitality and mental health people need to be in, or have been in, environments which foster the basic psychological needs. Thus, the focus of SDT is not on the strength of individual needs, but rather on the possibilities provided by the environment to satisfy these needs. Furthermore, SDT states that the satisfaction of basic psychological needs is essential in understanding the regulatory processes underlying goal-directed behaviour. In other words, being able to pursue goals that allow or support basic psychological needs, people will experience more positive psychological outcomes. A less allowing environment will be perceived as more controlling and result in a more limited internalization. An allowing environment, on the other hand, will be perceived as more autonomous and result in a higher level of internalization. In the latter case the individual will perceive a higher degree of self-determination, or differently put, a more autonomous regulation. Again, as described in the section on controlled and autonomous regulation, on pursuing the same goal two people can have the sensation of doing so for different reasons: because of obligation, as with controlled motivation; or out of choice, as with autonomous motivation. The latter case, goal pursuit based on autonomous motivation, has also shown great relevance for some highly work relevant outcomes as performance and job satisfaction (Baard et al., 2004).

Autonomy support

A central aspect of the environment which foster need satisfaction is the presence of managerial autonomy support (Gagné & Deci, 2005). Three specific behaviour make up the definition of autonomy support: 1) giving a meaningful rationale for doing a task; 2) acknowledging that an activity might not be found to be interesting in itself; 3) putting an emphasis on choice rather than control. These behaviour are seen as fostering the satisfaction of the basic psychological needs, thus leading to higher levels of internalization and a more autonomous regulation. Autonomy support can also be described as a context that is characterized by freedom from excessive pressure to behave or think in certain ways, thus giving the individual an opportunity to actively transform behavioural regulations and their associated values into their own (Ryan & Deci, 2000). Manager autonomy support has shown to be of relevance for job satisfaction, performance, well-being and a lower degree of job absenteeism (Baard et al., 2004). Baard et al. also specify that autonomy support, rather than a characteristic of

a job itself, refers to "an interpersonal climate created by the manager in relating to subordinates and carrying out managerial functions" (p. 4). This definition parallels the description Edmondson (1999) gives on what a psychologically safe environment is, and how it can be promoted by a leader. The connection Edmondson makes to goals is also seen in the Baard et al. (2004) definition of autonomy support, when they state that some of the managerial functions which can be carried out in an autonomy supporting manner is "goal setting, decision making and work planning" (p. 4). One distinction should be made though: in the frame of SDT, the interpersonal climate characterized by autonomy support is one which allows for internalization of goals, decisions and work plans, which means that the *why* of the goal plays a key role, not only the *what* or the *how* (Deci & Ryan, 2000). The importance of the leaders behavioural style was addressed already in the formulation of CET, when stating that the interpersonal style in which rewards where administered had effect on whether one's motivation for a task would be controlled or autonomous (Deci et al., 1999).

Value orientation

The value orientation is a more general aspect of the individuals motivation, describing differences acquired through past experiences of satisfaction or thwarting of basic psychological needs (Deci & Ryan, 2000). If motivational regulation, as described above, can be seen as more of a state-like concept, value orientation represents a more trait-like one (Gagné & Deci, 2005). Value orientation is divided in two categories, extrinsic and intrinsic values (Deci & Ryan, 2008). Extrinsic values are such more focused on external indicators of worth (e.g. wealth, status, social recognition), while intrinsic values put greater emphasis on relational, communitarian and self-fulfilling values. The effect of one's value orientation is multifaceted. For example, having an extrinsic or intrinsic value orientation influences the way in which one interprets the environment as controlling or autonomous (Gagné & Deci, 2005). It also affects one's regulational style in goal pursuit, in the sense that one tends to be more autonomous when holding intrinsic values (Deci & Ryan, 2008). Furthermore, value orientation correlates with well-being, showing a negative relation between extrinsic goals and well-being, but a positive relation between intrinsic goals and well-being.

Summing up on SDT

SDT is a motivational theory that aims at explaining the prerequisites, the process and the effects of different types of motivation. One major applicability to the organizational environment would be its view of the individuals relation to a task or set of tasks as the

result of an internalization process. In environments tending to the basic psychological needs that foster the innate growing and learning tendency of human beings, the individual has the chance of making external values and mores her or his own. This process of internalization provides a shift of locus of causality, or regulation, the perception one has of where the initiation of one's action lies. One becomes more self-detemined. Apart from the present relation to one's work, SDT also refers to the influence of one's history of need satisfaction. Thus, the more trait-like concept of value orientation opens for the understanding of the influence the past might have on the present, as well as the influence the present might have on what is yet to come.

THE PRESENT PILOT

The aim of the present pilot is to explore the contextual and behavioural aspects of organizational learning from a motivational perspective. The contextual aspect is supplied by Edmondson (1999) and the construct of Psychological Safety. The behavioural aspect is supplied by Van Dyna and LePine (1998) and the concept of Voice. The motivational perspective is supplied by Deci and Ryan (2000) and their formulation of the Self-Determination Theory.

Furthermore, by applying SDT to contexts and behaviour that foster risk taking, and learning, one also has the opportunity of shedding light on more qualitative aspects of these phenomena. Thus, the approach in the present pilot is both an exploration of the applicability of SDT as a motivational theory in the organizational setting, as well as an elaboration on the constructs of psychological safety and voice.

Much research has naturally been done on the questions of learning climate and learning behaviour. However, considering the motivational approach, most studies rely on a few major theories, as e.g. goal-setting theory and social cognitive theory (Gagné & Deci, 2005; Van den Broeck et al., unpub). The SDT research has addressed questions of learning, both from the climate and behavioural perspective, but mainly focusing on the school setting (e.g. Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004).

To my knowledge, no work has been published where organizational learning, viewed from a perspective of risk-taking, is investigated from the motivational standpoint of SDT. Hence, neither have I found any published work applying SDT to the combination of

psychological safety and voice, specifically. Furthermore, SDT being a theory most widely applied in the contexts of school, health and sport, there is a general request in the SDT-community for research in the organizational environment (Gagné & Deci, 2005). This is also due to the fact that SDT was quite recently introduced on the arena of organizational psychology (Van den Broeck et al., unpub).

OUTLINING THE ANALYSIS

The present pilot is directed at the work area. Thus, in two cases, instead of general motivational measures, more specifically work related measures will be used. These are 1) autonomous and controlled work motivation (general counterpart: controlled and autonomous motivation); and 2) extrinsic and intrinsic work value orientation (general counterpart: extrinsic and intrinsic value orientation). Other measures are either already directly related to the work area (e.g. psychological safety), or tap more basic human functioning (e.g. basic psychological needs).

Drawing on Edmondson's (1999) description of what creates psychologically safe environments (the emphasis on the participative role of the leader and on setting compelling goals), a relation to this construct is expected of both autonomy support (SDT) and the perception of goals, herein operationalized as goal-clarity (Huang & Sverke, 2007). In order for the perspective of SDT to be valid in the understanding of a relation between autonomy support and psychological safety, the relation is expected to be mediated by the satisfaction of basic psychological needs.

Considering the perception of being able to speak up in an psychologically safe environment, such a climate is expected to be related to voice, as both imply a certain amount of risk-taking (Edmondson, 1999; Van Dyne et al., 2003; Fuller et al., 2007), and as both present similar descriptions of behaviour that lead to organizational learning. Drawing on the issue of personal motives for engaging in voice, including the point made by Van Dyne et al. (2003) about voice being the most noble form of organizational citizenship behaviour, one could also expect a relation between voice and autonomous work motivation, as described in SDT. However, considering the description by Fuller et al. on the effects of self-monitoring on voice, it becomes interesting to look at the more trait-like sides of motivation, namely the work value orientation. If voice, as measured here, is to reflect the nobility stated by Van Dyne et al. (2003), then a positive relation

would be expected with intrinsic work values, as they also reflect values more directed at contribution and interactivity (Deci & Ryan, 2000).

RESEARCH QUESTIONS AND HYPOTHESES

The general research question of this pilot study is: What are the relations between the motivational aspects of SDT and a) the perception of the work context as one in which the risk of learning is possible to take, as described by the concept of psychological safety; and b) extra-role behaviour that foster organizational learning, as described by voice?

A few hypotheses will constitute the backbone of the analysis of data. However, the research question stated above also opens for a more explorative approach. Thus, apart from addressing the specific hypotheses, elaborations will also be made based on interesting correlations and results of hypothesis analysis.

H1: variables specifically expected to predict psychological safety are:

a) autonomy support
b) general need satisfaction
c) goal clarity

H2: variables specifically expected to predict voice are:

a) psychological safety
b) autonomous work motivation
c) intrinsic work value orientation

H3: need satisfaction is expected to mediate

a) a possible relation between autonomy support and psychological safety

METHOD

The present pilot has a cross-sectional design. Data was collected using a web-based questionnaire. The full questionnaire was created and administered using the free web-application LimeSurvey (www.limesurvey.org). A web page was created for information purposes (www.silvapsykologi.se). Email was used to communicate with participants who had questions about the project or the questionnaire.

PARTICIPANTS

A total of 82 individuals received email with invitation to complete the questionnaire. Of these, 69 initiated their responding, thus resulting in a decline from 13 individuals. Of the 69 participants, 59 responded all items of the questionnaire, while 10 responded a varying amount of items. Summing up, the present pilot counted with the participation of 59 to 69 individuals. Relevant demographic data is presented in Tables 1a and 1b. No individual reward was given for participation.

Table 1a. *Gender distribution.*

		Frequency	Percent
Valid	Female	39	56,5
	Male	30	43,5
	Total	69	100

Table 1b. *Age, and work related data.*

	N	Minimum	Maximum	Mean	Std. Deviation
Age	69	26	66	46	11
Years at present work	69	1	34	9	7
Years at work, general	69	1	50	25	12
Time at meetings, week	68	0	20	3	3
Number of cowerkers	68	2	60	16	10
Valid N (listwise)	68				

PROCEDURE

Organizations were selected trough the database 121.nu, browsing branches a-ö and selecting targets fulfilling the following criteria: 50-500 employees; located in Sweden, allowed to be part of a bigger financial group; service industry; profit-organizations; probability of having a considerable number of office employees (excluding mainly consultant based organizations); having a web page of their own (to secure existence); priority of Stockholm, Uppsala and Gothenburg. A total of 50 organizations were contacted for participation, out of which four accepted.

All organizations were contacted centrally through an email offering participation (Appendix I). When possible the Chief Executive Officer was contacted directly. If not available, the Human Recource Manager, or equivalent, was contacted. E-mail correspondence was followed by telephone communication. Recruiting was done in two episodes due to difficulties of getting acceptance of participation, in fall 2007 and spring 2008. Varying descriptions of the project was sent out depending on demands and questions. The selection of possible participants were made by the organizations themselves. This could be through a team leader wanting to include her or his team, or an internal request for participation resulting in a number of names supplied by the organization. Feedback on results of the pilot was offered to all organizations.

Each participant received an e-mail containing an invitation to participate in the pilot, and a link to the individual copy of the web-based questionnaire. This e-mail was sent using the web-survey application. The participants could themselves decide when and where to complete the questionnaire, as well as saving an uncompleted questionnaire for later completion. A database containing all participants was created in the application. On completion the results were gathered by the web-bases application in a separate database stripped of information about the individual participant. Thus, after completing the questionnaire, all responses became depersonalized and completely anonymous. All participants were informed about this procedure. Confirmation of completion was sent both to me and to the participant.

A total of eight measures formed a questionnaire consisting of 118 items (Appendix II, items in Swedish), including demographic variables. To adapt the questionnaire to the web-environment, allowing a reasonable amount of items per screen, the items where divided in 13 categories. Thus, the more extensive measures where sub-grouped as

follows: Need Satisfaction (2 groups, 9 items in each); Motivation at Work Scale (3 groups, 12, 12 and 11 items); and Work Value Orientation (2 groups, 9 items in each). Estimated time for completing the questionnaire was 20-30 minutes.

Item translation

All measures were obtained either through articles published in scientific journals, or by personal communication with Anja Van den Broeck, Centrum for Motivational Psychology, Katholieke Universiteit Leuven, Belgium. All items were in either English or Dutch, thus requiring translation. Two methods were used for this purpose.

English-Swedish translation procedure

All English items were translated according to the suggestions made by Behling and Law (2000) on translation and back-translation. In the first step all items were translated from English to Swedish by me. In the second step, the list of items were distributed to three individuals, all with excellent knowledge in English, who back-translated the items, independent of each other, from Swedish to English. The individuals had no knowledge of the original wording of the items. In the third step a comparison was made by me between the original English items and the ones supplied by the back-translators. Major differences were identified and a new translation made by me. The new set of items were then returned to the back-translators. The final back-translation showed only minor differences between original items and translation. The second version of the translated items was kept for inclusion in the questionnaire.

Dutch-Swedish translation procedure

All Dutch items where translated using an alternative version of the suggestions made by Behling and Law (2000). The list of items were sent directly to two Dutch and English speaking individuals, who independent of each other translated the items into English. The items were compared to each other and a translation into Swedish was made by me. These Swedish items then underwent the same translation / back-translation procedure as the one described under the English-Swedish translation procedure.

MEASURES

Cronbach's alpha is generally used for reporting the internal consistency amongst the items in a scale (Pallant, 2007). The ideal is for a scale to report a Cronbach's alpha of above .7 (Clar-Carter, 2004; DeVellis, as cited in Pallant, 2007). As Cronbach's alpha is sensitive to the number of items in a scale (Pallant, 2007; Briggs & Cheek, 1986), especially when the number of items are less than ten (Pallant, 2007), the mean inter-item correlation, which reports the homogeneity among items and is not sensitive to the length of the scale, is also reported. The optimal values of the mean inter-item correlation is of .2 to .4 (Briggs & Cheek, 1986). Values lower than .1 suggest a disparate set of items, while values above .5 suggest redundant items and a construct too specifically measured.

Psychological safety

The measure for psychological safety contained six items (Baer & Frese, 2003). The item collection was an alternative version of the original seven-item scale developed by Edmondson (1999). Baer and Frese excluded one item ("No one in this organization would deliberately act in a way that undermines others' efforts") for being misleading as it was interpreted as negatively worded. Items from the scale have been used to varying amount and adopted to specific settings in several studies, reporting alphas between .73 and .82 (Tucker, Nembhard, & Edmondson, 2007; Baer & Frese, 2003; Edmondson, 1999). Baer & Frese reported an alpha of .82. A sample item is "Members of this unit are able to bring up problems and tough issues". The scale was translated into Swedish using the English-Swedish procedure described above. Measurement was made on a seven point Likert-scale. Averaged scores where used for analysis. Internal consistency was good (α = .83). Mean inter-item correlation was within acceptable range (.47).

Voice

The measure for voice contained six items developed by Van Dyne and LePine (1998), alphas .82 to .89. The same measures have also been used by Fuller et al (2007), alpha .97, and LePine & Van Dyne (1998), alpha .95. A sample item is "I speak up in this group with ideas for new projects or changes in procedures". The scale was translated into Swedish using the English-Swedish procedure described above. Measurement was made on a seven point Likert-scale. Averaged scores where used for analysis. Internal consistency was good (α = .88), however mean inter-item correlation suggested redundant items or a measure too specifically measured (.53).

Need satisfaction

The measure for need satisfaction contained 18 items (Van den Broeck, Vansteenkiste, & De Witte, 2008). The scale consists of items measuring the three basic psychological needs. Sample item are, for competence "I really master my tasks at my job"; for belongingness "I often feel alone when I am with my colleagues" (reversed item); and for autonomy "At work, I often feel like I have to follow other people's commands" (reversed item). The items were translated using the English-Swedish procedure described above. Measurement was made on a five point likert scale. A general need satisfaction scale was computed averaging scores from all three sub-scales: need for competence, need for belongingness, and need for autonomy. Sub-scales were computed averaging the scores of respective items. Internal consistency for the general need satisfaction scale was acceptable (.78). Mean inter-item correlation was within acceptable range (.19). For the subscale belongingness (six items) the internal consistency was acceptable (.72), and the mean inter-item correlation was within optimal range (.33). For the subscale comptence (six items) the internal consistency was good (.84), and the mean inter-item correlaiton was within acceptable range (.48). For the subscale autonomy (six items) the internal consistency was less than acceptable (.59), however the mean inter-item correlaiton was within acceptable range (.19).

Autonomy support

The measure for autonomy support contained seven items (Baard et al., 2004). A sample item is "My manager encourages me to ask questions". The items where translated using the Dutch-Swedish procedure described above. Measurement was made on a seven point Likert-scale. Averaged scores where used for analysis. Internal consistency was good (.82). Mean inter-item correlation was within optimal range (.40).

Motivation at work

The measure for motivation at work contained 35 items (Vansteenkiste & Van den Broeck, 2008). Two subscales were computed using items measuring external, introjected, identified and intrinsic regulation. These two were controlled work motivation (external and introjected) and autonomous work motivation (identified and intrinsic). Sample items, answering the question of why one would put effort into one's job, was for the external regulation subscale "Because others oblige me to do so"; for the introjected regulation subscale "Because it is my duty vis-à-vis my employer to put effort in my job"; for the identified regulation subscale "Because putting effort in this job has

personal significance to me"; for the intrinsic regulation subscale "Because of the interest I have for this type of work". The items where translated using the English-Swedish procedure described above. Measurement was made on a seven point Likert-scale. For the subscale controlled work motivation (eight items) the internal consistency was acceptable (.79), and the mean inter-item correlation was within optimal range (.34). For the subscale autonomous work motivation (14 items) the internal consistency was good (.92), and the mean inter-item correlation was within acceptable range (.47).

Work value orientation

The measure for work value orientation contained 18 items (Vansteenkiste, Neyrinck, Niemic, Soenens, De Witte, & Van den Broeck, 2007). Two subscales were computed using items measuring extrinsic and intrinsic work value orientation. A sample item for extrinsic work value orientation is "It is important for me to have a job in which I have a position with a lot of power". A sample item for intrinsic work value orientation is "it is important for me to have a job through which I can make a small contribution to make the world a better place". The items where translated using the English-Swedish procedure described above. Measurement was made on a five point Likert-scale. For the subscale extrinsic work value orientation (nine items) the internal consistency was good (.85), and the mean inter-item correlation was within optimal range (.39). For the subscale intrinsic work value orientation (nine items) the internal consistency was less than acceptable (.48), however the mean inter-item correlation was within acceptable range (.12).

Goal clarity

The measure for goal clarity contained four items based on Rizzo et al. and Caplan (Huang & Sverke, 2007), with an alpha of .74. A sample item is "I have a clear sense of what tasks make part of my work role". The items were translated using the English-Swedish procedure described above. Measurement was made on a five point Likert-scale. Averaged scores were used for analysis. Internal consistency was good (.86). However, mean inter-item correlation suggested redundant items or a measure too specifically measured (.63).

Job satisfaction

The measure for job satisfaction contained three items developed by Hellgren and Sverke (1997) and has shown alphas of .85 to .88 (Bernhard & Sverke, 2003; Nordqvist, Hovmark, & Zika-Viktorsson, 2004). A sample item is "I feel happy with the job I have".

The items were translated using the English-Swedish procedure described above. Measurement was made on a five point Likert-scale. Averaged scores were used for analysis. Internal consistency was good (.89). However, mean inter-item correlation suggested redundant items or a measure too specifically measured (.74).

STATISTICAL ANALYSIS

General analysis

Estimation of reliability of measures was performed by calculating Cronbach's alpha and the mean inter-item correlation. A number of regression analysis were performed, all checked for the assumptions of the method according to procedures in Pallant (2007). These includes checking for multicollinearity, outliers, normality, linearity, homoscedasticity and independence of residuals. In the procedure Pallant mainly refers to Tabachnick and Fidell (2007) for different cut-off values. Furthermore, in all cases, the evaluation of the regression models are based on the adjusted R square value. This is due to the small sample size, as adjusted R square in those cases provides a better estimate of the true population value (Pallant, 2007). Finally, the relevance of variables to include in the predictive analyses were estimated by a) theoretical relevancy, resulting in the formulation of hypotheses, and b) variables which correlate with the dependent variable with a value of beta > .3 (Pallant, 2007).

Normality

All measures were checked for normality conducting a significance test for skewness, applying a conservative alpha level of .01, and cut off values beyond the range of approximately z = +/- 2.3 (Tabachnick & Fidell, 2007). The procedure consisted of dividing the skewness-value with its standard error, resulting in a z-value which was compared to its corresponding probability table (Clark-Carter, 2004). As regression analysis, which was intended in the present pilot, assumes normality (Tabachnick & Fidell, 2007; Pallant, 2007), transformation was conducted on variables not meeting this assumption. Transformation was done using the method reflect and logarithm (Pallan, 2007, p. 86).

All variables were checked for outliers. Where indicated by the statistical program, a

comparison was made between the variables mean value and its 5% trimmed mean to estimate the impact of the outlier(s) (Pallant, 2007).

Correlation

Bivariate analysis using Pearson's *r* was conducted on all major scales and sub-scales.

Prediction

Addressing hypothesis 1, a standard multiple regression analysis was performed to explore the prediction of psychological safety, assessing the relative importance of three variables (autonomy support, general need satisfaction and goal clarity). Goal clarity, which resulted non-significant, was excluded and a new analysis was performed to determine the most influential predictor of the two remaining variables (autonomy support and general need satisfaction). The unique variance of each variable was computed by squaring the semi-partial correlation coefficient.

The following elaborations were performed on hypothesis 1:

1) The analysis described above was repeated adding autonomous work motivation
2) Hierarchical multiple regression analysis was performed to asses the relative importance of the three sub-scales of need satisfaction (need for autonomy, need for belongingness, need for competence) in predicting psychological safety, while controlling for autonomy support.
3) Partial correlation was performed on goal clarity and psychological safety, controlling for a) autonomy support; and b) need for belongingness.

Addressing hypothesis 2, a standard multiple regression analysis was performed to explore the prediction of voice, assessing the relative importance of three variables (psychological safety, autonomous work motivation, intrinsic work value orientation). Psychological safety, with an initial correlation of $r = .29$, below the limit of inclusion mentioned above, was still included due its specificity in the hypothesis. However, the variable proved insignificant in the regression model and was thus excluded. A new analysis was performed to determine the most influential predictor of the two remaining variables (autonomous work motivation and intrinsic work value orientation). The

unique variance of each variable was computed by squaring the semipartial correlation coefficient.

The following elaborations were performed on hypothesis 2:

1) The analysis described above was repeated adding general need satisfaction
2) Partial correlation was performed on psychological safety and voice, controlling for a) intrinsic work value orientation, b) autonomous work motivation; and c) general need satisfaction.

Mediation

Addressing hypothesis 3, a mediation analysis, following the guidelines of Baron & Kenny (1986), was used to assess the assumption of general need satisfaction mediating the relation between autonomy support and psychological safety.

The following elaborations were performed on hypothesis 3:

1) Mediation analysis inserting the need for belongingness as a sole mediator
2) Mediation analysis inserting the need for autonomy as a sole mediator
3) Mediation analysis inserting the need for autonomy and the need for belongingness as a combined mediator. This new variable was an averaged variable of the two need variables, computed by adding the them into one and dividing the sum by two (the number of variables).
4) Partial correlation was performed on psychological safety and the need for competence, controlling for the need for autonomy and the need for belongingness. In this case, the two original variables were entered simultaneously as control variables into the computation. Hence, this elaboration was not performed with the combined need variable described in point 3 above.

All analyses were made using SPSS 15.0 for Windows. Mediation analysis also counted with the use of the excel-based statistical application MedGraph (Medgraph – Graphical depiction of mediation, n.d.).

RESULTS

Normality

Four variables showed significant skewness (psychological safety, z = -3.62; need for competence, z = -2.54; goal clarity, z = -3.08; job satisfaction, z = -3.56). Transformation was conducted on the four variables, in all cases using the method reflect and logarithm (Pallan, 2007, p. 86). All transformations had a positive effect on respective scales, resulting in non-significant skewness (psychological safety, z = 0.95; need for competence, z = 0.30; goal clarity, z = 0.04; job satisfaction, z = 0.07). Transformation also had the effect of removing outliers present for the above mentioned variables.

Checking for outliers, only small differences were found between the variables mean value and their 5% trimmed mean, indicating a marginal effect of the outliers. The outliers were not given further attention.

Correlations

Table 2. *Bivariate correlations on central variables.*
Eight main variables(one with three sub-variables)

		AS	AM	IWVO	GNS	SNA	SNB	SNC	PS	V	GC
Autonomy Support (AS)	Pearson Correlation										
	Sig. (2-tailed)										
	N										
Autonomous Motivation (AM)	Pearson Correlation	,409**									
	Sig. (2-tailed)	,001									
	N	61									
Intrinsic Value Orientation	Pearson Correlation	,184	,348**								
	Sig. (2-tailed)	,163	,007								
	N	59	59								
General Need Satisfaction (GNS)	Pearson Correlation	,334**	,362**	,354**							
	Sig. (2-tailed)	,006	,004	,006							
	N	65	61	59							
Satisfaction of Need for Autonomy (SNA)	Pearson Correlation	,359**	,325*	,111	,662**						
	Sig. (2-tailed)	,003	,011	,403	,000						
	N	65	61	59	66						
Satisfaction of Need for Belongingness (SNB)	Pearson Correlation	,253*	,241	,466**	,719**	,195					
	Sig. (2-tailed)	,042	,061	,000	,000	,117					
	N	65	61	59	67	66					
Satisfaction of Need for Compentece (SNC)	Pearson Correlation	,125	,200	,140	,740**	,315*	,261*				
	Sig. (2-tailed)	,319	,122	,292	,000	,010	,033				
	N	65	61	59	67	66	67				
Psychological Safety (PS)	Pearson Correlation	,559**	,360**	,192	,535**	,329*	,537**	,263*			
	Sig. (2-tailed)	,000	,005	,144	,000	,011	,000	,044			
	N	59	59	59	59	59	59	59			
Voice (V)	Pearson Correlation	,265*	,451**	,482**	,344**	,186	,279*	,253	,288*		
	Sig. (2-tailed)	,042	,000	,000	,008	,159	,032	,053	,027		
	N	59	59	59	59	59	59	59	59	59	
Goal Clarity (GC)	Pearson Correlation	,528**	,319*	,205	,404**	,313*	,287*	,260*	,494**	,127	
	Sig. (2-tailed)	,000	,014	,119	,002	,016	,028	,047	,000	,338	
	N	59	59	59	59	59	59	59	59	59	
Job Satisfaction (JS)	Pearson Correlation	,379**	,617**	,239	,461**	,476**	,326*	,207	,493**	,261*	,448**
	Sig. (2-tailed)	,003	,000	,069	,000	,000	,012	,116	,000	,046	,000
	N	59	59	59	59	59	59	59	59	59	59

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Prediction

Addressing hypothesis 1, evaluating predictors of psychological safety, the total variance explained by the final model was 42.8%, F (2, 56) = 22,74, p < .001. Autonomy support proved to be the most influential predictor of the two with beta = .43, p < .001, followed by general need satisfaction with beta = .39, p < .001. The unique contribution of each variable was 16% for autonomy support, and 14% for general need satisfaction.

Elaborations on hypothesis 1 showed the following results:

1) Autonomous work motivation showed no predictive ability
2) Assessing the relative importance of the three sub-scales of need satisfaction in predicting psychological safety, while controlling for autonomy support, the total variance explained by the model as a whole was 45.6%, F (2, 56) = 22,74, p < .001. The three need satisfaction sub-scales explained an additional 18% of the variance in psychological safety, after controlling for autonomy support, R squared change = .18, F change (3, 54) = 6.45, p = .001. However, in the final model, both need for autonomy and need for competence proved insignificant. Autonomy support remained the strongest predictor with beta = .42, p < .001, followed by need for belongingness with beta = .39, p < .001. The unique contribution of each variable was 15% for autonomy support, and 14% for need for belongingness.
3) In the partial correlations, a) introducing autonomy support as a control variable, the relation between goal clarity and psychological safety dropped from r = .56, p < .001, to r = .28, p = .031; and b) introducing need for belongingness as a control variable, the relation dropped from r = .56, p < .001, to r = .42, p = .001.

Addressing hypothesis 2, evaluating predictors of voice, the total variance explained by the final model was 29.9%, F (2, 56) = 13,39, p < .001. Intrinsic work value orientation proved to be the most influential predictor of the two with beta = .37, p = .003, followed by autonomous work motivation with beta = .32, p = .008. The unique contribution of each variable was 12% for intrinsic work value orientation, and 9% for autonomous work motivation.

The following elaborations were performed on hypothesis 2:

1) General need satisfaction showed no predictive ability
2) All partial correlations resulted in a decrease of the correlation between

psychological safety and voice to a level of non-significance.

Mediation

Addressing hypothesis 3, introducing general need satisfaction as a mediator, the relation between autonomy support and psychological safety dropped from $r = .56$ ($p < .001$) to $r = .42$ ($p < .001$). The direct effect remaining significant, along with the significant Sobel test ($z = 2.2$, $p = .028$), suggested a partial mediation. Dividing the indirect effect ($r = .14$) with the total effect ($r = .56$), pointed to 25% of the effect of autonomy support on psychological safety going through general need satisfaction.

The following elaborations were performed on hypothesis 3:

1) Inserting the need for belongingness as a sole mediator resulted in no mediation
2) Inserting the need for autonomy as a sole mediator resulted in no mediation
3) Inserting the variable combining the two needs in point 1 and 2 above, the relation between autonomy support and psychological safety dropped from $r = .56$ ($p < .001$), ro $r = .38$ ($p < .001$). The direct effect remaining significant, along with the significant Sobel test ($z = 2.5$, $p = .012$), suggested a partial mediation. Dividing the indirect effect ($r = .18$) with the total effect ($r = .56$), pointed to 32% of the effect of autonomy support on psychological safety going through the satisfaction of the two needs for autonomy and belongingness.
4) In the partial correlation, inserting the needs for autonomy and belongingness as control variables, the relation between psychological safety and the need for competence resulted non-significant, dropping from $r = .26$, $p = .04$, to $r = .08$, $p = .55$.

DISCUSSION

The aim of the present pilot was to explore contextual and behavioural aspects of organizational learning from the motivational perspective of SDT. Organizational learning is considered a prerequisite for thriving in the organizational world of today (Sessa & London, 2005). It is also generally considered to be associated with interpersonal risk-taking (Edmondson, 1999; Sessa & London, 2005; Van Dyne et al., 2003). As the motivational perspective of SDT is rather new to the organizational setting (Van den Broeck et al., unpub), research is needed to test its applicability. Exploring the different aspects of SDT in relation to more established organizational construct is one way of doing this. Furthermore, by applying SDT to contexts and behaviour that foster risk taking, and learning, one also has the opportunity of shedding light on more qualitative aspects of these phenomena. Thus, the approach in the present pilot is both an exploration of the applicability of SDT as a motivational theory in the organizational setting, as well as an elaboration on the constructs of psychological safety and voice.

The results can be summarized in four major points:

1) Addressing the prediction of psychological safety, results indicated a great importance of the interpersonal relation between the leader and the employees, as measured by autonomy support. Worth mentioning is also the high predictability by the need of belongingness, specifically, compared to the other needs. Furthermore, autonomous work motivation showed no predictive ability.
2) Addressing the relation between goal clarity and psychological safety, this was found to be highly influenced by autonomy support. Furthermore, the need for belongingness was found to play only a minor role in this relation. This might indicate the importance of the interpersonal framing of goals.
3) Addressing the prediction of voice, the more trait-like concept of intrinsic work value orientation was found be of great importance, along with the more state-like concept of autonomous work motivation. However, a climate of psychological safety showed no predictive ability in relation to voice.
4) Addressing general need satisfaction as a mediator between autonomy support and psychological safety, partial mediation was concluded. However, a combination of only the needs for autonomy and belongingness seemed to give the best picture of the mediation relation. The need for competence showed no relation to psychological safety after controlling for the both the need for autonomy and the need for autonomy belongingness.

The prediction of psychological safety

One of the central assumptions of the present pilot was the presence of a relation between autonomy support and psychological safety, due to the similarities between Edmondson's (1999) description of what leaders and managers can do to promote a climate of psychological safety, and the descriptions in SDT of the behaviour that characterize autonomy support. The relation between the constructs was strong, even suggesting predictability by autonomy support on psychological safety. However, from the motivational perspective of SDT, such a relation could only be understood as the result of a satisfaction of basic psychological needs. The mediation analysis was provided in order to test the applicability of SDT in understanding the relation between manager support and climate characteristics. Results confirmed general need satisfaction as, partially, explaining the relation between the two. However, questions about the more precise character of the mediation were raised by the fact that the need for belongingness was the sole predictor of psychological safety amongst the basic psychological needs. A mediation analysis only including the need for belongingness showed no effect. As no correlation was present between autonomy support and the need for competence, a mediation analysis was performed on the combination of the need for belongingness and the need for autonomy. This analysis yielded an even higher percentage of explanation on the relation between autonomy support and psychological safety. Thus, although the need for belongingness was the sole predictor of psychological safety amongst the basic psychological needs, an understanding of the relation between autonomy support and psychological safety must also include the satisfaction of the need for autonomy. On the other hand, the specific predictability of the need for belongingness on psychological safety might be understood as an explanation of a characteristic of the climate, a sense of pertaining to a group and trusting its members. It is noteworthy also that the need for competence plays no role in these relations, neither as a predictor, nor as a part in the mediation. Furthermore, controlling for the two needs of belongingness and autonomy, no significant relation remained between the need for competence and psychological safety.

The above indicates that, from the motivational perspective of SDT, the concept of psychological safety is to be understood mainly as being associated with a sense of freedom to act and of being part of the team. Mastering one's work does not seem to play any significant role in the experience of a climate as psychologically safe. This is further supported by the lack of predictability on psychological safety by autonomous work

motivation. The reasons for why one puts effort into one's job do not predict this kind of climate. Thus, the sensation of the possibility to act seems to play a bigger role in the motivational relation between autonomy support and psychological safety, than one's actual reasons for acting.

The relation between goal clarity and psychological safety

Based on the research of Edmondson (1999) one could expect a strong relation between goal clarity and psychological safety, as Edmondson describes the process of setting compelling goals as decisive for a psychologically safe environment. As is seen in the correlation matrix, that is indeed the case. However, controlling for autonomy support, based on the assumption that the psychological environment in which the goals are presented matters, the relation was basically halved. It is interesting to note that the need for belongingness, the other predictor of psychological safety apart from autonomy support, did not have an effect even near of the one presented by autonomy support. These findings indicate that the interpersonal environment in which the goals are presented is of great importance. This is partly assumed by both SDT (Deci & Ryan, 2000) and Edmondson (1999). However, when stressing the importance of what is referred to as compelling goals, Edmondson puts the main emphasis on these goals being a) meaningful, in the sense of aiming at some agreed upon organizational value; and b) sufficiently challenging, more in line with the concept of flow (2002b). Lacking in that explanation, but showing in the results herein, is the importance of the interpersonal environment which frames the presentation of the goals.

The prediction of voice

Before discussing the prediction of voice, it is worth noting that the measure for intrinsic work value orientation, a major predictor of voice, showed some conflicting results concerning its reliability. Its internal consistency, as measured by Cronbach's alpha, was well below the generally accepted limit of .7. This, of course, opens for the argument that the variable is by no means accountable, and should not be included in the analysis. However, apart from the argument that the present work is a pilot and therefore might allow explorations on less solid grounds, it is worth noting that the mean inter-item correlation, suggested as a better measure of reliability on short scales (Pallant, 2007), was within the range of acceptability. Thus, in the following, all analysis including the variable must be read taking its weaknesses into account, but without rejecting the interest of what the results might be pointing at.

Analysing the prediction of voice, one of the most interesting result patterns in the present pilot emerges. While the predictors of psychological safety seemed to be related to perceptions of the environment, the predictors of voice seem more related to the individual's actual relation to work. The measures for these predictors are distinct, but do show some similarities relevant to the discussion herein. The measure of motivation at work specifically asks questions of why one puts effort into ones job, thus describing the motivational relation to one's present doings. Intrinsic work value orientation on the other hand describes a more general view on what kind of job one would want to have, or what it is that one values in a work situation. Although on different levels, both measures describe one's relation to work. Motivation at work might be said to describe one's relation to *the work*, while work value orientation might describe one's relation to *a work*, or just work, in plural. Thus, while opinions about the work environment seem to predict perceptions of climate characteristics, prediction of voice seems to rely more on the actual relation to work as a specific set of tasks, and to values related to work on a more general level.

The gap between psychological safety and voice

The interpretation presented above to understand the difference between the predictors of psychological safety and the predictors of voice might also be one which helps explaining the lack of predictability of psychological safety on voice. Admittedly, Edmondson does not state that a psychologically safe environment will lead to voice. However, she does state that environments where people do take the risk of learning also tend to be characterized by a climate of psychological safety (e.g. Edmondson, 2006). In other words, Edmondson claims no causality in the relation, but point to a great coexistence. Still, as enacting in voice behaviour is also assumed to be associated with taking interpersonal risks (Van Dyne et al., 2003; Fuller et al., 2007), and as low levels of impression management are assumed to characterize the presence of both psychological safety and voice (Edmondson, 1999; Fuller et al., 2007; Premeaux & Bedeian, 2003), one could have expected psychological safety to at least predict the enactment in voice. Now, in the present pilot, this was not the case. Why? Perhaps because there are some central characteristics which separate these two aspects of organizational learning. Recapitalizing what predicted psychological safety (the two needs of autonomy and belongingness, and autonomy support), and what predicted voice (autonomous work motivation and intrinsic work value orientation), the difference might actually be one between being *prepared* to learn, on the one hand, and explicitly engaging in learning behaviour, on the other. Thus, being prepared to learn

would not predict actual learning behaviour. What it might predict though is effectiveness in learning when needed. Or put differently: an ability of risk-taking when required. This relation is not explored in the present pilot, however it is in line with findings made by Edmondson (2007) on implementation of new medical equipment in a hospital setting, where teams high on psychological safety succeeded better than those where risk-taking was not encouraged.

Taking the risk of learning – implications for organizations

From the motivational perspective of SDT, the differences described above between psychological safety and voice also describe different processes. In the case of psychological safety, the question would be: what can one do to prepare e.g. a team for learning? The SDT answer would be to give autonomy support, in order to satisfy the basic psychological needs, and, while doing this, aiming specifically at the needs for autonomy and belongingness. In the case of voice, the question would be: what can one to do to reach higher levels of pro-social contribution at the work place? SDT would propose a focus on the values and mores that constitute the organization. The internalization of these values and mores would, as suggested by the present pilot, be predictive of employees contributing in a pro-social manner. Worth noting here is also the aspect of autonomy in higher levels of internalization, as described by the concept of work motivation. Thus, an internalization process could not be achieved by forcing individuals to accept organizational values and mores. That would rather parallel the definition of controlled work motivation. Instead, internalization would have to count with a give-and-take process between employee and manager. Furthermore, in promoting voice at the work place, SDT would suggest a look at the personnel selection process. An individual's work value orientation is not readily changed, as it constitutes more generally held perceptions of work. Thus, wanting employees that engage in pro-social behaviour, certain value orientations might have to be favoured.

Worth noting here is the difference between causality, on the one hand, and correlation and prediction on the other. The implications mentioned above are not to be understood as actions one can take to causally achieve an outcome of psychological safety or voice. The active component of the relation between the constructs is beyond the scope of the present pilot, as well as of the design and statistical tools chosen for it. However, in a world that is full of variables which are impossible to control, one can address what is addressable. Thus, even if one variable herein can't be said to cause the other, they can be said to coexist. Therefore, in a pragmatic approach, working with one of them may

very well trigger the active component that links them, and wanted outcomes might actually be more or less achieved.

Future research

Three points emerge as those of main interest concerning future research:

1) A longitudinal study addressing the relation between psychological safety and voice. Drawing on the discussion above on what characterizes the two aspects of learning, and the different motivational processes by which they may be understood, the question arises of whether creating a *preparedness* for learning, with time, could predict voice. In other word, if the long-time presence of a pro-learning environment would increase the occurrence of pro-social behaviour. Or formulated from the SDT perspective: if longitudinal autonomy support would lead to higher levels of internalization and higher levels of risk-taking behaviour.
2) The present pilot counted with the participation of profit-organization employees. Exploring differences to e.g. non-profit, or even voluntary, organizations could be of interest, as levels of self-monitoring has shown to influence vocational preferences (Brown, White, & Gerstein, 1989). Impression management plays a great role in both psychological safety and voice. In the first case as a basic assumption of the concept, in the other case as a factor influencing the reasons for why one would choose to voice. This also has its representation in SDT and the distinction between controlled and autonomous work motivation. Thus, one might find differences in the motivational processes depending on type of organization, as well as on the presence of both psychological safety and voice.
3) Using a larger sample than the one in the present pilot, it would be interesting to more specifically address the question of to what extent voice might occur with or without the presence of a psychologically safe environment. Thus, although psychological safety can not be said to predict voice, as stated in the present pilot, it might have a moderating role on the enactment of voice, as proposed by Edmondson (2002b). The SDT extension in this case would be the additional question of the possible impact of intrinsic work value orientation on voice, in environments not characterized by psychological safety.

Limitations

The present pilot counts with a number of limitations. Addressing the sample, the risk of biases is apparent, as final participants were selected by the organizations themselves. The reasons for these specific selections was not a variable possible to control in the

later analysis of data. It is also impossible to know if the individual participation was regulated by controlled or autonomous work motivation, and thereby, which level of social desirability that went into the variation of scores. The issue of understanding the reasons for participation is also present in the fact that 46 out of 50 contacted organizations declined to participate. It is not known in the present pilot if there are any major common characteristics amongst the organizations that did participate. What is known is that the main reasons for organizations choosing not to participate was either ongoing reorganizations or excessive job pressure. One major implication of these limitations is of course a limited generalizability, also affected by the low number of participants. Thus, the main focus of the present pilot becomes the understanding of the mechanisms on what is measured, outlining possible explanations which could then be tested on a larger population, and on a sample more diverse and representative of the population of Swedish employees working in profit organizations.

Addressing the measures, there were two occurrences of extremely low alphas, on the measure for the need for autonomy, and the measure for intrinsic work value orientation. As Cronbach's alpha has such a dominant position as the measure for scale reliability, the deviations are noteworthy and could imply heavy restrictions on the possibilities of interpretation based on these measures. However, as stated by Pallant (2007), the mean inter-item correlation is often a better measure of scale reliability on short scales. Both scales counted with less than ten items, and both scales counted with values within the acceptable range on the mean inter-item correlation. Considering also the tentative approach associated with performing a pilot, and the strong relations presented by mainly the measure of intrinsic work value orientation, the results in the present pilot should still be interesting enough for the consideration of future elaborations and replications.

Another issue worth mentioning, considering the sample and the measures, is the fact that the questionnaire contained a total of 118 items, with an estimated completion time of 20-30 minutes. In a context of a profit organization, this might be perceived as a great amount of time. This might have affected the willingness to complete the questionnaire, as well as the level of honesty and reflection in responding. Furthermore, the items posed questions on one's relation to one's supervisor and to one's job. E-mail correspondence was received where individuals explicitly described their reasons to decline participation based on the content of the items. A theoretical remark on this fact, in line with the frame of the present pilot, is that individuals with a low sense of

psychological safety, and with a more controlled motivation towards work, might have been less prone to complete the questionnaire. Thus, a bias might be present in that the sample is skewed towards participants with a higher sense of psychological safety and a more autonomous motivation towards work.

Final words

Summing up on the findings in the present pilot, the motivationally different characteristics of psychological safety and voice was amongst the most interesting. Psychological safety seemed to correspond mainly to the individual's relation to colleagues and to supervisors. Voice seemed to correspond mainly to the individual's relation to the actual work performed, and to more general perceptions of what constitute a good job.

Organizations might thus chose to work with the enhancement of learning, promoting interpersonal risk-taking, by focusing on two specific aspects. One, acting to prepare the organization or team for times when risk-taking is more readily needed. Two, collaborating with the employee on what values and mores are to make up the core of the work place.

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APPENDIX I

E-mail sent to organizations in order to obtain participants

Hej!
Andreas Silva heter jag, läser sista terminen på Psykologprogrammet i Uppsala. Jag skriver min examensuppsats nu och tror att vi skulle kunna ha ömsesidig glädje av varandra.

Mitt område är arbets- och organisationspsykologi. Mitt fokus är motivation och lärandebeteende. Jag genomför en enkätstudie som söker svar kring frågor om samband mellan just lärandebeteende och motivation.

Lärandebeteende handlar om väldigt vardagliga processer. Som att be om hjälp, söka och ge feedback, erkänna misstag … Utveckling för en organisation, även långsiktigt, handlar ofta om det som händer ”på golvet”. Varje dag, varje vecka.

Motivation handlar om det som, hos varje individ, styr beteendet. Upplever man tex att man gör sitt jobb för att man är tillsagd att göra det, eller för att man tycker att det är relevant och viktigt i sig? Detta har visat sig ha stor inverkan på sådant som kommunikation, lojalitet och innovation.

Jag söker nu deltagare till enkätstudien. Det rör sig om 10-30 personer per företag, från ungefär 10 olika företag. Ett sådant underlag ger möjlighet att uttala sig om människor i allmänhet i arbetslivet, samtidigt som man skyddar det enskilda företaget vad gäller resultat.

Enkäten genomförs helt webbaserat. Det tar ca 30 min. Enskilda deltagarna är anonyma i relation till resultatet. Detsamma gäller självklart företaget.

Vad skulle ni kunna ha för nytta av detta? Och vem är jag, mer i detalj, som kontaktar er?

Besök hemsidan för forskningsprojektet. Där presenterar jag allt lite mer utförligt.
http://www.silvapsykologi.se

Hoppas verkligen att det hela verkar intressant för Er!
Jag hör av mig inom några dagar så får vi prata lite mer.

Vänliga hälsningar,
Andreas Silva
Psykologstuderande, Termin 10, Psykologprogrammet
Institutionen för Psykologi, Uppsala Universitet

Appendix II

Swedish items, complete set.

Psychological Safety

1 Gör man ett misstag i min arbetsgrupp läggs det ofta en till last.
2 Som medlem i min arbetsgrupp kan man ta upp problem och svåra frågor till diskussion.
3 Det händer att man i min arbetsgrupp är avvisande mot andra för att de är annorlunda.
4 Man kan tryggt ta risker i min arbetsgrupp.
5 Det är svårt att be andra i min arbetsgrupp om hjälp.
6 När jag arbetar med min arbetsgrupp uppskattas och används mina unika färdigheter och talanger.

Voice

1 Jag utvecklar och utformar rekommendationer som rör frågor som påverkar min arbetsgrupp.
2 Jag gör min röst hörd, och uppmuntrar andra att engagera sig i frågor som har påverkan på min arbetsgrupp.
3 Jag framför min åsikt kring arbetsrelaterade frågor till de andra i min arbetsgrupp, även om min åsikt avviker och de andra i gruppen inte håller med mig.
4 Jag håller mig välinformerad om frågor där min åsikt kan vara till nytta för min arbetsgrupp.
5 Jag engagerar mig i frågor som kan påverka kvaliteten på arbetsklimatet i min arbetsgrupp.
6 Jag framför min åsikt vad gäller idéer för nya projekt och förslag på förändringar på hur vi jobbar i min arbetsgrupp.

Need satisfaction

1 Jag känner ingen större samhörighet med andra på jobbet.
2 På jobbet känner jag mig som en del av en grupp.
3 Jag har inte så mycket med andra att göra på mitt jobb.
4 På jobbet kan jag prata med andra om sådant som verkligen har betydelse för mig.
5 Jag känner mig ofta ensam när jag är med mina kollegor.
6 En del som jag jobbar med är också nära vänner till mig.
7 Jag känner mig egentligen inte kompetent i mitt arbete.
8 Jag bemästrar verkligen de uppgifter jag utför i mitt arbete.
9 Jag upplever mig som kompetent i mitt arbete.
10 Jag tvivlar på att jag kan utföra mitt jobb på ett korrekt sätt.
11 Jag är bra på de saker jag gör i mitt jobb.
12 Jag upplever att jag till och med klarar av de svåraste uppgifterna på jobbet.
13 Jag upplever att jag kan vara mig själv på jobbet.
14 På jobbet upplever jag ofta att jag måste följa andras order.

15 Om jag kunde välja skulle jag göra saker på jobbet på ett annat sätt.
16 De uppgifter jag måste utföra på jobbet är i linje med det jag verkligen vill göra.
17 Jag upplever att jag är fri att utföra mitt jobb på det sätt jag själv tycker att de bästa.
18 Jag upplever att jag i mitt arbete är tvingad att göra saker jag inte vill göra.

Autonomy support

1 Jag upplever att min överordnade ger mig valmöjligheter.
2 Min överordnade visar tydligt att hon/han personligen tar illa upp om jag inte lever upp till hennes/hans förväntningar.
3 Jag upplever att min överordnade förstår mina synpunkter.
4 Min överordnade bekräftar mig i min tro på min förmåga att kunna avsluta ett jobb på ett bra sätt.
5 Min överordnade är lyhörd för hur jag vill sköta saker på jobbet.
6 Min överordnade uppmuntrar mig att ställa frågor.
7 Min överordnade uppmuntrar mig att ta initiativ.
8 Min överordnade förhör sig om min åsikt beträffande mitt jobb innan hon/han föreslår hur saker bör göras.

Motivation at work scale

1 Jag anstränger mig, eller lägger energi, i mitt arbete för de stunder av glädje det här jobbet ger mig.
2 Jag anstränger mig, eller lägger energi, i mitt arbete för att jag tycker väldigt mycket om det här arbetet.
3 Jag anstränger mig, eller lägger energi, i mitt arbete för att det här jobbet stämmer väl överens med de intressen jag har.
4 Jag anstränger mig inte, för mina ansträngningar är ändå förgäves.
5 Jag anstränger mig, eller lägger energi, i mitt arbete för att andra (tex. chefer, kollegor, familj, kunder) fordrar av mig att jag gör det.
6 Ärligt talat så gör jag bara precis det jag måste göra i det här jobbet.
7 Jag vet inte varför jag gör det här jobbet, det är meningslöst arbete.
8 Jag anstränger mig, eller lägger energi, i mitt arbete för att jag har roligt när jag utför mitt jobb.
9 Jag anstränger mig, eller lägger energi, i mitt arbete för att det här jobbet tillåter mig att uppnå andra värden i livet som är viktiga för mig.
10 Jag anstränger mig, eller lägger energi, i mitt arbete för att andra (tex. chefer, kollegor, familj, kunder) presser mig att göra det.
11 Jag anstränger mig, eller lägger energi, i mitt arbete för att som anställd på det här företaget så borde borde jag anstränga mig i mitt jobb.

12 Jag anstränger mig, eller lägger energi, i mitt arbete för att det här jobbet är ett uttryck för den jag är.
13 Jag anstränger mig, eller lägger energi, i mitt arbete för att något i mig själv tvingar mig att anstränga mig i mitt jobb.
14 Jag anstränger mig, eller lägger energi, i mitt arbete för att andra (tex. chefer, kollegor, familj, kunder) kräver av mig att jag gör det.
15 Ärligt talat så lägger jag ner väldigt lite ansträngning på mitt jobb.
16 Jag anstränger mig inte, för jag förväntar mig inte att uppnå önskade resultat.
17 Jag anstränger mig, eller lägger energi, i mitt arbete för att jag är skyldig mig själv det.
18 Jag anstränger mig, eller lägger energi, i mitt arbete för att det har betydelse för mig personligen att jag anstränger mig i det här jobbet.
19 Jag anstränger mig, eller lägger energi, i mitt arbete för att andra (tex. chefer, kollegor, familj, kunder) tvingar mig att göra det.
20 Jag anstränger mig, eller lägger energi, i mitt arbete för att jag själv tycker att det är viktigt att jag anstränger mig i det här jobbet.
21 Ärligt talat så lägger jag inte ner mycket energi på det här jobbet.
22 Ärligt talat så är jag inte säker på att jobbet är värt att lägga energi på.
23 Jag anstränger mig, eller lägger energi, i mitt arbete för att det här jobbet tillåter mig att nå mina livsmål.
24 Jag anstränger mig, eller lägger energi, i mitt arbete för att det här jobbet stämmer väl överens med den jag är innerst inne.
25 Jag anstränger mig, eller lägger energi, i mitt arbete pga det intresse jag har för den här typen av arbete.
26 Jag anstränger mig, eller lägger energi, i mitt arbete för att det jag gör i det här jobbet har stor betydelse för mig personligen.
27 Jag anstränger mig inte, för egentligen tycker jag att jag ödslar min tid på det här jobbet.
28 Jag anstränger mig, eller lägger energi, i mitt arbete för att den här typen av arbete verkligen är spännande.
29 Jag anstränger mig inte, för mina ansträngningar leder inte till önskade resultat.
30 Jag anstränger mig, eller lägger energi, i mitt arbete för att när jag anstränger mig i det här jobbet ger det mig en chans att uttrycka mina personliga värderingar i handling.
31 Jag anstränger mig, eller lägger energi, i mitt arbete för att det är i linje med mina personliga värderingar att anstränga mig i det här jobbet.
32 Jag anstränger mig, eller lägger energi, i mitt arbete för att det arbete jag gör är väldigt roligt.
33 Jag anstränger mig, eller lägger energi, i mitt arbete för att jag tycker att det här jobbet är spännande.
34 Jag anstränger mig, eller lägger energi, i mitt arbete för att jobbet jag gör är intressant.
35 Jag anstränger mig, eller lägger energi, i mitt arbete för att det är min plikt gentemot min arbetsgivare att anstränga mig i mitt jobb.

Work value Orientation

1 Det är viktigt för mig att ha ett jobb där arbetskollegor bryr sig om mig och ger mig stöd.
2 Det är viktigt för mig att ha ett jobb där jag kan tjäna mycket pengar.
3 Det är viktigt för mig att ha ett jobb där jag lär mig många nya saker.
4 Det är viktigt för mig att ha ett jobb där jag hjälper till att lösa andras problem, utan att nödvändigtvis få något tillbaka.
5 Det är viktigt för mig att ha ett jobb där man ser upp till mig för min prestigefyllda position.
6 Det är viktigt för mig att ha ett jobb där jag har en befattning med mycket makt.
7 Det är viktigt för mig att ha ett jobb där jag är ekonomiskt framgångsrik.
8 Det är viktigt för mig att ha ett jobb där jag och mina kollegor kan ha roligt tillsammans.
9 Det är viktigt för mig att ha ett jobb där jag åtnjuter ett högt anseende.
10 Det är viktigt för mig att ha ett jobb där jag har goda vänner bland mina kollegor som jag kan prata om personliga saker med.
11 Det är viktigt för mig att ha ett jobb där jag har stort inflytande över andra.
12 Det är viktigt för mig att ha ett jobb där jag blir rik.
13 Det är viktigt för mig att ha ett jobb där jag får en hög grad av socialt erkännande från andra.
14 Det är viktigt för mig att ha ett jobb genom vilket jag kan göra en liten insats för att göra världen till en bättre plats.
15 Det är viktigt för mig att ha ett jobb där jag får användning av mina färdigheter.
16 Det är viktigt för mig att ha ett jobb där jag kan lära andra det jag vet.
17 Det är viktigt för mig att ha ett jobb där jag kan utöva kontroll över andra på mitt jobb.
18 Det är viktigt för mig att ha ett jobb där innehållet är intressant.

Goal Clarity

1 Det är klart och tydligt utsagt vad som förväntas av mig i mitt arbete.
2 Jag har en klar uppfattning om vilka arbetsuppgifter som ingår i min arbetsbefattning.
3 Jag vet vilket ansvarsområde jag har i mitt arbete.
4 Jag tycker att mina arbetsmål är diffusa och oklara.

Job Satisfaction

1 Jag trivs på mitt arbete.
2 Jag känner mig nöjd med det arbete jag har.
3 Jag är tillfredsställd med mitt arbete.