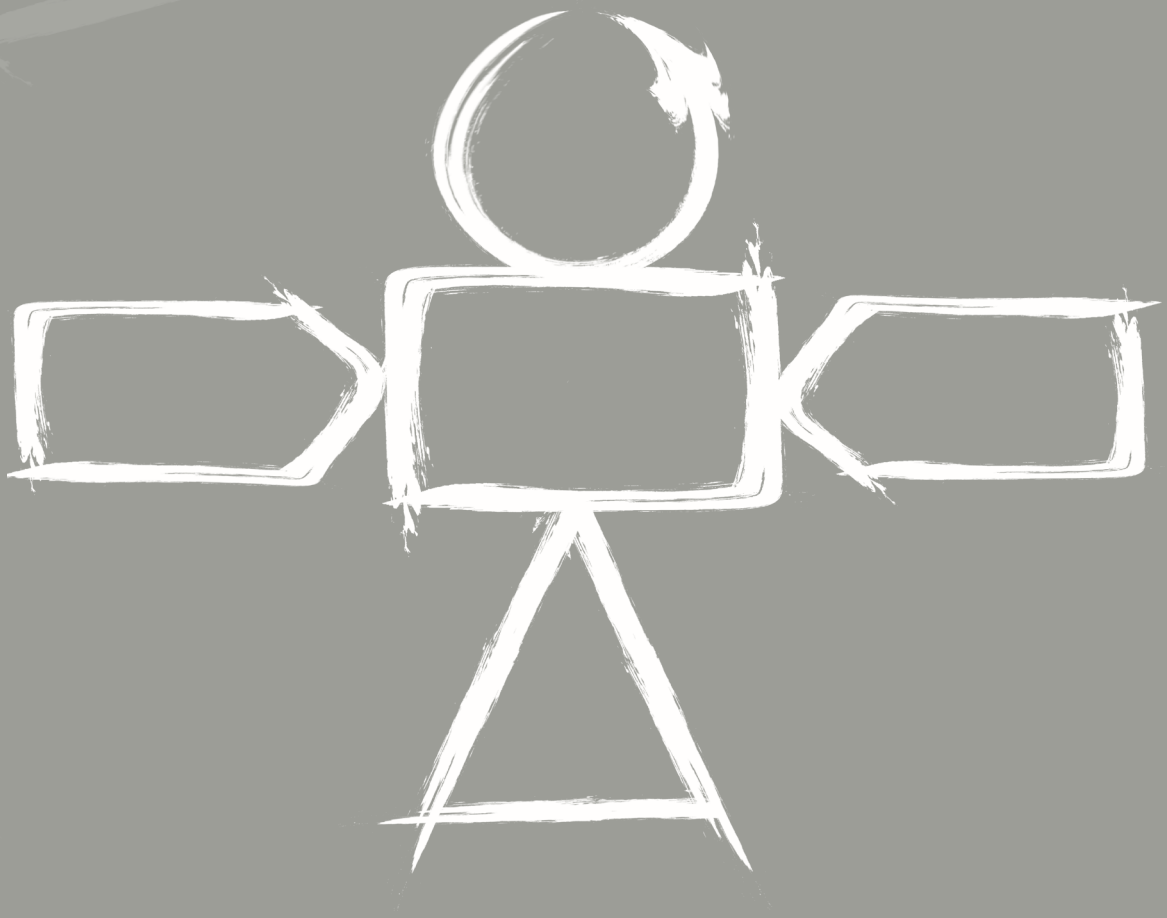
Proactive and Adaptive Agility among Employees

The relationship with personal and situational factors



Sandra Doeze Jager-van Vliet

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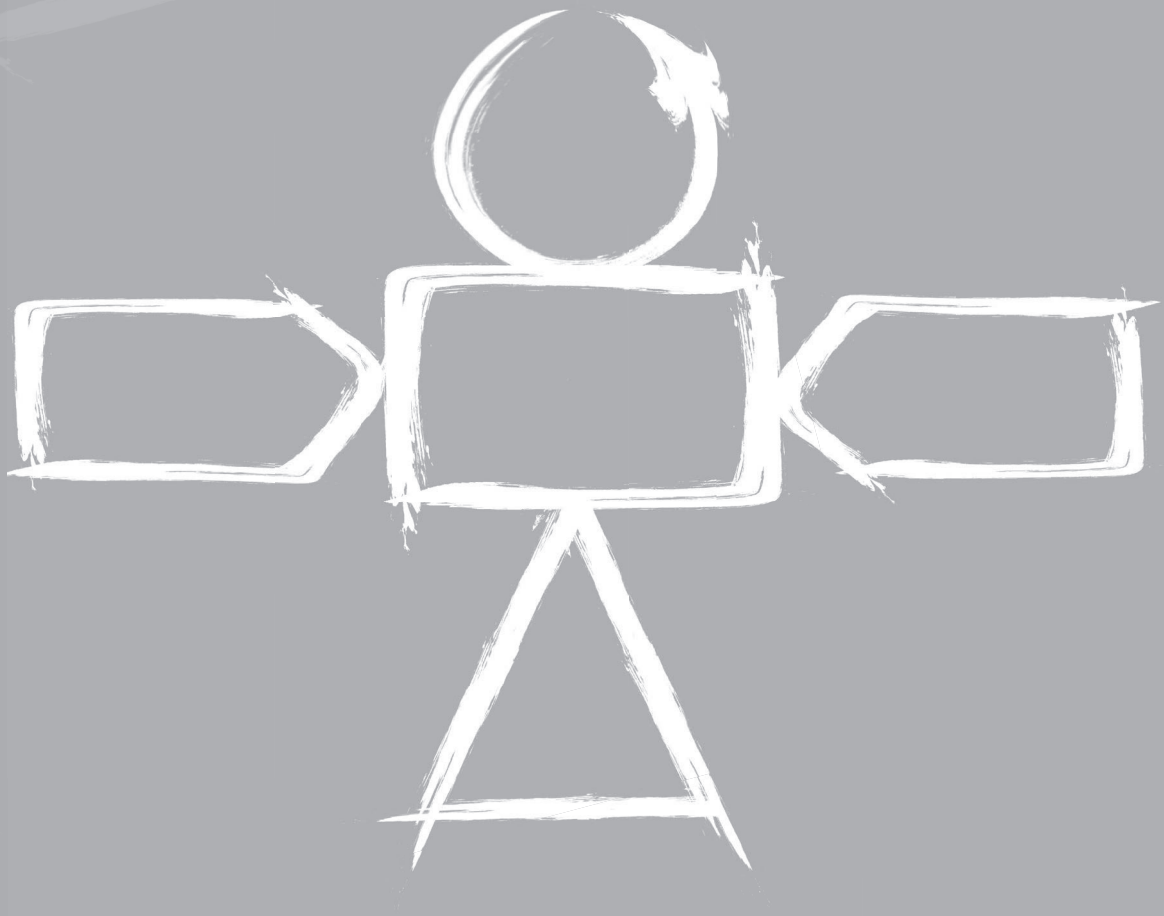

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Proactive and Adaptive Agility among Employees

The relationship with personal and situational factors

Proactieve en adaptieve wendbaarheid van medewerkers

De relatie met persoonlijke en situationele factoren

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Introduction

INTRODUCTION

The past decade has seen unprecedented challenges in business with rapidly changing economic circumstances in countries across the world. Today, organizations increasingly operate in a global market and in a competitive environment where this market is fragmented and customers make higher demands on products and services (Ben-Menahem Zenlin, Volberda, & Van den Bosch, 2013; Livari & Livari, 2011; Mooghali, Ghorbani, & Emami, 2016; Nijssen & Paauwe, 2012; Paauwe & Richardson, 2001; Ramesh & Devadasan, 2007). To survive and to be profitable, businesses need to find ways to adapt to changes in the environment and to be flexible in their business models (Sharafi & Zhang, 1999). Agility is the term used to describe this approach of running a company that allows itself to thrive in challenging times (Gunasekaran, 1999). Agility can be applied to agile organizational strategy (Goldman, 1995), agile supply chains (Christopher, 2000), agile information systems (Huang, 1999), and workforce agility (Dyer & Shafer, 2003). Agility (Alavi, Abd. Wahab, Muhamad, & Arbab Shirani, 2014; Van Oyen, Gel, & Hopp, 2001) is not an end in itself, but it is imperative for organizations to take on new challenges arising from change in order to continue (Jackson & Johansson, 2003). In this dissertation, the focus will be on employee agility (also known as workforce agility).

Statement of the problem

Since employees largely determine the agility of an organization (Breu, Hemingway, Strathern, & Bridger, 2002; Mooghali et al., 2016; Sherehiy, Karwowski, & Layer, 2007), it is important to investigate workforce agility (WFA). Workforce agility refers to the human aspect of overall agility within an enterprise (Van Oyen et al., 2001). For an individual to be agile, this person should be capable of responding to unpredictably changing opportunities and should contribute to the bottom line of a company that is continuously reorganizing its human and technological resources (Dove & Wills, 1996). Most of the workforce agility studies are focusing on identifying behavioral attributes of the workforce, rather than identifying the underlying causes of such behaviors (Sumukadas & Sawhney, 2004). What is known about the factors that influence WFA mostly comes from the perspective of managers outlining managerial practices to ensure a more agile workforce (Dyer & Shafer, 2003). The view of workers themselves seems to be neglected in the research to date, and how their motives or needs may affect their agility therefore is mostly unknown. This study proposes to investigate WFA from the perspective of the workers themselves and how others (colleagues) at work see these individuals.

Purpose of the study. It is important in times of organizational change that employees themselves have the ability to be agile (Pulakos, Arad, Donocan, & Plamondon, 2000). Agile employees are seen as individuals who 1) will proactively seek opportunities, and 2) can easily adapt to new situations. The extent to which employees demonstrate agile behavior varies (Chonko & Jones, 2005; Dries, Vantilborg, & Pepermans 2012; Dyer & Shafer, 2003; Sherehiy, 2008).

The purpose of this dissertation is to investigate the concept of employee agility: The dissertation seeks to contribute to an enhanced theoretical understanding of this concept. Specifically, the aim is to enhance the understanding of personal and situational factors that may have an impact on a worker's agility. Personal factors refer to employees' needs, in other words the internal why behind their agility, their willingness to change (behavior intention), and their resistance to change (attitude). Situational factors refer to constraints and enhancing factors in the organizational context, namely mechanisms and inputs that may have an impact on a worker's agility, such as trust in one's organization.

Harvey, Koubek, and Chin (1999) developed a WFA model which we use as an inspirational framework for our dissertation. Below we will explain the components of this model as used in our study. It should be noted that this model was developed in a technological agility context and has not been investigated empirically. A.technical agile context had the focus on tasks, while for example a service context had the focus on pro-acting behavior. An overview of the internal (personal) and external (situational) factors that are hypothesized to affect WFA according to Harvey et al. (1999) is provided in Figure 1.1a. *Their model consists of the follow five components*: 1) "*internal factors*", which contain personality, experience/knowledge and abilities; 2) "*input*", these are for example challenging and clear goals; 3) "*output*", for example feedback; 4) "*mechanism*", for example mentors; and 5) "*constraint*", for example the type of organization (a production/technological organization or a service organization). For more detail about this model we refer to Harvey et al. (1999).

Below, Figure 1.1b presents *an adaption of the model of Harvey et al. (1999)* which we used for our study. Harvey et al.'s components helped us to integrate our studies and findings. The variables chosen for the present dissertation were based on an extensive literature review of workforce agility (see Table 1.1) and employees' willingness and attitude to change, and were categorized and structured around the five components of Harvey et al.'s model (1999) to integrate our topics. One *personal* (internal factors) and four *situational* (external) factorgroups are distinguished: output, constraint, input and mechanism (see Figures 1.1a and b). These five

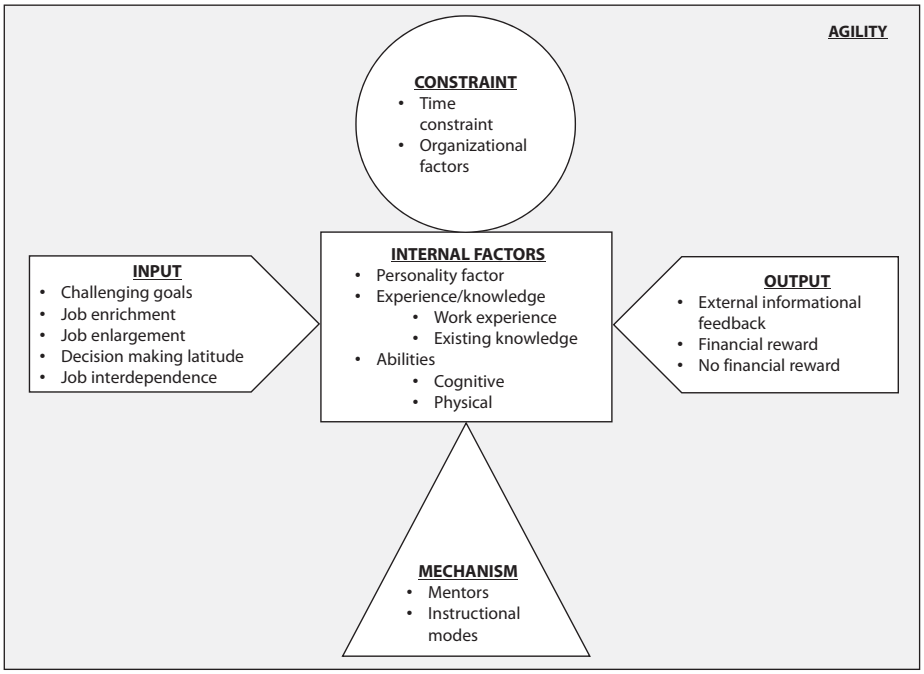

Figure 1.1a. Overview of internal (personal) and external (situational: constraint, input, output, mechanism) factors that affect an employee's adaptability (agility behavior; Harvey et al., 1999).

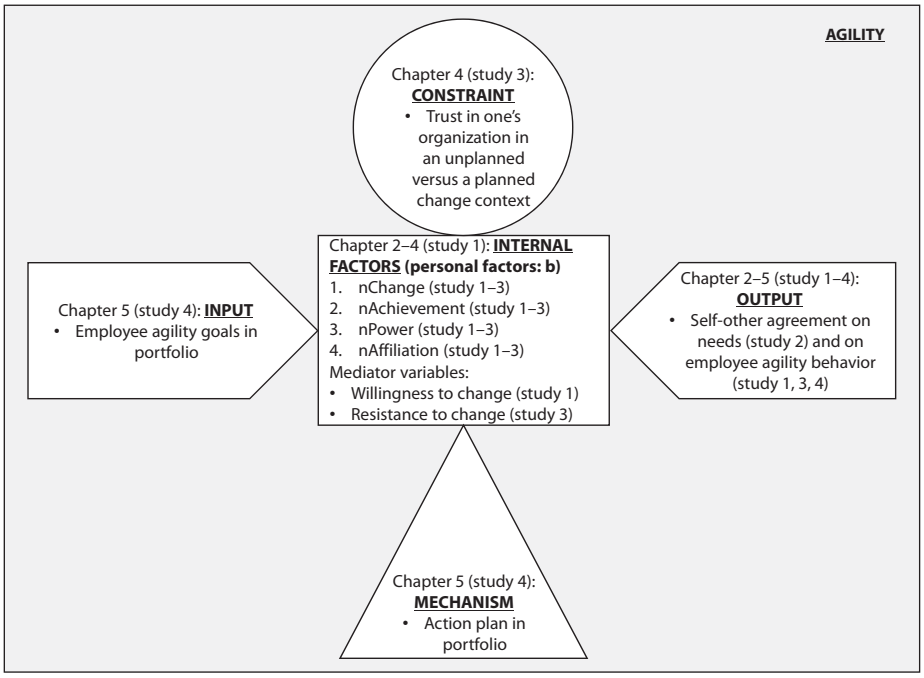

Figure 1.1b. Linkages between the studies and chapters in the present dissertation. Adapted from Harvey et al.'s 5 components (1999).

components result in agility (dependent variable: diveded in adaptive and proactive agility). In sum, the following **eight** main grouped elements were distinguished, which are central to this dissertation and which will be explained below (see Figure 1.1b): (a) agility (b) "*internal/personal factors*" (*needs*: Need for Change, Need for Achievement, Need for Power and Need for Affiliation), two mediating variables (c) *willingness to change* (intention) and (d) *resistance to change* (attitude: opinion), and four situational factors, namely (e) "*output*": *self-other agreement* about agility behavior, (f) "*constraint*": a *planned and an unplanned organizational change context* in relation to *trust* in the organization (g) "*input*": agility *goals*, and (h) "*mechanism*": *portfolios* including action plans. Figure 1.1b includes the linkages between the studies and chapters in the dissertation.

EIGHT ELEMENTS

Agility (dependent variable: proactive and adaptive agility)

Many concepts and labels have been developed which are similar to agility, such as proactivity (Dyer & Shafer, 2003; Plonka, 1997), adaptability (Dyer & Shafer, 2003), and resilience (Fiksel, Polyviou, Croxton, & Pettit, 2015). Chonko and Jones (2005) stated that organizational agility requires two main types of behavior in the workforce: 1) proactive and 2) adaptive agility. Table 1.1 presents the attributes of workforce agility from previous research as conceptually related to proactive and adaptive agility. Thus, employee agility consists of a proactive and an adaptive component. *Proactive agility* refers to the anticipation of problems related to change, the initiation of solutions, and the eventual solution of change-related problems (initiation and anticipation; Chonko & Jones, 2005). *Adaptive agility* is the change or modification of individuals or their behavior in order to increase their fit with the new environment (response). This dissertation will focus on the three central attributes of proactive agility and the four central attributes of adaptive agility which have been distinguished by Chonko and Jones (2005), Pulakos et al. (2000), and Sohrabi, Asari, and Javad (2014; see Figure 1.2) and will draw on concepts from a range of researchers who have written about agility as outlined in Table 1.1 below.

Proactive agility contains the eagerness to learn, independence, and courage. *Eagerness to learn* is an active approach of employees towards their personal development. *Independence* is the ability of employees to perform tasks with minimal guidance and the preference for responsibility. *Courage* is a proactive approach of employees to create possibilities and changes instead of waiting for things to happen.

Table 1.1. Attributes of workforce agility from previous research as conceptually related to proactive and adaptive agility in the present study

Researchers	Previous research (1997–2017)	Present study: employee agility also know as workforce agility
		Proactive agility:
Plonka (1997); Dyer & Shafer (2003); Chonko & Jones (2005); Asmuβ (2008); Sherehiy (2008)	The ability to generate innovative ideas, proactiveness, initiation of change	
Harvey et al. (1999); Pulakos et al. (2000); Mooghali et al. (2016)	Openness to experience, coping with uncertainty	• *Courage*
Pulakos et al. (2000); Asmuβ (2008); Mooghali et al. (2016)	Taking initiative in meetings	• *Independence*
Pulakos et al. (2000); Breu et al. (2002); Dyer & Shafer (2003); Poell & Van der Krogt (2003); Dries et al. (2012); Sohrabi et al. (2014); Mooghali et al. (2016)	Creating new knowledge, learning, speed of skill development, learning agility (also know as generative behavior)	• *Eagerness to learn*
		Adaptive agility:
Dyer & Shafer (2003); Chonko & Jones (2005); Sherehiy (2008); Sohrabi et al. (2014)	Adaptability, switching from one task to other tasks, responding to change	
Pulakos et al. (2000); Sherehiy (2008); Alavi et al. (2014); Mooghali et al. (2016)	Resilience, professional flexibility	• *Resilience*
Gunesakaran (1999); Pulakos et al. (2000); Breu et al. (2002); Latham & Locke (2007); Asari et al. (2014); Mooghali et al. (2016)	Teamwork, interpersonal adaptability, flexibility, sharing ideas	• *Teamwork*
Plonka (1997); Pulakos et al. (2000); Breu et al. (2002); Sohrabi et al. (2014); Dries et al. (2012); Mooghali et al. (2016)	Being comfortable with change, new ideas, and new technologies; change agility, responsiveness to external change	• *Coping with change*
Plonka (1997); Pulakos et al. (2000); Sohrabi et al. (2014); Mooghali et al. (2016)	Problem solving ability	• *Decisiveness*

Note: Per attribute, articles are ordered according to the year of publication.

Adaptive agility contains resilience, teamwork, coping with change, and decisiveness attributes. *Resilience* is seen as an employees' ability to deal with setbacks. *Teamwork* is the ability of an employee to work together with colleagues, to share information,

and to stimulate group processes. *Coping with Change* concerns an open approach to dealing with and adapting to the implemented changes. *Decisiveness* is an approach of employees who, during a change, will try to adapt by finding and exploit opportunities in the change. The proactive and adaptive components (with their attributes) are the two main factors of particular interest in this study (see Figure 1.2) in understanding employees' agility behavior.

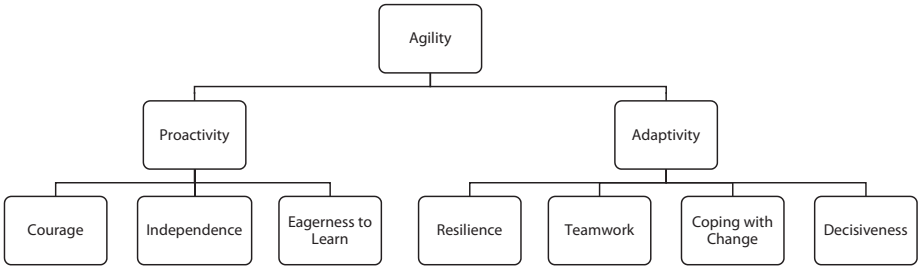

Figure 1.2. The two components of agility: proactive and adaptive agility, and their attributes.

Personal and situational factors related to agility

Harvey et al. (1999) stated that the ***personal (also known as "internal")*** factors that are thought to play a significant role in agility behavior include employees' personality, experience and abilities. In our study we investigate employees' needs (Need for Change, Achievement, Power, and Affiliation), because needs are the reasons why employees do or do not show agile behavior (Engeser & Langens, 2010). We also investigate willingness to change (intention to change) and resistance to change (negative attitude towards change), because these concepts are related to agility behavior. Harvey et al. (1999) stated that the ***situational (also known as "external")*** factors that are thought to play a significant role in agility behavior include challenging goals ("*input*"; *in our study agility goals*), feedback ("*output*"; *in our study self-other perception on employee agility behavior: agreement and feedback*), mentors ("*mechanism*"; *in our study a portfolio including development agility action plans*) and organizational factors ("*constraint*": a *planned and an unplanned change context*). Figure 1.1b provides our adapted model of Harvey et al.'s model.

Personal factors related to agility

Personal needs

Needs are important motivators for our behavior in society and at work (Shinn, 1986). There are three well-documented needs-based models that have been used within organizational research, each outlined briefly here.

Maslow's model hierarchy of needs. Maslow developed a hierarchical model of five levels of human needs ranging from the most basic, such as food and shelter, to the more abstract growth need of self-actualization. Maslow's model stated that individuals are motivated to ensure that these needs are met and that each person moves up through the hierarchy when his or her more basic needs have been met (Jex & Britt, 2008; Maslow, 1943). Within an organization, the hierarchy of needs can explain the motivations of employees to work, ranging from the motivation to earn money to pay for food and a home, to the motivation to perform well so that they gain self-esteem.

Alderfer's existence, relatedness, growth (ERG) model. This model is similar to Maslow's in that it also utilizes a hierarchical structure, but Alderfer reduced Maslow's number of levels to three (Existence, Relatedness and Growth; Alderfer, 1969; Arnolds & Boshoff, 2002). This model is more closely aligned to the work environment compared to Maslow's theory. Existence refers to the basic material requirements of humans. It includes the items that Maslow described as physiological and safety needs. Relatedness refers to the desire people have for maintaining important interpersonal relationships. Growth refers to the intrinsic desire of people for personal development. However, this model, like Maslow's, has hardly been studied empirically and has not stimulated much new research (Arnolds & Boshoff, 2002).

McClelland's model of three needs. McClelland proposed that an individual's needs are not pre-determined but are acquired over time through experience. An employee's motivation at work was described by him as being influenced by three needs, namely the Need for Achievement, the Need for Power, and the Need for Affiliation. The model is based on Murray's 27 needs (Murray, 1938), but McClelland's model of three needs is more directly applicable to the work environment and to understanding individual differences in motivation. Jex and Britt (2008) have shown McClelland's model of needs to be the most commonly applied to the work domain. This is the only model which explicitly allows for individual differences in understanding motivation that can be directly applied to the work environment (McClelland, 1970). Each of the needs is described in more detail below. Firstly, however, we will describe the Need for Change.

Need for Change (nCh)

Next to the needs of McClelland, which will be described in more detail below, we also study Murray's Need for Change, because this need is conceptually most strongly related to agility. People with a high nCh best perform in contexts in which they can initiate changes (Murray, 1938). The Need for Change has a strong empirical relation with openness to experience (Costa & McCrae, 1988; Engeser & Langens, 2010; Harvey et al., 1999), as does agility. A positive relationship between this need and in particular proactive agility may be expected as the reasons why people (pro)act in an agile way can be regarded as an internally motivated more than an adaptive reaction to the context. Also, proactive agility is often regarded as the competence to initiate changes (e.g., Gunasekaran, 2001).

Need for Achievement (nAch)

McClelland and Winter (1969) described people with a high nAch as those who seek out and enjoy new challenging tasks. People who are deemed to be high in nAch tend to be good at goal setting and have high performance standards (Philips & Gully, 1997). Turban and Keon (1993) argued that employees with a high nAch prefer to work within companies where they can secure promotion based on personal performance rather than on seniority. Personality traits associated with having a high nAch include openness, conscientiousness, and creativity (Harris, 2004). Therefore, individuals with a need to achieve are expected to be more proactive than reacting to change (adaptively) because they tend to show behaviors and attitudes which accommodate changes (Barrick & Mount, 1991; Harris, 2004). So, we assumed that there would be a positive relationship between nAch and proactive agility.

Need for Power (nPow)

Those who are high in nPow thrive on the opportunity to influence and lead others (Winter, John, Stewart, Klohnen, & Duncan, 1998). Two forms of power have been distinguished: personalised power and social power (McClelland, 1987). Individuals characterized by personalised power prefer dominant jobs where they have authority over others; they tend to be more aggressive and forceful than those with social power. Social power is related to styles of leadership that focus on engaging others in goal attainment. A personality trait associated with nPow is extraversion (Shinn, 1986; Winter, et al., 1998). People with nPow are open to new developments and they are proactive in creating new opportunities (Sanz, Gil, García-Vera, & Barrasa, 2008).

In line with these findings, we believe that there would be a positive relationship between nPow and proactive agility.

Need for Affiliation (nAff)

Winter et al. (1998) described those with a high nAff as individuals who desire and maintain friendships with the people they work with. Individuals with a high nAff tend to have stable relationships, are generous with their time for others, and are satisfied with their job. A high nAff is associated with an extraverted personality and with enjoying social interactions with others (Winter et al., 1998). Such individuals will be loyal to organizations that they view as supportive (Wiesenfeld, Raghuram, & Garud, 2001). 'Commitment to an organization' and 'establishing positive relations with others' are aspects that may drive someone with a high nAff to demonstrate agile behaviors if the group also needs to show agility. An individual who wants to feel like part of a group (high nAff) will most likely want to adopt behaviors similar to the group, that is, agile behaviors demanded from the entire workforce. Consequently, we expect nAff to show a positive correlation with adaptive agility in a context of organizational change.

Willingness to change as a mediator between needs and agility

An important factor that most likely will mediate the link between employees' needs and their agility in the workplace is one's willingness to change. Willingness to change is people's intention to change agility behavior. This is in contrast with resistance to change (below we will explain resistance to change), which is a negative attitude towards change (Paul, Van Peet, & Reezigt, 2012). It is assumed that willingness to change is the facilitator between needs and agility. Willingness to change consists of four components (Metselaar, 1997). First, the perceived consequences of the change for one's own work form an important aspect of one's willingness to change. When the change is perceived to have negative consequences for the employee, for example less task responsibility, it is more likely that the change will elicit resistance. Emotions related to the organizational change form a second important aspect of one's willingness to change. Emotions related to change refer to how employees experience the process of change in view of their position in the organization. The employee's belief in the added value of a change for the organization forms the third aspect of willingness to change. The added value refers to the influence of the process of change in the organization on the internal efficiency. The employee's commitment to the change is the fourth and final aspect of one's willingness to change. This commitment refers to the employees' experience of involvement in the process of change.

The first research question to be addressed in this dissertation therefore is:

Research question 1: Which of four needs, namely the three needs outlined in McClelland's needs model and Murray's Need for Change, are related to employee agility. Are these relationships mediated by one's willingness to change?

Specifically, study 1 will explore whether there are significant relations between the Need for Change, Need for Achievement, Need for Power, and Need for Affiliation, and proactive and adaptive agility and whether willingness to change mediates the relationship between these needs and agility.

The following hypothesis is stated for research question 1:

H1: Employees' Need for Change, Need for Achievement, Need for Power, and Need for Affiliation will be positively related to proactive agility (self-rated and other-rated). Moreover, the relationship between these four needs and agility will be mediated by one's willingness to change.

Resistance to change as a mediator between trust and agility

As a result of the growing awareness that "successful organizational adaptation is increasingly reliant on generating employee support and enthusiasm for proposed changes, rather than merely overcoming resistance" (Piderit, 2000, p. 783; Sohrabi, 2014), new concepts have been developed to explain employees' responses (attitude instead of intention) to organizational change. However, many definitions and labels have been used by different authors, which describe the same or similar concepts (Oreg, 2006). This implies that different terms are used interchangeably. For example, positive attitudes to change have been labeled readiness for change (e.g., Holt, Armenakis, Feild, & Harris, 2007), commitment to change (e.g., Chen & Wang, 2007), acceptance of change (e.g., Kavanagh & Ashkanasy, 2006), and openness to change (e.g., Wanberg & Banas, 2000), while negative attitudes to change have been described as cynicism about change (e.g., Stanley, Meyer, & Topolnytsky, 2005) and resistance to change (e.g., Bouckenooghe, 2010; Ford, Ford, & D'Amelio, 2008). Resistance to change, as a mediator between trust and agility, will be further described in more detail in the section about trust.

Situational factors related to Agility

The previous section outlined the personal (internal) factors that will be considered in predicting agility in this study. This section investigates the situational (external) factors that are likely to predict agility, including output (self- and other- perception; feedback), constraint in the organizational environment (employee's trust in the organization in an unplanned and planned change context), input (agility goals) and mechanism (portfolio including action plan) (see Figure 1.1b).

Output (situational factor): Self- and other-perception

Social comparisons are used by individuals to help construct a perception of themselves on how well they perform at tasks or to better understand how others view them (Kenny & West, 2010). In these situations people agree each other in how they see the person (*consensus*). Or people see others as similar to themselves: *assumed similarity* (*projection*). Correspondence has been found between how one sees oneself and how one is seen by others (*self-other agreement*; Kenny, 1994). For example, findings regarding self-other agreement on values such as respect have shown that people can accurately assess values of others. Others therefore can be used to validate self-reported values (Dobewall, Aavik, Konstabel, Schwartz, & Realo, 2014). In the work context the Need for Achievement, Need for Power, and Need for Affiliation have been proposed to explain how employees behave in work environments (see also above: personal factors related to agility). According to McClelland, understanding the needs of employees will imply a high self-other agreement on their needs.

The second research question therefore is:

Research question 2: Are there similarities and differences in ratings of McClelland's three needs (Need for Achievement, Need for Power, and Need for Affiliation) between others, and between employees themselves and how others (colleagues) perceive them?

Specifically, study 2 will assess consensus (other-other agreement), self-other agreement (whether or not employees view themselves on their needs in a similar way as their colleagues) and assumed similarity (projection).

The following hypothesis is stated for research question 2:

H2: There will be consensus, agreement between self- and other-ratings, and assumed similarity on one's Need for Achievement, Need for Power, and Need for Affiliation.

Constraint (situational factor): An unplanned and a planned organization change context and trust in the organization

Unplanned and planned change context. Employees may react differently to different types of changes (Freese, 2007). Therefore, the study investigated the relationship between trust and agility in relation to an unplanned (organizational reaction to the environment) and a planned (strategic proactive) change context (McNamar, 2006). Unplanned changes are the result of a suddenly occurring situation. Such changes have a "disorganized character" (McNamara, 2006, p. 175). Planned changes are major changes by the management, who is responsible for the implementation of a change process. The goal of a planned change may be to remedy a particular situation or to further develop a process or a structure in an organization, which can consequently influence the organization (McNamara, 2006; Freese, 2007).

Trust. Research has demonstrated positive effects of having confidence in an organization such as a positive effect on the well-being of employees (European Commission, 2006), on their organizational commitment, on their level of cooperation and on the acceptance of decisions of management (Bijlsma & Koopman, 2003). A study by Mishra and Spreitzer (1998) has shown that trust in the organization can serve as a tool to overcome resistance to change and to interpret the implementation process correctly. When there is no trust in an organization, employees can feel threatened by change, which can result in resistance and feelings of resentment. Zayim and Kondakci (2015) investigated the predictive value of organizational trust for cognitive, emotional and intentional resistance to change. The results of their study imply that a positive relationship may be expected between organizational trust and employee agility. Van den Heuvel (2014) found a negative relationship between trust and resistance to change in employees. The goal of the present study was to investigate whether resistance to change would mediate the relationship between trust and agile behavior of employees.

The third research question therefore is:

Research question 3: Which contribution do "trust" in the organization and "resistance to change" have on an employee's agility?

Specifically, this study will investigate how trust in the organization affects resistance to change within that organization and what impact it has on the agility of the employee in two different change contexts: unplanned versus planned.

The following hypothesis is stated for research question 3:

H3: Higher reported levels of trust in the organization will imply more positive attitudes to change (less resistance), which in turn will influence an employee's agility. In an unplanned change context there will be a positive relation between trust and adaptive agility, and in a planned change context there will be a positive relation between trust and proactive agility.

Input and Mechanisms (situational factor)

Input: Agility employee goals

Earlier research has indicated that in the absence of SMART (specific, measurable, attainable, relevant, and having a timeframe) goal setting (in our case agility goals), feedback has no effect on agile performance (Latham, 2009; Locke & Latham, 2002). Agility goals can range from individual agile goals like having more autonomy (Fukushige & Spicer, 2011) or developing learning strategies (Poell & Van der Krogt, 2003), to agile social contextual goals such as improving cooperation or information sharing skills (Huang, 2012). They may also be focused on interpersonal behavior (Den Brok, Brekelmans, & Wubbels, 2004) or skills in directing group processes (Simons & Ruijters, 2008).

Mechanism (situational factor): Portfolio

For organizations to survive in fast changing market conditions, their human capital plays a crucial role (Wright, Cropanzano, & Bonett, 2001). Organizations therefore need an HRM system within which continuous learning is supported, leading to a workforce high in agility (Lombardo & Eichinger, 2000). A development portfolio

may help to reach this standard. Kicken, Brand-Gruwel and Van Merriënboer (2008) state that a development portfolio should provide improvement in performance level across a certain time-span, with the improvement referring to agility in the present study. By combining assessments from different sources such as peers and employees themselves (i.e., self-assessments), persons receive 360-degree feedback on their agility performance, which is expected to help identify gaps between their current and desired agility performance. A development portfolio shows the processes that an employee needs to go through to reach a particular goal (Burke, Lake, & Paine, 2008; Kicken et al., 2008), in this study the goal of agility. The process involved in setting clear personal agility development goals consists of four phases (Danielson & Abrutyn, 1997). In the first phase employees are concerned with the *collection* of topics for their personal agility goals by assessing the who, what, and why of their current agile situation. In the second phase, *selection*, the employees choose which development agility goal to work towards. However, this phase does not include a selection of which specific agility goals will be used during the process, but rather specifies the entire set of learning goals for the chosen topic. The third phase, *reflection*, allows people to assess why they have not yet achieved these agility goals; i.e., what is currently missing? For example, an extraverted employee wants to speak up during board meetings, but is lacking the knowledge to really be able to contribute to the meetings. During the final phase, *injection*, employees decide on which of the full set of agility development goals they want to focus on for the remainder of the project.

Mechanism (situational factor): Actionplan in portfolio

As we explained above, when there is a high self-other agreement the employer can help employees to increase their employee agility (Kenny & West, 2010). Moreover, employees can ask others for feedback on their agility and their agility goals; when they have clear agility goals, their agility can increase (Latham, 2009).

It has been shown that goal setting (in this study agility goals) positively relates to taking action (Locke & Latham, 2002; Ryan & Deci, 2000). When employers talk with employees about their level of agile behavior (during development plans), they often start by giving feedback on that behavior (DeNisi, 2011). Employers assess personal qualities of these employees on competence scales (Dewettinck & Van Dijk, 2013) and discuss agile performance (Prowse & Prowse, 2009) or tasks (Anseel, Van Yperen, Janssen, & Duyck, 2010). Feedback should provide employees with meaningful information concerning their behavioral change, focusing on

discrepancies between a desired agile standard and their current agile state (Atkins & Wood, 2002; Hensel, Meijers, Van der Leeden, & Kessels, 2010). This gap can be important in the appraisal of strengths and weaknesses (Cleveland, Murphy, & Williams, 1989), role specific competences (Avkiran, 1999), but it can also be related to the competences necessary for the agile organization in general (Wickramasinghe & De Zoyza, 2011).

The fourth research question therefore is:

Research question 4: What role does a development portfolio play in improving agility in employees?

Specifically, can goal setting and feedback be used by means of a portfolio in organizations to assist employees in improving their proactive and adaptive agility?

The following hypothesis is stated for research question 4:

H4: Portfolios will positively influence employees' agility (by goal setting) and self-other agreement on agility.

In sum. This dissertation's focus is on workforce agility, which refers to the ability of employees to initiate and adapt to changes in an organization. The purpose of the present study is to investigate personal and situational factors that are related to employee agility. The framework chosen for this thesis is Harvey et al.'s model of agility (1999). Regarding personal factors we investigate employees' Needs for Change, Need for Achievement, Need for Power and Need for Affiliation, that is the internal *why* behind their agility, and the two following mediators: willingness to change and resistance to change. Situational factors refer to constraints and facilitating aspects of the organizational context, output in terms of perceived behavior (by self and other) and also input (in our case goals) and mechanisms (in our case action plans) that may impact on a worker's agility. We investigate the use of a portfolio intended to develop employee agility at work and self-other agreement across a longer period of time on agility.

2

The mediating role of willingness to change in the relationship of employees' Need for Change, Need for Achievement, Need for Power, Need for Affiliation and agility

Doeze Jager-van Vliet, S.B., Born, M.Ph., & Van der Molen, H.T. (2017)

ABSTRACT

Organizations have an increasing need for agility. Earlier research has addressed organizational agility and how employees behave in reaction to change. This study looks at reasons for differences between employees' adaptive agile behaviour in reaction to organizational changes and why they choose to proactively initiate agile behaviours themselves. To this end, we investigated the relationship between employees' basic internal needs as derived from the work by Murray and McClelland on the one hand and their adaptive and proactive agility on the other hand among a sample of 100 employees from a service organization undergoing change. Specifically, we expected that employees' basic internal needs would be related to their proactive agility, as internal motivations can be expected to stimulate proactive behaviours, whereas adaptive behaviours may be more influenced by external factors. Our findings showed that employees' Need for Change, Need for Achievement and Need for Power, but not their Need for Affiliation, were positive predictors of self-rated proactive agility, but not of other-rated proactive agility. Adaptive agility (self- and other-rated) could not be predicted by these needs. In particular, employees' emotions towards the change, but not their commitment and the added value of the change and consequences for their own job, as perceived by them, were an important mediator between the Need for Power and Need for Change, and their proactive agility. These findings show the importance of employees' needs for their proactive agility but less so for their adaptive agility during organizational change. Confirming earlier studies, the relationship between self- and other-ratings was low.

The economic environment of organizations is constantly changing because of the rapid evolution in technology and growing customer expectations. To respond to these challenges and demands it is necessary for them to restructure and re-engineer themselves regularly (Nijssen & Paauwe, 2012). Agility provides ways of running companies to meet these challenges (Asari, Sohrabib, & Reshadic, 2014; Gunasekaran, 1999). An agile organization is able to "*operate profitably in a competitive environment of continually and unpredictably changing customers' opportunities*" (Dove & Wills, 1996; p. 195). Although an organization's agility depends on its ability to adapt, its full potential also depends on the degree to which the knowledge and skills of the workforce keep pace with the requirements of a dynamically evolving workplace (Alavi, Wahab, Muhamed, & Shirani, 2014; Asari et al., 2014). For example, an organization might choose to implement certain measures in order to respond to changing customer opportunities (Ganguly, Nilchiani, & Farr, 2009). If, however, employees cannot or will not perform these changes, the organization may fail. Individuals will adapt to changes implemented by the organization and also may implement the changes proactively themselves, as Harvey, Koubek and Chin (1999) state. These researchers define the concept of individual agility as "*The ability to adjust to new or different conditions caused by varying demands of technological and organizational changes by altering one's acts, behaviour, attitude, and mental state towards changes initiated internally (by the employee) or externally (e.g., organization or technology)*" (p. 204).

Clearly, the organization cannot be agile without agile employees (Mooghali, Ghorbani, & Emami, 2016). Therefore, in order to maintain a competitive advantage, organizations must invest not only in technology, but also in their human resources. As we will discuss in the next section, there is a good body of research addressing *how* employees behave in reacting to change, but there is still a lack of insight into *why* an employee demonstrates agile behaviours. We believe that we should be focusing on the underlying drives that result in employees' agile behaviour. To this end, we will investigate employees' basic needs, namely their Needs for Change, Achievement, Power, and Affiliation. We further believe employees' willingness to change forms an attitude which may play a role in the relationship between employees' basic needs and their agility during organizational change. Willingness to change has been conceptualized by Metselaar (1997) in terms of the emotions of employees related to the change at hand, the belief of employees in the added value of the change, their commitment to the change, and the consequences of the change for their work. Therefore, this study aims to increase our understanding of the agility of employees by assessing their needs and their agility as mediated by willingness to change.

We consider this knowledge to be important for our theoretical understanding of the agility-construct. Furthermore, earlier research has shown that concepts related to in particular proactive agility, for example employee intrapreneurship (Gawke, Gorgievski, & Bakker, 2017) and proactive work behaviour had positive effects on employees' well-being and work engagement (Gawke et al.,) and on their job satisfaction (Cunningham & De La Rosa, 2008). Also, our findings have practical importance, as such knowledge will allow managers to work towards better training and selection of their personnel.

Below we will discuss the concepts of agility, employees' needs and their willingness to change (attitude), which we subsequently integrate into a model and from which we derive our hypotheses.

THEORETICAL BACKGROUND

Agility

The necessity of an agile workforce is becoming increasingly more evident. Yet, the literature on workforce agility remains limited (Alavi et al., 2014; Asari et al., 2014; Hosein & Yousefi, 2012; Mooghali et al., 2016; Sherehiy, Karwowski, & Layer, 2007). Most studies addressing workforce agility have focused on identifying behavioural attributes, which are part of employees' agility, such as learning new things, knowledge sharing in the team, and creative problem solving (Plonka, 1997; Pulakos, Arad, Donovan, & Plamondon, 2000).

Empirical studies surrounding agility show consistency among researchers in their view about the facets which constitute agility or are related to agility although their terminology varies. We now discuss these views in order of year of publication. Gunesakaram (1999) investigated agile employees in the context of manufacturing firms, and identified teamwork, competence and independence as important facets of agility. Harvey et al. (1999) identified four personality factors related to agility positively, namely self-consciousness, self-esteem, extroversion/sociability and dependability. Breu, Hemingway, Strathern and Bridger (2001) examined how the pressures of organizational agility influence the workforce. Their study among 515 UK organizations suggests that agile employees use five capabilities namely *intelligence*, *competencies*, *collaboration*, *culture* and *information systems (IS)*. Mooghali et al. (2016) showed that "*HRM practice, a significant and positive impact on physical agility and intelligence personnel, including intelligence, competence, collaboration, culture and employees' use of information systems*" (p. 2442). Dyer

and Shafer (2003) suggest that there are six employee mind-sets or behaviours that drive the "Dynamic Organization", namely *drive and discipline*, *autonomy and accountability*, and *growth and continuity*. Chonko and Jones (2005) investigated the attributes of an agile employee force and distinguished between adaptive and proactive behaviours. Individuals who change their behaviour in order to increase the fit with their environment (that is, they react) show *adaptive agility*. On the other hand, when people anticipate and exploit problems related to change and identify new opportunities, they show *proactive agility*. This distinction is comparable to the difference between reactive and proactive control, respectively, as made in neuroscientific research (Aron, 2011). Sherehiy (2008) broadly agrees, as do Dyer and Shafer (2003), to distinguish between proactive and adaptive attributes of agility. Dries, Vantilborgh and Pepermans (2012) examined learning agility as a predictor of high potential. "*Career variety was found to be positively associated to learning agility*" these researchers reported (p. 340). Alavi et al. (2014), Asari et al. (2014) and Sherehiy (2008) all identified *adaptive* agility attributes (e.g., resilience) and *proactive* agility attributes (e.g., courage) as important factors of agility. In sum, workforce agility or employee agility seems to consist of two important aspects: (1) adaptability, that is an employee's ability to respond to on-going changes; and (2) proactive agility, that is an employee's ability to create new opportunities. Above, we saw that the research focus until now mostly has been on behavioural attributes of agility. Behavioural attributes explain how a person behaves (Winter, John, Stewart, Klohnen, & Duncan, 1998). In this study, we aim to investigate the major reasons *why* people act in an agile way. The reasons behind behavioural attributes in general have been labelled as motivational attributes or basic needs by Winter et al. (1998). Individuals' basic needs can be differentiated in, among other needs, their Need for Change, Need for Achievement, Need for Power and their Need for Affiliation (McClelland, 1985; Murray, 1938). Specifically, we believe employees' basic internal needs will related to their proactive agility because internal motivations can be expected to stimulate proactive behaviours, whereas adaptive behaviours may be more influenced by external factors.

Needs

The present study focuses on why employees show agile behaviours. Murray (1938) proposed 27 needs in his book *Explorations in Personality* and referred to these as psychogenic needs. Each need explains why someone would demonstrate certain behaviours. Although an investigation of all of Murray's needs in relation to agility is

beyond the scope of this study, we focus on the four following distinct needs, which are relevant to the concept of work-related agility.

Firstly, the *Need for Change* clearly is conceptually related to agility. Secondly, we focus on the Needs for Achievement, Power, and Affiliation, as McClelland (1985) argued that these three types of needs differentiate individuals in a work setting. Many empirical studies (e.g., McClelland, 1985; McClelland, Atkinson, Clark, & Lowell, 1953) have demonstrated that these three needs can be used to describe the major reasons why people do things. Jex and Britt (2008) have shown McClelland's theory of needs to be the most commonly applied framework of human motivation.

Among the above needs, the Need for Change is conceptually most strongly related to agility. Both the Need for Change and agility have clear empirical relations with openness to experience (Costa & McCrae, 1988; Engeser & Langens, 2010; Harvey et. al., 1999). We expect to find a positive correlation between this need and proactive agility in particular. There are two reasons for our expectation: (1) why people act in an agile way can be regarded as an internally motivated process instead of as a reaction to the context; and (2) agility is often regarded as the competence to initiate changes (e.g., Gunasekaran, 2001).

Hypothesis 1: The Need for Change will show a positive correlation with proactive agility but not with adaptive agility.

Previous research (e.g., Dweck, 1986) has shown that the *Need for Achievement* significantly and positively influences the way people create new tasks in work situations. A high Need for Achievement has been linked to successful job performance (McClelland et al., 1953) and agility has also been viewed as a key aspect of successful employees (Alavi et al., 2014). A high Need for Achievement is also seen in individuals who are goal-oriented and have high standards of performance (Engeser & Langens, 2010). A strong Need for Achievement is more characteristically expressed by initiating change (proactively) than reacting to change (adaptively). Therefore, individuals with a willingness to achieve are expected to be more proactive because they tend to show behaviours and attitudes, which accommodate changes (Harris, 2004). These individuals are likely to be persistent and therefore will not withdraw from change and novelty. Individuals who exhibit traits associated with a strong sense of purpose, obligation and persistence generally perform better when carrying out proactive changes than those who do not (Harvey et al., 1999).

Hypothesis 2: The Need for Achievement will show a positive correlation with proactive agility but not with adaptive agility.

The *Need for Power* characterizes individuals who have the desire to influence and lead or engage others in goal attainment (Winter et al., 1998). Individuals with a high Need for Power, therefore, are attracted to jobs or organizations that give them a sense of achievement and empowerment (Winter et al., 1998). Research into the Big-5 personality factors (Enseger & Langens, 2010; McCrae et al., 2004) shows that there is a strong relationship between people with a high Need for Power and their extraversion. Extraverted people are open to new things and they are proactive in creating new opportunities (Sanz, Gil, García-Vera, & Barrasa, 2008). In line with these findings, the following hypothesis may be formulated.

Hypothesis 3: The Need for Power will show a positive correlation with proactive agility but not with adaptive agility.

The *Need for Affiliation* characterizes individuals who have a desire to maintain friendships with others or with groups. They want to establish positive relations with others. In addition, those with a high Need for Affiliation enjoy stable relations, generously give their own time to others, are content with their jobs, readily commit to their organization, and are more extraverted than introverted (Wiesenfeld, Raghuram, & Garud, 2001; Winter et al., 1998). Therefore, individuals with a high Need for Affiliation work most effectively in environments where they are cared for and encouraged (Wiesenfeld et al., 2001). 'Commitment to an organization' and 'establishing positive relations with others' are aspects that may drive someone with a high Need for Affiliation to demonstrate agile behaviours if the group also needs to show agility. An individual who wants to feel like part of a group (high Need for Affiliation) will most likely want to adopt behaviours similar to the group, that is, agile behaviours demanded from the entire workforce. Consequently, we expect the Need for Affiliation to show a positive correlation with adaptive agility in a context of organizational change.

Hypothesis 4: The Need for Affiliation will show a positive correlation with adaptive agility but not with proactive agility.

Figure 2.1 visualizes hypotheses 1 to 4, which focus on the relationships between the four needs and adaptive and proactive agility.

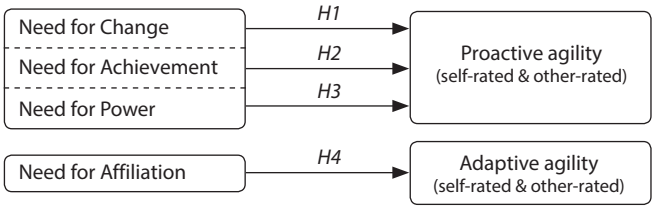

Figure 2.1. Hypotheses 1 to 4 regarding the relationships between the needs and adaptive and proactive agility.

Willingness to Change as a mediator

Organizational change and innovation can cause strong resistance at work, but can also lead to positive attitudes (George & Jones, 2001; Piderit, 2000). When assessing the needs and agility of employees, it therefore is useful to take into account employees' willingness to change during an organizational change process (Avey, Wersing, & Luthans, 2008). This is one of the factors distinguished by the DINAMO-Model (Metselaar, 1997). The DINAMO-Model states that an employee will react positively to change when the employee is instructed to change and also is able to change (Metselaar, 1997). Willingness to change therefore may be an important mediator in the relationship between the employees' Need for Change, Achievement, Power, and Affiliation on the one hand, and agility on the other hand. In the DINAMO-Model, willingness to change is regarded as an attitude and consists of four facets. Firstly, the perceived consequences of the change for one's own work form an important aspect of one's willingness to change. When the change has negative consequences for the employee, for example less task responsibility, it is more likely that the change will elicit resistance. Emotions related to the organizational change form a second important aspect of one's willingness to change. The employee's belief in the added value of a change for the organization forms the third aspect of willingness to change. The employee's commitment to the change is the fourth and final aspect of one's willingness to change (Metselaar, 1997). The below hypothesis tests whether willingness to change, consisting of the four above aspects, will act as a mediator as follows:

Hypothesis 5a: The relationships between the Need for Change, Achievement and Power and proactive agility, but not adaptive agility, are mediated by the employees' willingness to change.

Hypothesis 5b: The relationship between the Need for Affiliation and adaptive agility, but not proactive agility, is mediated by the employees' willingness to change.

Figure 2.2 visualizes hypothesis 5 on the relationships between the needs and adaptive and proactive agility as mediated by willingness to change.

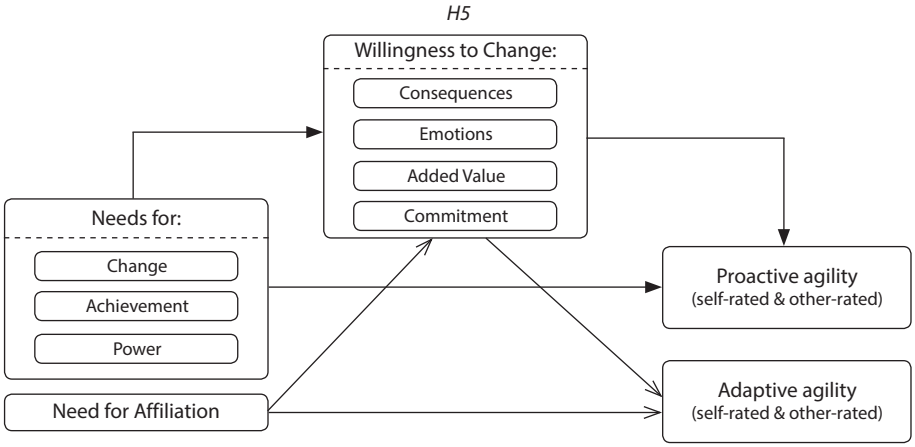

Figure 2.2. Hypothesis 5 regarding the relationships between the needs and adaptive and proactive agility as mediated by willingness to change.

METHOD

Participants and procedure

Employees from a large Dutch company (N = 100) participated in the study on a voluntary basis in the second half of 2015. This sample size implied a power of .88 (given α = .0.05, and an expected effect size of .20; Kenny, Kashy, & Cook, 2006). The company was active in the field of job services and was undergoing a major organizational change at the time of the study. The change related to of the abolishment of personal offices and personal office space for individual employees, which implied a large impact on daily life at the office and the working environment of employees. After having received agreement from the company's human resource management director to conduct the study, the line managers of the company were asked to pass information about the study to their team members and to encourage them to participate in the study. Participants mostly were between 30–40 years old and ranged from 20 to 63 years. The sample consisted of 56.5% females and 43.5%

males, which is representative of this industry. They had worked on average 10.5 years in this company. Most of them had completed higher vocational education (59.5%).

The respondents filled out a series of scales (for details see measures) in an e-survey format. Most participants completed the survey at work, and a few (10%) at home. Two weeks after the initial email, a reminder email was sent to increase the response rate to 68%. All participants were asked to sign an informed consent form, and were told that they could stop at any time participating in the study. As an incentive to participate, they each received an extensive feedback report on their individual results. Within a week, participants received the other-rated agility scale for an other-rater to judge their agility. Participants could distribute the other-rated agility scale to whoever (e.g. a direct colleague or the manager) they wished, but to at least three people. In case of multiple raters, their scores were averaged. Consequently, for each participant nine scores were available in total: A self-rated adaptive agility score, a self-rated proactive agility score, an (averaged) other-rated adaptive agility score, an (averaged) other- proactive agility score, a self-rated willingness to change score, and self-rated scores for the Need for Change, the Need for Achievement, the Need for Power, and the Need for Affiliation.

MEASURES

Needs. The five needs were measured with the Personality and Preference Inventory (PAPI; Cubiks, 2012). The PAPI measures the extent to which an individual relates to statements such as 'I like to do new things' (for the Need for Change). The PAPI-3 (Cubiks, 2012) is a new version of the old PAPI (Sanz et al., 2008), which was specifically designed to assess the psychological needs of Murray, and cognition/behaviour patterns at work. It consists of 137 statements, which are scored on a 7-point Likert scale (from 1 'absolutely disagree' to 7 'absolutely agree'). The PAPI-3 contains a social desirability scale of five statements. We used the Dutch version of the PAPI-3, and only the scales measuring the four needs as follows: the Need for Change scale (total 6 items, 'like to do new things', $\alpha = .82$), the Need for Achievement scale (total 6 items, e.g., 'I like to succeed at the task', $\alpha = .83$), the Need for Power scale (total 6 items, e.g., 'I try to influence other people', $\alpha = .85$) and the Need for Affiliation scale (total 6 items, e.g., 'I hope to get in touch with other people', $\alpha = .85$).

Self-rated agility. The Dutch agility questionnaire (Cubiks, 2014) was specifically developed for this study. The questionnaire was designed after carefully reviewing the available literature on agility (Alavi et al., 2014; Pulakos et al., 2000; Sherehiy, 2008), which inspired us for items covering agility. Together, we developed 36 items. 10

experts in organizational behaviour judged their accuracy and relevance and screened out 5 items. We conducted an exploratory factor analysis using principal component varimax rotation for the 31 remaining items. Seven interpretable factors emerged with eigenvalues greater than one (Comrey & Lee, 1992; Field, 2009). They were labelled (1) *Resilience* (total 4 items): an employees' competence to deal with setbacks, for example 'I know how to give a positive spin to a negative situation'; (2) *Teamwork* (total 5 items): the competence of an employee to work together with colleagues, share information, and stimulate group processes, for example 'I am motivating other team members and I appreciate their input'; (3) *Coping with change* (total 4 items): an open approach to deal with and adapt to implemented changes, for example 'I am having a positive view on change'; (4) *Decisiveness* (total 4 items): the competence of an employee to be vigorous, for example 'I am putting a lot of energy in my work'; (5) *Eagerness to learn* (total 5 items): an active approach of employees for personal development, for example 'I am asking for feedback about my performance'; (6) *Independence* (total 4 items): is the competence of employees to perform tasks with minimal guidance and the preference for responsibility, for example 'I am considering new ways to identify potential opportunities'; (7) *Courage* (total 5 items): a proactive approach towards possibilities and changes instead of waiting for things to happen, for example 'I am consistently looking for more responsibility'.

All items loaded substantially (>.60) on their respective factors. The seven-factor solution explained 62.5% of the score variance. However, as the facets resilience, teamwork, coping with change, and decisiveness correlated strongly with one another (varying from .56 to .75), we treated them as a unidimensional construct or factor (Spector, 1992; Tabachnick & Fidell, 2013) and labelled this factor as adaptive agility (adapting to change). These facets did not correlate with independence, eagerness to learn and courage (varying from r = .06 to .15). The facets independence, eagerness to learn, and courage correlated strongly with one another (varying from r = .51 to .69). We therefore treated them as one factor labelled as proactive agility (initiating change). In sum, we treated agility as construct consisting of two components, namely adaptive and proactive agility. The two components explained 55% of the score variance, with adaptive agility explaining 37%, and proactive agility explaining 18 % of the variance. This two-factor solution is consistent with related research (Chonko & Jones, 2005) as well as other research indicating that the agility attributes (Pulakos et al., 2002; Alavi et al., 2014) are part of a broader construct. The self-rated adaptive and proactive agility scales proved reliable. The reliabilities of the constructs were assessed during pilot-testing and confirmed in our sample. *Adaptive agility* was measured by 17 items (α = .87). Adaptive agile item examples are: 'I offer solutions

when things go wrong', and 'I am having a positive view on change'. *Proactive agility* was measured by 14 items (α = .87). Proactive agile item examples are: 'I am adopting a proactive approach rather than responding to situations', and 'I am constantly looking for new opportunities'. All items were scored on a 5-point Likert scale ranging from 1 'strongly disagree' to 5 'strongly agree'. The intercorrelation between adaptive agility and proactive agility was $r = .36$.

Other-rated agility. A rephrased version of the self-rated-agility scales was used for other-rated-agility scales. An example of rephrasing the statements is changing the item: 'I offer solutions when things go wrong' into 'He/She offers solutions when things go wrong'. Other-ratings of adaptive agility showed adequate reliability (α = .88). Other-ratings of proactive agility also showed adequate reliability (α = .88). The intercorrelation between self-rated and other-rated adaptive and proactive agility were as follows: self-rated adaptive agility and other-rated adaptive agility: $r = .27$; self-rated adaptive agility and other-rated proactive agility: $r = .08$; self-rated proactive agility and other-rated adaptive agility: $r =. 06$, self-rated proactive agility and other-rated proactive agility: $r = .20$; other-rated proactive agility and other-rated adaptive agility: $r = .26$.

Willingness to change. Willingness to change was measured with the willingness to change scale of Metselaar (1997), which includes the following factors: perceived consequences of the change for one's work, felt emotions, added value of the change for the organization and commitment to the change process. These factors respectively have reliabilities of .90, .87, .85 and .84. The respondents had to assess 24 statements on a 5-point Likert scale ('strongly threatening' to 'strongly stimulating'). For example, the following statements had to be rated: 'What is your opinion about the influence of the process of change on the quality of your work?' (Consequences for own work; total 10 items), 'How do you experience the process of change in view of your position in the organization: indicate your feelings in terms of bad or good?' (Emotions; total 5 items), 'What is your expectation about the influence of the process of change in the organization on the internal efficiency?' (Added value; total 5 items) and 'What is your opinion about the following statement: I'm feeling involved in the process of change' (Commitment; total 4 items).

RESULTS

Table 2.1 displays the descriptive statistics and intercorrelations among all variables. Age was negatively and significantly related to the Need for Achievement ($r = -.42$, $p < .01$), Need for Power ($r = -.23$, $p < .05$), and Need for Affiliation ($r = -.40$, $p < .01$), implying that older employees scored lower on these needs. Also noteworthy is the

Table 2.1. Descriptive statistics and intercorrelations among all variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	1.13	.41															
2. Age	1.86	1.34	.05														
3. Educational level	2.19	.37	.04	.13													
4. Willingness-consequences for own work	3.71	.48	.30**	-.27**	-.07	(.84)											
5. Willingness-emotions	3.57	.51	.22*	-.28**	-.02	.25*	(.78)										
6. Willingness-added value org.	3.65	.60	.01	-.17	-.07	.21	.24*	(.82)									
7. Willingness-commitment to change process	3.46	.73	.05	.12	-.08	.20	.22	.13	(.84)								
8. Agile-self adaptive	4.11	.43	.36**	-.21	-.21	.37**	.38**	.15	.21	(.87)							
9. Agile-self proactive	3.85	.33	.15	-.11	-.01	.32**	.41**	.28*	.01	.38**	(.87)						
10. Agile-other adaptive	4.09	.47	.06	-.06	-.32*	.21	.23	.19	.23	.27**	-.06	(.88)					
11. Agile- other proactive	3.71	.43	.03	.31**	-.33**	.22	.23	.13	.03	.08	.20	.26**	(.88)				
12. Need for Achievement	31.45	6.03	.15	-.42**	.22	.19	.11	.12	-.07	.15	.43**	-.06	.19	(.89)			
13. Need for Power	28.04	5.41	.20	-.23	.20	.31**	.30**	.09	.25*	.33**	.45**	-.15	.07	.49**	(.82)		
14. Need for Change	29.46	5.18	.27**	-.18	.20	.17	.22	.25*	-.11	.20	.60**	.04	.20	.43**	.16	(.85)	
15. Need for Affiliation	31.39	5.34	.11	-.40**	.29*	.15	.02	.04	-.17	.05	.20	.05	.00	.34**	.25**	.31**	(.85)

Note: $N = 100$. For gender, 1 = female, 2 = male. Age, 0 = < 20 years, 1 = between 20 and 30 years, 2 = between 30 and 40 years, 3 = between 40 and 50 years, 4 = between 50 and 60 years and 5 = 60 years and older. Educational level, 0 = secondary school, 1 = lower vocational education, 2 = higher vocational education, and 3 = higher university education. Reliabilities (α) are provided in the diagonal. Scores range from 1 (= strongly disagree) to 5 (= strongly agree). *$p < .05$ (2-tailed). **$p < .01$ (2-tailed).

fact that educational level and the Need for Power were unrelated to one another (r = .20, *ns*), whereas educational level and the Need for Achievement (r = .22, p < .05) and Affiliation (r = .29, p < .05) were positively and significantly related, implying that higher educated employees had a higher Need for Achievement and Affiliation.

Hypothesis testing

Hypothesis 1 suggested a positive correlation between the Need for Change and proactive agility (self- and other-rated). Table 2.1 shows that this hypothesis was confirmed for self-rated proactive agility (r = .60, p <. 01), but not for other-rated proactive agility. Therefore, hypothesis 1 was partially supported, namely for self-rated proactive agility. Additionally, there was no significant relationship between the Need for Change and adaptive agility (self- and other-rated).

Hypothesis 2 expected a positive correlation between the Need for Achievement and proactive agility (self- and other-rated). This hypothesis was confirmed for self-rated proactive agility (r = .43, p <. 01), but not for other-rated proactive agility. Therefore, hypothesis 2 had partial support, namely for self-rated proactive agility. Additionally, there was no significant relationship between the Need for Achievement and adaptive agility (self- and other-rated).

Hypothesis 3 predicted a positive correlation between the Need for Power and proactive agility (self- and other-rated). Our hypothesis was confirmed for self-rated proactive agility (r = .45, p <. 01), but not for other-rated agility (see Table 2.1). Therefore, hypothesis 3 had partial support, namely for self-rated proactive agility. Although not predicted, there also was a significant relationship between the Need for Power and self-rated adaptive agility (r = .33, p <. 05), but not for other-rated adaptive agility (see Table 2.1).

Hypothesis 4 suggested a positive correlation between the Need for Affiliation and adaptive agility (self- and other-rated). This hypothesis, however, was not supported by our results. Neither self-rated nor other-rated agility – adaptive or proactive agility – was related to the Need for Affiliation (see Table 2.1). Therefore, hypothesis 4 had to be rejected.

Hypothesis 5a expected to find mediation effects of willingness to change for the relationship between the needs (Need for Change, Achievement and Power) and proactive agility (self- and other-rated). Hypothesis 5b expected to find mediation effect of willingness to change for the relationship between the Need for Affiliation and adaptive agility.

Although all mediation effects were tested, only the significant ones are reported (see Figure 2.3a to 2.3c). The PROCESS tool model 4 (parallel multiple mediation) in SPSS (Hayes & Preacher, 2014) was used to test this hypothesis. The mediated effect was tested using a bootstrap estimation approach with 1000 samples (Shrout & Bolger, 2002). Results showed mediation effects for the Need for Change and Power, but not for the Need for Achievement and Affiliation. Results showed that the factor *emotions* of willingness to change partially mediated the relationship between the Need for

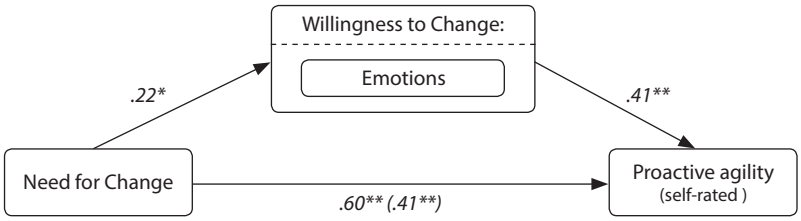

Figure 2.3a. Significant partial mediation by willingness to change (emotions) of the relationship between the Need for Change and self-rated proactive agility: the direct relation between Need for Change and self-rated proactive agility remains significant (.41) after adding the mediator.

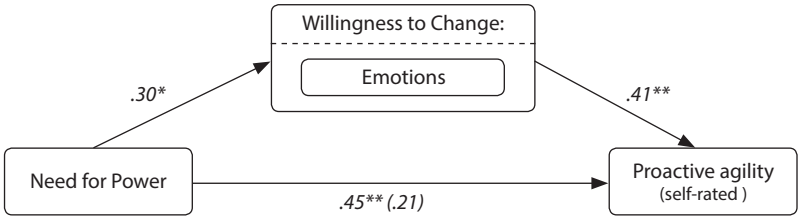

Figure 2.3b. Significant full mediation by willingness to change (emotions) of the relationship between the Need for Power and self-rated proactive agility: the direct relation between Need for Power and self-rated proactive agility becomes non-significant (.21) after adding the mediator.

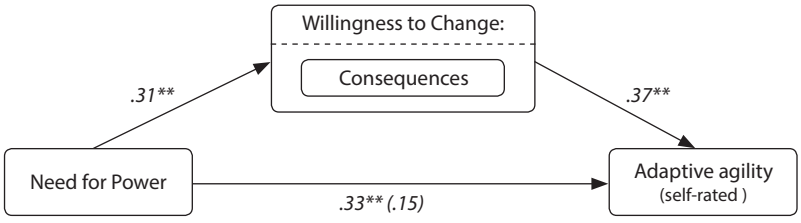

Figure 2.3c. Significant full mediation by willingness to change (consequences) of the relationship between the Need for Power and self-rated adaptive agility: the direct relation between Need for Power and self-rated adaptive agility becomes non-significant (.15) after adding the mediator.

Change and self-rated proactive agility (β = .10, $p < .05$; see Figure 2.3a). The indirect effect results indicated that the indirect coefficient was significant ($b = .045$, SE = .018, 95% CI = .01 to .05). The direct effect results indicated the direct coefficient remained significant ($b = .059$, SE = .023, 95% CI = .01 to .05).

The relationship between Need for Power and self-assessed proactive agility disappeared (full mediation) when the factor *emotions* of willingness to change was added as mediator (β = .21, $p > .05$; see Figure 2.3b). The indirect effect results indicated the indirect coefficient was significant ($b = .312$, SE = .169, 95% CI = .07 to .08).

The association between Need for Power and self-assessed adaptive agility disappeared (full mediation) when the factor willingness to change *consequences for work* was added as mediator (β = .15, $p > .05$; see Figure 2.3c). The indirect effect results indicated the indirect coefficient was significant ($b = .161$, SE = .066, 95% CI = .05 to .10).

In sum, this hypothesis was partially supported, namely for willingness to change (emotions) in three relationships: between the Need for Power and self-rated proactive agility, between the Need for Change and self-rated proactive agility, and, but not predicted, for willingness to change (consequences) in the relationship between the Need for Power and self-rated adaptive agility (Table 2.1 and Figures 2.3a to 2.3c).

In Figure 2.3a, 2.3b and 2.3c, we have visualized the significant mediation relationships between the needs and adaptive and proactive agility as mediated by willingness to change.

DISCUSSION

This study set out to explore the relationship between employees' agility and four of Murray's (1938) needs, namely the Need for Change, Achievement, Power, and Affiliation. The purpose was to provide insight in the relationship between four important employees' needs (why employees demonstrate agile behaviour) and their proactive and adaptive agile behaviour as mediated by willingness to change.

Our hypotheses were partially supported. The findings showed that there is a relationship between employees' Need for Change, Achievement, and Power and self-rated proactive agility, but not for other-rated proactive agility. There was no relationship between the Need for Affiliation and agility. Willingness to change acted as a mediator of the relationship between some of the needs and self-rated agility. There was a marked difference between how individuals rated their own agility and how others perceive them. Below, these results are discussed in more depth.

The Needs for Change, Achievement, Power, and Affiliation, and the relationship with agility

We hypothesized that the Need for Change (hypothesis 1) would positively correlate with proactive agility. This hypothesis was confirmed for self-rated proactive agility, but not for other-rated proactive agility. The results confirm the idea of Tornau and Frese (2013) that employees who have an open mind and want to experience new things are inclined to initiate change (proactively) rather than just react to it (adaptive).

We hypothesized that employees' Need for Achievement (hypothesis 2) would positively correlate with proactive agility. This hypothesis was confirmed for self-rated proactive agility, but not for other-rated proactive agility. These results are in line with the ideas of Harris (2004) and Engeser and Langens (2010) that individuals with a willingness to achieve will also show proactive behaviour, because they tend to show behaviours and attitudes which accommodate change.

We predicted a positive correlation between the Need for Power (hypothesis 3) and proactive agility. Our hypothesis was confirmed for proactive self-rated agility, but not for proactive other-rated agility. Our results confirm the notion of Sanz et al. (2008) that employees with a strong Need for Power are open to new things and to creating new opportunities (proactively) rather than just react (adaptively) to it.

We expected to find a positive correlation between the Need for Affiliation (hypothesis 4) and adaptive agility. This prediction, however, was not supported by the results: neither self-rated nor other-rated agility – adaptive or proactive agility – yielded significant correlations with the Need for Affiliation. A possible explanation for a lacking relationship could be that the Need for Affiliation seems to be less directly work-related than the Needs for Achievement and Power. The lack of studies in work settings, which have investigated employees' Need for Affiliation, could be some indirect support for this notion. The Need for Affiliation, however, may become more vital at work. Grant and Parker (2009) argue that the future of work will imply a necessity for employees who are more proactively agile in combination with a relational orientation. For a relational orientation, the Need for Affiliation therefore may become more urgent.

Mediation effects

We hypothesized (hypothesis 5 a and b) to find mediation effects between the needs and adaptive and proactive agility. More specifically, we suggested that the relationship between the Need for Change, the Need for Achievement, and the

Need for Power and proactive agility would be mediated by willingness to change within the context of an occurring organizational change. We also suggested that the relationship between the Need for Affiliation and adaptive agility would be mediated by willingness to change. The results showed a full mediation effect by the emotions factor of willingness to change between the Need for Power and self-rated proactive agility, and a partial mediation effect by the emotions factor of willingness to change in the relationship between the Need for Change and self-rated proactive agility. These findings seem to imply that emotions towards an occurring organizational change have influence. Employees with a Need for Change or Power will show positive emotions to the occurring change, which in their turn will have a positive effect on agility behaviour. It is important to note that particularly employees' emotions towards the change, but not their commitment and the added value of the change and consequences for their own job, as perceived by them, is an important mediator between the Need for Power and Change, and proactive agility.

Limitations and directions for future research

All measures, except the other-rating of agility, were self-ratings. It therefore is not surprising that relationships between all these measures were higher than with the other-rating of agility (Chang, Van Witteloostuijn, & Eden, 2010). As has been suggested by these authors in relation to this issue of common method variance, we used other-ratings of agility to circumvent this issue. However, other-rated agility unfortunately could not be predicted by the needs. Also, the relationship between self- and other rated agility was not high. It seems that employees evaluated themselves in a different way on agility than others evaluated them. One possible explanation for the low correlation between self-rated and other-rated agility scores is that others (managers and colleagues) might have been projecting their own perceived agility onto the target employee. From research by Kenny (1994) it is known that other-ratings can be highly impacted by this phenomenon of projection. Future research may therefore incorporate a round-robin design (Kenny & West, 2010) in which participants receive evaluations from others, but also provide evaluations for those other participant (and themselves). Such a design will make the actual influence of projection more clear.

A potential other reason for the self-other disagreement on agility scores may be the fact that agility is a fairly complex concept and therefore employees themselves and others might not know specifically what to assess (Watson, Hubbard, & Wiese, 2000). In relation to this point, we propose that the agreement between others and

oneself on one's agility can be improved by means of a portfolio (Kicken, Brand-Gruwel, Van Merriënboer, & Slot, 2008). In a portfolio, employees collect evidence of their behaviour, thereby increasing the visibility of displayed agile behaviour for themselves and for others. To examine whether the difference between self- and other-evaluations of agility is actually due to high complexity of the construct of agility, future researchers should therefore try to incorporate the employee portfolio as part of their research design.

Finally, the impact of the environment is important in the topic of agility (Tornau & Frese, 2013). The organizational change investigated in the present study was a planned change. It can be expected that employees will be proactively agile in a planned change work context (e.g., planned change as response to developments in the market), while in an unplanned change context (e.g., as a result of a suddenly urgent occurring change situation) employees may mostly show adaptive agility. For this reason, our results need to be generalized with care. A follow-up study could try to replicate our findings in unplanned organizational change contexts.

We were unable, unfortunately, to measure employee outcomes such as work performance, well being, and job satisfaction. Future researchers could therefore incorporate such employee outcomes to investigate for which of these agility will be an important predictor.

Conclusion

This study shows the importance of employees' Needs of Achievement, Power, and Change for their proactive agility but not for their adaptive agility during organizational change. The emotions factor of willingness to change acted as mediator in the relation between the Need for Change and Power and self-rated proactive agility.

3

Self-other agreement between employees on their Need for Achievement, Need for Power, and Need for Affiliation: A social relations study

Doeze Jager-van Vliet, S.B., Born, M.Ph., & Van der Molen, H.T. (2017)

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ABSTRACT

The present study focused on self-other agreement between employees on their Need for Achievement, Need for Power and Need for Affiliation, which needs are relevant for performance and wellbeing at work. The Social Relations Model was used to examine consensus between other-raters, self-other agreement and assumed similarity (seeing others as one sees oneself) on these needs. Data were collected among 168 employees from a Dutch non-profit organization, with four employees in each of 42 teams. Consensus between other-raters occurred for all needs. Self-other agreement existed for the Needs for Achievement and Power, but not for Affiliation. Assumed similarity occurred for the Need for Achievement, but not for the other needs. Findings for the Need for Achievement demonstrate a traditional rating pattern exhibiting consensus, self-other agreement and assumed similarity. The absence of assumed similarity for the Need of Power implies that employees are able to distinguish between their own and their peers' needs to have influence at work. The lack of self-other agreement for the Need for Affiliation may imply that improving others' awareness of one's need to connect is necessary to enhance one's well-being at work. Our findings may be useful to organizations, as being knowledgeable about one's employees' needs is important to improve the fit between their needs and the job.

The classic trichotomy of needs theory of McClelland (1961) put forward that there are three intrinsic motives that drive each individual: the Need for Achievement, the Need for Power, and the Need for Affiliation (McClelland, 1961). These needs have been used in both motivational psychology (Deci & Ryan, 2000) and work and organizational psychology (e.g., Harrell & Stahl, 1984; Latham & Budworth, 2006; Ramlall, 2004) to explain why people act the way they do. At work, people are motivated for different reasons to accomplish their responsibilities (DeNisi & Pritchard, 2006). People with a high Need for Power for instance will be driven in their work by wanting to influence others, whereas people with a high Need for Achievement will enjoy the accomplishment of a difficult and challenging task. People scoring high on the Need for Affiliation essentially need to be in close and friendly relationship to others (McClelland, 1961; Ramlall, 2004).

Baard, Deci and Ryan (2004) argued that the intrinsic need satisfaction within organizations form a motivational basis for organizational success. They were able to demonstrate that satisfying the intrinsic needs of employees by means of a supportive work climate, predicted their well-being, vitality, and their performance evaluations. People with a high Need for Affiliation, for instance, who have a desire for maintaining good relationships and being part of a group, will flourish in a work climate in which social interaction is encouraged and with a manager who is able to create team spirit. When, however, employees become frustrated in their needs, this could lead to poorer satisfaction, work performance and perhaps increased withdrawal and related health costs for organizations (Harell & Stahl, 1984).

The present study takes the perspective that understanding employees' needs at work is a prerequisite to be able to subsequently stimulate and facilitate the desired work outcomes. In line with this perspective, the focus of our study is an investigation of the degree to which there is an interpersonal agreement within employees' social work environment upon one's Need for Achievement, Need for Power and Need for Affiliation. At the core of our study is the notion that a higher agreement between one's self-rated needs and other's ratings of one's needs implies a better understanding of one's needs, which should ultimately have a positive effect on important work-related outcomes. However, if, as suggested by Fletcher (1997, p. 186), self-perceptions would differ from the perceptions by others "… then it is difficult to see how one can manage work relationships successfully, contribute well as a team member and adapt one's behavior to circumstances and individuals". Given that motivation is an important determinant of work behavior (DeNisi & Pritchard, 2006), people will need feedback for self-insight to be able to change their behavior sooner or later (DeNisi, 2011).

Within an organization consisting of self-governing teams, our study examined whether people's perceptions about their own Need for Achievement, Need for Power and Need for Affiliation in the work context, agree with how they are perceived by their team members (self-insight) and how they perceive those others (social comparison).

The Need for Achievement, the Need for Power, and the Need for Affiliation

Building on the pioneering research of the Harvard Psychological Clinic (1930, Explorations in Personality), Murray (1938) first discussed the importance of the Need for Achievement, the Need for Power, and the Need for Affiliation in the context of an integrated motivational model. McClelland (1961) then published *The Achieving Society* in which he proposed that these three needs form the basis of human motivation in the work environment. His ideas, also known as the *Need Theory* and the *Learned Needs Theory*, provide an explanation for how the three needs (Need for Achievement, Power, and Affiliation) may affect the actions of people in a work context.

According to McClelland, Atkinson, Clark, and Lowell (1953), people with a high Need for Achievement get satisfaction from *individually* mastering challenging tasks. Because they are concerned with personal achievement, people with a high Need for Achievement place high value on receiving regular individual feedback (Brunstein & Hoyer, 2002), and on meeting their obligations and accomplishing tasks (Engeser & Langens, 2010; McClelland, 1961). Individuals with a high Need for Power prefer to influence others, to control others or be in a position of power (Winter, 1998). Highly power-motivated individuals obtain satisfaction from exerting social, physical or emotional impact on others or on the world at large, but experience aversion against social defeats and impact from others (Winter, 1998). A high Need for Affiliation characterizes people who love to create and maintain social relationships, enjoy being part of a group and have the desire to feel loved and accepted (Sokolowski & Heckhausen, 2008). Those with a high Need for Affiliation are more likely to get lonely than those with a low Need for Affiliation, suggesting that their Need for Affiliation may be related to their sense of self and their desire for external stimulation (McClelland, 1961).

Several studies have supported the importance of the Need for Achievement, the Need for Power, and the Need for Affiliation in the work environment. Harrel and Stahl (1984) reported correlations between the three needs and several job outcomes, with the Need for Affiliation relating negatively and the Need for Power

relating positively to the job satisfaction of managers. These authors found the Need for Achievement to be positively related to the amount of time people spend on their work and work-related activities, and their performance ratings. Baard et al. (2004) described positive relationships between the satisfaction of employees' basic psychological needs of competence, autonomy, and relatedness (which needs are loosely comparable to the needs of Achievement, Power and Affiliation) and their well-being as well as the performance evaluation they reported to have received from the organization. Among 745 employees from different work settings in Belgium, Van den Broeck, Vansteenkiste, De Witte and Lens (2008) found that the degree to which these psychological needs could be satisfied, was able to fully account for the relationship between one's job resources and one's exhaustion at work, and to partially account for the relationships between these employees' job demands and their exhaustion, and between their job resources and vigor at work. As yet another example, Greguras and Diefendorff (2009) in a longitudinal study among full-time employees in Singapore confirmed that the psychological need satisfaction was able to predict employees' supervisor-rated job performance and their affective commitment to the organization. Such findings seem consistent with Deci and Ryan's (2000) work in which they posit that satisfaction of one's psychological needs leads to optimal performance.

Consequently, from findings such as the above, we deduce that being able to accurately comprehend and account for an employee's needs can influence employees' work performance and job satisfaction. At the same time, it also seems likely that not understanding an employee's needs will increasingly lead to problems at work and eventually perhaps to higher employee turnover.

Self-other agreement

The present study's premise is that a higher agreement between one's self-rated needs and other's ratings of one's needs should eventually have a positive influence important work-related outcomes. Earlier research into self-other agreement on related constructs such as personality and values has taken diverging stances in the topic of self-other agreement. Some state that self-ratings are subject to response biases such as social desirability, implying that other raters are better and more objective judges of individual's characteristics (e.g., Oh, Wang, & Mount, 2011). Other researchers state that individuals are experts about themselves, and therefore anyone else will be less able to provide accurate ratings about that person than the person him or herself (e.g., Klein & Loftus, 2014). Several researchers have taken intermediate

positions in this discussion, proposing that self-other agreement will be higher, when, among other things, the visibility of the construct is higher and the desirability of the construct is lower (e.g., John & Robins, 1993), when 'good' raters are used (e.g., raters with a higher dispositional intelligence, who are better able to relate behavior to underlying dispositions; De Kock, Lievens, & Born, 2015), and for ratees who are better ratable (e.g., low self-monitors; Funder, 1995) or have more self-insight than others (Hixon & Swann, 1993).

John and Robins (1993) provided empirical support for the idea that a higher observability and a lower evaluativeness (favorability versus unfavorability) of a construct will lead to a higher self-other agreement. Extraversion, for instance, has a relatively high observability and a relatively low evaluativeness, leading to more self-other agreement than for instance conscientiousness, which has a somewhat lower observability and a higher evaluativeness. In a similar vein, Vazire (2010) was able to support the idea that observability and evaluativeness of a construct would also determine whether the self or the other would be the best judge of this construct. Vazire for example reported that for constructs low in observability and evaluativeness, such as neuroticism-related traits, the self was the best judge. The extent to which such findings are relevant for work settings needs to be understood from the fact that employees remain dependent upon others at work. Such others may form sources of information about their performance and provide feedback, but also may be significant in decisions about their careers. Overall, it therefore will continue to be important for organizations to strive for self-other agreement, whether the self as perhaps at times being the better judge needs to clarify his or her own needs to others or whether the others as perhaps at times being the better judges will have to enlighten the rated employee. For organizations it may also be important to use other-ratings to complement self-assessed information in predicting important work outcomes. More generally, and in line with the work done by Kristof-Brown (2000), we believe it is essential to develop knowledge about one's own and others' needs at work to be able to improve the fit between employee and the organization, which fit subsequently will imply fewer turnovers.

Studies into self-other agreement have predominantly focused on agreement in terms of personality, although other self-attributes such as physical attractiveness and social skills (e.g., Hixon & Swann, 1993), and values varying from conservatism to hedonism and self-realization (e.g., Dobewall, Aavik, Konstabel, Schwartz, & Realo, 2014) have also been studied. Findings from such studies regarding self-other agreement have shown that people can assess some of these characteristics of others and therefore can be used to validate self-reported constructs. To the best

of our knowledge, however, research into the extent of self-other agreement on the Need for Achievement, the Need for Power, and the Need for Affiliation has not yet been conducted. Consequently, the current study aims to contribute to the available knowledge regarding employee behavioral motivations by using the Social Relations Model to assess the extent of self-other agreement on the three needs in a work context

Social Relations Model

The Social Relations Model (SRM) developed out of the person perception literature by Kenny and La Voie (1984), and can be seen as an application of Cronbach, Gleser, and Nanda's (1972) generalizability theory. The SRM uses a round-robin design to assess the extent of self-other agreement, but also the factors that influence such correlations. In a round-robin design each member of a group rates and is rated by each other member of the group. One of the key assets of the SRM is that it distinguishes between target variance (the target effect) – the extent to which the targets (those being rated) vary in their tendency to elicit similar ratings from all raters – and perceiver variance (the perceiver effect), which is the extent to which perceivers (raters) vary among each other in their individual tendencies to rate targets similarly.

The SRM is seen as valuable by researchers (e.g., Greguras, Robie & Born, 2001) to better understand self-other (dis)agreement than more typical 360-models, in which multiple perceivers rate a given target while the given target does not in turn rate those perceivers. Overall, there are two key reasons for this preference; firstly, the SRM is a tool to conceptualize processes of inter personal perception (Back & Kenny, 2010), which implies that it distinguishes between target and perceiver effects influencing the ratings of persons, and secondly it comprises a robust statistical method of data analysis (Bonito & Kenny, 2010). An extensive discussion of the Social Relations Model is beyond the scope of this article, for which we refer to Kenny and La Voie (1984), Kenny and West (2010), and Marcus and Leatherwood (1998). Yet, to clarify our hypotheses the following aspects of the Social Relations Model need to be discussed.

Consensus

To analyze self-other agreement it is important that there is *consensus among others* about the rating of a particular person (Marcus & Leatherwood, 1998). Consensus, or other-other agreement, is the extent to which the raters for instance consistently rate

the same team members as having a stronger Need for Affiliation than other team members have. In line with generalizability theory terminology, consensus implies a main effect (variance component) due to ratees which also is referred to as the target effect (cf. Kenny, 1994; Kenny, Albright, Malloy, & Kashy, 1994).

Self-other agreement

Self-other agreement is defined as the correlation between self-ratings and the target effect (e.g., are ratees who see themselves as having a weak Need for Affiliation also seen by their team members as having a weak Need for Affiliation?).

Assumed similarity

Perceivers' ratings (i.e., other-ratings) of the target can be influenced by so-called projection, which refers to the innate bias of seeing others as one sees oneself (e.g., are ratees who see themselves as having a strong Need for Affiliation also inclined to see their team members as having a strong Need for Affiliation?). This correlation virtually always is positive (*assumed similarity*), although it also has been suggested that it can be negative, which is labeled as *contrast projection*. Contrast projection indicates that the perceiver rates others as opposite to oneself.

In sum, first according to personal-organizational fit theory, individual value profiles need to be compared to organizational value profiles to determine fit and to predict changes in values, norms, and behaviors (e.g., Kristof, 1996; Kristof-brown, 2000; Schneider, 1987). As values are thought to be based on people's needs (e.g., McClelland, 1985), needs may be shared similarly to the ways values are shared within organizations Second, the SRM allows us to assess the self-other agreement on the Need for Achievement, the Need for Power, and the Need for Affiliation, while it also assesses the extent of consensus and assumed similarity. In the following, several hypotheses will be developed related to the extent of consensus, self-other agreement and assumed similarity on employees' needs. As consensus is a prerequisite for self-other agreement, it will be discussed first.

Hypotheses

Several considerable conceptual and empirical associations among motives, values, and personality traits provide the possibility to draw upon findings on personality traits and values to develop expectations about self-other agreement levels on the three needs. Engeser and Langes (2010) posited that the need to excel will motivate both highly conscientious people and people with a strong explicit achievement

motive, therefore implying that the motive to Achieve would be most closely related to Conscientiousness. Their results indeed indicated that the Need for Achievement was strongly related to Conscientiousness (r = .55). Furthermore, they were able to confirm the expectation that the Need for Power would be a combination of Extraversion (r = .55) and (negatively) Agreeableness (r = -.43), and that the Need for Affiliation would clearly be related to Extraversion (r = .65).

Moreover, the value theory of Schwartz (1992) shows some strong conceptual associations with the three needs. The achievement and power values, which are theoretically strongly related to the Need for Achievement and the Need for Power, respectively, both belong to the higher-order value of Self-Enhancement. The values of Security and Conformity, belonging to the higher-order value Conservation, conceptually relate most to the Need for Affiliation. Security among other things focuses on harmony, and stability of relationships, whereas Conformity includes a restraint of actions, likely to harm others. Dobewall et al. (2014) were able to empirically show substantive other-other and self-other agreement for the Self-Enhancement and the Conservation values.

Next to drawing upon the above findings from the domains of personality and values, for some of the hypotheses studies investigating other self-attributes such as affectivity (Watson, Hubbard, & Wiese, 2000) and happiness (Dobewall, Realo, Allik, Esko, & Metspalu, 2013), could be used to be able to develop expectations about the effect sizes of consensus, self-other agreement, and assumed similarity.

Consensus

Dobewall et al. (2014) found consensus between raters on all Big-Five personality *traits* (r = .31 to r = .52), and similar results for *values* (e.g., security and conformity values; r = .35 to r = .47). These results imply moderate-to-strong effect sizes of consensus (Cohen, 1988; effect sizes of .30 ≤ r). We therefore expected similar degrees of consensus in our sample of employees for the three needs.

Hypothesis 1: Consensus (other-other agreement) for the Need for Achievement, the Need for Power and the Need for Affiliation will be moderately to strongly positive.

Self-other agreement

We expected that self-other agreement on the Need for Achievement, the Need for Power, and the Need for Affiliation would be comparable in strength to the self-other agreement on the Big Five personality *traits* (Kenny, 1994, p. 189; r = .39 [conscientiousness], r =. 70 [extraversion], and r = .42 [agreeableness]), on *values*

(Dobewall et al., 2014; ranging from $r = .31$ to $r = .54$), and on *affectivity*. Watson et al. (2000) report that most *affective* traits (e.g., hostility, self-assurance) "tend to show moderate to strong levels of self-other agreement" (p. 552). Similar findings were presented for *happiness* by Dobewall et al. (2013; $r = .55$). These findings imply that for the three needs, which also are self-attributes like the above constructs, moderate to strong self-other agreement may be expected (effect sizes of $.30 \leq r$).

We thus predict the following hypothesis for our sample of employees.

Hypothesis 2: The self-other agreement for the Need for Achievement, the Need for Power and the Need for Affiliation will be moderately to strongly positive.

Assumed similarity

Earlier research has revealed the presence of assumed similarity (projection), implying that people see others as being similar to themselves. Assumed similarity suggests that people may use themselves as a benchmark to make sense of others, coloring their assessments of others (Funder, 1995; Lee, Ashton, Pozzebon, Visser, Bourdage & Ogunfowora, 2009; Murray, Holmes, Bellavia, Griffin & Dolderman, 2002). People may spontaneously think about themselves when they judge others. As empirical studies on assumed similarity until now unfortunately as far as known have only focused on personality, the following findings we report refer to such studies. Kenny (1994, p.184) found levels of assumed similarity for Conscientiousness on average equaling $r = .37$, for Extraversion $r = .27$, and for Agreeableness even as high as $r = .65$. The high level of projection for Agreeableness may be the consequence of Agreeableness being a reciprocal trait: being kind to others may imply others will also reciprocate in a kind manner. Because of the relationships between these personality traits and the Needs for Achievement, Power and Affiliation respectively (Engeser & Langens, 2010; Zhao & Seibert, 2006)) we similarly predict moderately to strongly positive ($.30 \leq r$) levels of assumed similarity for the three needs among our sample of employees.

Hypothesis 3: The assumed similarity for the Need for Achievement, the Need for Power and the Need for Affiliation will be moderately to strongly positive.

METHOD

Participants and procedure

For this study, 168 employees working at a large non-profit organization in the Netherlands participated in the study in exchange for extensive feedback. The employees (91 males and 77 females) worked in one of 42 teams, each of which consisted of four members. Consequently, 42 teams of four members each summed up to 168 participants. The mean age of the participants was 40.3 years (*SD* = 7.9) and all participants were of Dutch nationality. They had been working in their team for 11 months on average. The entire organization was made up of self-governing teams working in its call center, the financial department, the HR department, etc.

The participants had indicated to the organization that they wished to follow a work-related course to develop themselves further. The course was provided by a University of Applied Sciences and taught topics varying from knowledge about the functioning of organizations to organizational behavior and work-relevant communication skills. The employees who followed the course worked in teams which could be found across the whole organization and for that reason the study sample can be seen as reflecting the existing structure of the organization. As an integrated part of the course, each of the participants asked their three team-members to evaluate them on their needs, and they also self-rated their needs. Thus, data from all participants following the course (a 100% response rate) could be used for the study.

Data were collected in September 2014. During one of the course lectures, the participants completed the Multi Motive Grid (MMG; Sokolowski, Schmalt, Langens & Puca, 2000), which aims to measure individuals' needs (see Measures section for more information on the MMG). They completed one self-report version measuring their own levels of Need for Achievement, Need for Power, and Need for Affiliation. They also completed three other-reports of the MMG, namely for each of their team members. These team members were their direct colleagues. In this way, all team members provided perceiver-ratings for their peers. They therefore were restricted in who to rate, as those whom they rated were their team members. On average it took the participants half an hour, including receiving information about the research, to complete the MMG for all four target-individuals (the self and the three other team members). All team members were asked to fill in the four questionnaires (one self-report, three other-observations) and to do so at that moment in time. (The sample size of $N = 168$ implied a statistical power of .93, given $\alpha = .05$ and an effect size r of at least .20).

Ethical approval was obtained from the researchers' department's ethics committee prior to commencing the study. Participants were first briefed on what the study involved and were made aware of any incentives and that they could stop participating at any time. Upon completion, they received a de-briefing sheet disclosing exactly what study they took part in with contact details of the researcher for any further questions. Participants provided their informed consent on the form which the University of Applied Sciences uses for all students who take part in the university's courses.

Measures

Needs. The Need for Achievement, the Need for Power, and the Need for Affiliation were measured with the Multi Motive Grid (MMG; Sokolowski et al., 2000), which is a 12 items measure intended for the assessment of individuals' needs. The MMG contains three scales, one for each need, with each need measured by four items. To be applicable for the Dutch sample, the first author translated the instruction and items of the Multi Motive Grid from English to Dutch. To control for any translation effects, an independent bilingual researcher translated the Dutch version back into English to identify any mistakes made. Participants rated the 12 items on a five-point Likert response scale from 1 (*very much disagree*) to 5 (*very much agree*). Example items are "Feeling confident to succeed at this task" (Need for Achievement), "Trying to influence other people" (Need for Power), and "Hoping to get in touch with other people" (Need for Affiliation). Participants received the following instruction contextualized to the work-setting: "Take your work setting in mind when you fill out the below items". This type of instruction provides a work-related frame-of reference to the participants when they fill out the items (cf. Hunthausen, Truxillo, Bauer, & Hammer, 2003).

The scales demonstrated acceptable reliabilities in the study by Sokolowski et al. (2000). Our sample showed the following alpha coefficients for self-ratings: for the Need for Achievement $\alpha = .88$, for the Need for Power $\alpha = .81$, and for the Need for Affiliation $\alpha =. 76$. The intercorrelations between the scales in our sample were similar to each other: the Need for Achievement x the Need for Power, $r = .31$, the Need for Achievement x the Need for Affiliation, $r = .35$, and the Need for Power x the Need for Affiliation, $r = .29$. Our sample showed alpha coefficients for perceiver-ratings as follows: for the Need for Achievement $\alpha = .85$, for the Need for Power $\alpha = .80$, and for the Need for Affiliation $\alpha =. 75$. The intercorrelations between the scales were comparable to each other and to the intercorrelations among the self-rated

need scales: the Need for Achievement x the Need for Power, r = .30, the Need for Achievement x the Need for Affiliation, r = .33, and the Need for Power x the Need for Affiliation, r = .28.

Analyses

All analyses were conducted by means of Kenny's FORTRAN program SOREMO version V.2 (1998; 2007). This program was designed to analyze data based upon social relations through the round-robin design methodology. The formulas that this program uses may be found in Kenny (1994, Appendix B). The analysis we performed consisted of two steps. First, the participants' ratings of the other members of their groups were decomposed into target variance, perceiver variance and relationship/error variance. (The latter component is a confounding of the variance specific to the relationship between one particular rater and one particular rate and error variance, and does not play a role in our hypotheses.) This decomposition was necessary to examine the degree of consensus (i.e., other-other agreement) in other-perceptions of achievement, power and affiliation. Consensus (the target effect/target variance component) in SRM is defined as the amount, or percentage, of target variance compared to the full variance in ratings. It is expressed by s^2, referring to the percentage of explained variance by systematic differences between targets (i.e., a main effect due to ratees) in their needs: a significant s^2 for the Need for Affiliation, for instance, implies that raters systematically see differences between team members in their Need for Affiliation, with some team members having a higher Need for Affiliation, and other team members having a lower Need for Affiliation. Note that consensus is not indexed by means of a correlation but that a variance approach is used to measure it, resulting in a proportion of variance.

The proportion of variance attributable to targets can be viewed as a squared correlation (cf. Kenny, 1994, pp. 53-56). Consensus was estimated for each need, together with the reliabilities of the target effect for each need (cf. Bonito & Kenny, 2010; Greguras et al., 2001, for reliability estimation). The variance partitioning also provided the components necessary for the second step, namely correlating target and perceiver effects with the employees' self-ratings for the estimation of self-other agreement and assumed similarity respectively. To estimate self-other agreement, a correlation was calculated between the actual self-ratings and the averaged other-ratings of the target on the three Needs. The estimation of assumed similarity involved determining the correlation between self-rating and the perceiver effect for each need.

RESULTS

Self-ratings

As can be seen from Table 3.1, on average, participants rated their own levels all needs above the scale midpoint of three. The average self-ratings on the Need for Achievement ($M = 3.61$, $SD = .41$) were significantly higher than the average self-ratings on the Need for Power ($M = 3.44$, $SD = .56$; $t = 2.56$, $p < .05$), but significantly lower than the self-ratings on the Need for Affiliation ($M = 3.84$, $SD = .36$; $t = 3.09$, $p < .05$). Consequently, participants scored highest on the Need for Affiliation and lowest on the Need for Power.

Perceiver-ratings

On the Need for Achievement, the participants on average rated others (i.e., the targets) slightly higher ($M = 3.79$, $SD = .65$) than they rated themselves (self-ratings; $M = 3.61$, SD.41; $t = 2.13$, $p < .05$). On average, they rated others similarly ($M = 3.35$, $SD = .34$) on the Need for Power as they rated themselves ($M = 3.44$, $SD = .56$; $t = .63$, *ns*). Their ratings, on average, of others on the Need for Affiliation were also non-significantly different ($M = 3.69$, SD = .45) from their self-ratings ($M = 3.84$, $SD = .36$; $t = 1.12$, *ns*).

Hypothesis testing

Hypothesis 1 stated that the consensus (other-other agreement) on the levels of the Need for Achievement, Power and Affiliation would be positive and moderate to strong. This implied in terms of the amount of target variance (notated as s^2) that we expected this value to be at least equal to (the equivalent of $(r = .30)^2$) $s^2 = .09$. The results supported our first hypothesis in the sense that significant consensus occurred for all needs ($p < .05$). On the Need for Achievement, the level of consensus was $s^2 = .08$, on the Need for Power $s^2 = .06$, and on the Need for Affiliation $s^2 = .07$. These values implied a moderate level of consensus, approaching the .09-value used as a benchmark for a moderate result (Cohen, 1988).

Hypothesis 2 stated that the self-other agreement on the levels of the Need for Achievement, Power and Affiliation would be positive and moderate to strong ($.30 \leq r$). The extent of self-other agreement was estimated by the correlation between self-ratings and perceiver-ratings (the target effect) on the three needs. The results supported our second hypothesis, but not for the Need for Affiliation. For the Need

Table 3.1. Results for the three needs, including means, standard deviations for self-ratings and perceiver-ratings, and consensus, self-other agreement and assumed similarity (*N* = 168 employees in 42 teams)

Need for Achievement	
Self-ratings	$M = 3.61^{a}$, $SD = .41$
Perceiver-rating	$M = 3.79^{a}$, $SD = .65$
Consensus[b]	$s^2 = .08^{*}$ (.59)
Self-other agreement	$r = .49^{*}$
Assumed similarity	$r = .62^{*}$
Need for Power	
Self-ratings	$M = 3.44$, $SD = .56$
Perceiver-ratings	$M = 3.35$, $SD = .34$
Consensus[b]	$s^2 = .06^{*}$ (.67)
Self-other agreement	$r = 1.30^{**c}$
Assumed similarity	$r = .03$
Need for Affiliation	
Self-ratings	$M = 3.84$, $SD = .36$
Perceiver-ratings	$M = 3.69$, $SD = .45$
Consensus[b]	$s^2 = .07^{*}$ (.60)
Self-other agreement	$r = .08$
Assumed similarity	$r = .00$

Note: * $p < .05$, ** $p < .01$; [a] Significant difference between self-ratings and perceiver ratings (on a five-point Likert scale from 1 to 5) on the Need for Achievement ($p = 0.05$); [b] Consensus is measured as a proportion of variance, which can be viewed as a squared correlation (Kenny, 1994, p. 56). [c] The design of the SRM allows for correlations larger than 1.0, which should be interpreted as $r = 1.0$ (Kenny, 2007). Reliability estimates for the variance estimates which represent consensus are in brackets. These values are values which are typically found in SRM studies (personal correspondence with David Kenny, 23 December 2014).

for Achievement, the results indicated a significant and high self-other agreement: $r = .49$, $p < .05$. For the Need for Power, the extent of self-other agreement was also significant and high: $r = 1.30$, $p < .05$. (The SRM-design allows for correlations larger than 1; according to Kenny (2007) these correlations should be interpreted as $r = 1$). The self-other agreement on the Need for Affiliation, however, was not significant: $r = .08$, *ns*, indicating that the self-rated Need for Affiliation of the participants did not relate to the other-rated Need for Affiliation.

Hypothesis 3 specified that the assumed similarity on the levels of need for Achievement, Need for Power and Need for Affiliation would be positive and moderate to strong ($.30 \leq r$). The results supported our third hypothesis for the Need for Achievement but not for both other needs. Results indicated a significant and high assumed similarity for the Need for Achievement: $r = .62$, $p < .05$, meaning that employees saw their team members similar to themselves in terms of the Need for Achievement. In contrast, the Need for Power and the Need for Affiliation did not result in significant assumed similarity, with $r = .03$, *ns*, and $r = .00$, *ns*, respectively.

DISCUSSION

Among 42 teams in a large non-profit organization, with each team consisting of four employees, the present study examined the extent to which consensus, self-other agreement, and assumed similarity existed for the Need for Achievement, Power, and Affiliation in the work environment. The study was conducted by means of Kenny and La Voie's (1984) Social Relations Model (SRM). There was a significant and moderate consensus (i.e. other-other agreement) among perceivers on their ratings of the target's levels of all three needs. High self-other agreement was found for the Need for Achievement and the Need for Power but the Need for Affiliation, unexpectedly, did not result in significant self-other agreement. This implies that employees do not perceive their own Need for Affiliation as others do. High assumed similarity occurred for the Need for Achievement only, but assumed similarity did not occur for the other needs. These results suggests that the way employees see their own Need for Achievement is very similar to how they see their colleagues' Needs for Achievement, but this is not the case for both other needs.

As expected, the findings that were significant showed moderate to strong effect sizes (see Table 3.1), confirming other research in the area of self-related attributes such as studies into values, personality, happiness and affectivity (e.g., Dobewall, Realo, Allik, Esko, & Metspalu, 2013; Dobewall et al., 2014; Kenny, 1994; Watson, Hubbard, & Wiese, 2000). The strength of consensus, however, was slightly lower than was expected, and the self-other agreement for the Need for Power and assumed similarity for the Need of Achievement even were somewhat higher than was expected. We will now discuss the findings for each need separately.

Need for Achievement

Among the three needs, McClelland (1985) regarded the Need for Achievement as the most fundamental need in the work environment. As was predicted, the Need for Achievement showed consensus among co-workers, clear self-other agreement among employees, and also substantial assumed similarity. This means that one's colleagues agree among each other, and with employees themselves on their Need to Achieve, and also project their own achievement drive on their colleagues.

In occupational settings, the sensitivity of colleagues to pick up signs of one's internal motive to achieve is perhaps not so surprising. The centrality and observability of achieving one's tasks at work in the mostly interdependent tasks and jobs within teams, will probably lead to substantial agreement of perceptions of employees' achievement motives by their team members when compared to other employees' perceptions and one's self-perceptions. Assumed similarity refers to a process where one's ratings of the target are influenced by a tendency to perceive others as one perceives oneself. Given the relevance and naturalness in work contexts of the need of employees to strive for achievement, it seems likely that colleagues will project their own achievement needs on their peers, assuming that their team members are also motivated to realize their tasks. However, an alternative explanation to assumed similarity cannot be ruled out, namely that peers' own Need for Achievement levels within each team are *actually* similar to the level of the rated team members (cf. Watson et al., 2000). In other words, the possibility remains that coworkers rated their peers similar to themselves on their Need for Achievement because they actually have similar levels of this need in each team.

Need for Power

Consensus for the Need for Power was significant, with one's co-workers moderately agreeing among each other on their colleagues' drive to exert power over others. It further is interesting to see that the level of self-other agreement was quite high for this need, even though this need might not be the most essential need for all employees in a work environment (Harrell & Stahl, 1984). The high degree of self-other agreement likely reflects the fact that it is rather observable whether one's team member at work has an inclination towards wanting to influence others, as this will probably directly have an impact upon the colleagues in the team themselves. This explanation would be in line with research showing that an enhanced observability of a construct implies a higher self-other agreement (e.g., John & Robins, 1993).

The absence of any assumed similarity for this need reflects the fact that one's co-workers evidently are able to distinguish between their own power drive and that of their colleagues. Stated differently, seeing their team members' Need for Power is not related to the way they see their own Need for Power. A simple explanation for this finding is that the Need for Power does not imply reciprocity, in the sense that one's own Need for Power is not seen to be caused by the Need for Power of one's colleagues.

Need for Affiliation

Consensus was significant for the Need for Affiliation and, as for both other needs, it had a moderate effect size. Yet, in contrast to both other needs, self-other agreement was absent for the Need for Affiliation. This need seems to be mentioned less often in employee motivation theories as being important for employees' job performance and how to motivate them (cf. Ramlall, 2004) than the Needs for Achievement and Power. It might be that behaviors related to the Need for Affiliation are therefore not as prominent and visible in the everyday working environment as compared to behaviors related to both other needs are. Due to perhaps a lesser relevance and prominence at work, a reduced self-other agreement may result. An alternative explanation for the non-existent self-other agreement may be derived from the so-called Eight Diamonds of major situational characteristics proposed by Rauthmann et al. (2014). From this framework, it may be deduced that individuals behave differently in private and professional contexts. The work environment may generate a climate in which individuals cannot express themselves as they truly are, and they may therefore suppress their actual Need for Affiliation, thus leading to low self-other agreement.

Finally, also assumed similarity was absent for the Need for Affiliation. This finding may similarly relate to the possibly lesser role played by this need in the occupational context, than in other domains of life such as at home and with friends. While individuals who feel a strong Need for Affiliation enjoy and seek out social interaction and networks with others, they may tend to show this drive less obviously in the professional environment, therefore implying that co-workers will probably also not actively project their own need on their colleagues.

In our sample several mean score differences were found between the needs, which we at present do not wish to interpret more generally than that these differences apparently characterizes this sample of employees.

Limitations and future research

The present study had several limitations. The first limitation relates to characteristics of our sample. Although our sample was sufficiently large in terms of the number of teams and the team size for sufficient statistical power (Kenny, 1994), the employees who participated in our study worked at one site of a large non-profit organization. Our findings therefore need to be tested for their stability in other samples and in other types of organizations, such as organizations in the profit sector and organizations with employees who are less acquainted with each other, for instance because of the use of telework. Using telework and not working on the same location might imply less self-other agreement on one's basic needs simply because of colleagues being less familiar with each other.

Second, our study only focused on three basic psychological needs. Therefore, future studies may attempt to investigate whether results similar to our findings on these needs, will also be found for other concepts which are central to the work environment, such as employees' work performance, their work values and other motivational characteristics (e.g., monetary reward sensitivity and security), and their well-being at work (Ostroff, Atwater & Feinberg, 2004). In large firms, there is a focus on key performance indicators as part of their annual performance appraisal system, and workers' skillsets will at times be regarded as a major feature of their employability and job performance. Investigating the degree of consensus, self-other agreement and assumed similarity seems relevant in such contexts, as these may also affect the acceptability of performance appraisals and subsequent compensation-based salary.

Third, several moderators may have an impact upon ratings, which we did not investigate (cf. Kenny & West, 2010). Examples possibly are the status-relationship between employees who rate each other, how long they have known each other, team size, cultural heterogeneity versus homogeneity of teams, and typical aspects of office-politics that can lead to rivalries. Future studies need to also be aware of potential effects of factors such as response tendencies. When raters for instance are new to a team it could be feasible that they tend to lean towards giving more positive, socially desirable ratings to their team members (cf. LeBreton & Senter, 2008; McAbee & Connelly, 2016).

Fourth, as described earlier, the effects of actual similarity and assumed similarity should be disentangled, as it seems plausible that actual similarity within teams at work will to a degree influence the ratings given by other team members on employees' Need for Achievement, next to assumed similarity (cf. Watson et al.,

2000). Furthermore, similar to other person perception research the estimation of self-other agreement is a correlation, which has several limitations as described by Kenny and West (2010). One of these is that the correlation measure ignores any potential correlation between the target and perceiver effects.

Fifth, we were not able to examine any relevant outcomes (e.g., job performance) in our study. This needs to be the next step in future research.

Finally, future studies examining the topic of agreement, consensus and assumed similarity as related to the three needs could perhaps benefit from using a social desirability scale as part of the rating procedure. Inserting a social desirability scale may help getting a clearer picture of any conscious or unconscious bias in self- and perceiver-ratings.

Practical implications

The findings of the present study have generated several practical implications. Firstly, self-reflection of employees will benefit from receiving the opinion of someone else and comparing how this opinion matches the opinion of the employee him or herself (Amudsen & Martinsen, 2014; Ramlall, 2004). Although the self-other agreement was strong for the Needs of Achievement and Power, there was no self-other agreement for the Need for Affiliation, even though co-workers significantly agreed among each other (consensus) concerning this need of their colleagues. This may imply that employees need to communicate their need level of Affiliation better to connect to their colleagues more clearly.

Second, the high level of self-other agreement for the Needs for Achievement and Power suggests that ratings of co-workers or others at work can be used to confirm self-reports on employees' own needs. Ratings by co-workers as part of employees' portfolio could for instance be useful to help facilitating an improved fit at work in which their needs can be better satisfied. It also suggests that organizations may efficiently use self-report measures of the Needs for Achievement and Power as truthful representations of these needs of their employees, given the strong relationship with other-ratings of these needs.

Third, our findings show that it apparently is easy to observe to what extent a colleague has a drive to achieve (Need for Achievement), and has a need to influence others (Need for Power), but that it is not so easy to observe someone's Need for Affiliation. In line with the literature on employees' needs satisfaction (e.g., Deci & Ryan, 2000), organizations will attempt to meet the needs of their employees to retain talent and improve productivity. Yearly reports by major national institutions

such as Deutsche Bank likewise stress the persistent challenge of meeting employee expectations. In particular, our results suggest that contemporary organizations should learn to better observe their employees' Need for Affiliation. When organizations for instance are moving into open plan office spaces, those with a low Need for Affiliation may feel annoyed by the near presence of others in high spatial density areas (cf. Hongisto, Haapakangas, Varjo, Helenius, & Koskela, 2016). Similarly, when an organization propagates telecommuting and wishes employees to work detached from the office, it is important to recognize whether employees with a high Need for Affiliation may feel their relationships with coworkers to get harmed (cf. Gajendran & Harrison, 2007).

Conclusion

The present study examined the extent of consensus, self-other agreement, and assumed similarity for the Need for Achievement, Power, and Affiliation among employees. Most of our findings reflected earlier findings in the domain of self-attributes of values, affectivity and personality. Consensus was found on all needs. High self-other agreement was found on the Needs for Achievement and Power. The Need for Affiliation, in contrast, did not show self-other agreement. Finally, assumed similarity occurred for the Need for Achievement but not for the Needs for Power and Affiliation. Particularly the absence of self-other agreement on the Need for Affiliation is striking and needs more responsiveness of contemporary organizations which are involved in alternative work arrangements such as flexibility in where the work is conducted.

4

The relationship between trust in the organization, resistance to change and adaptive and proactive employee agility in an unplanned and planned change context

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ABSTRACT

Modern organizations need to adapt quickly to on-going changes. The present study sought to examine employees' agility during periods of unplanned and planned change and the extent to which perceived trust in the organization and resistance to change could predict this agility. Agility has two components: proactive agility and adaptive agility. Data were collected in two different organizations, one undergoing an unplanned change (N = 90 employees) and one undergoing a planned change (N = 98 employees). In an unplanned context, trust of employees in the organization had an effect on the adaptive component of self-rated agility through affective resistance to change. In this context, trust did not have an effect on the proactive component of agility. In contrast, in a planned change context, trust had an effect on the proactive component of self-rated agility through cognitive resistance to change. In this context, trust did not have an effect on the adaptive component of agility. Other-rated adaptive and proactive agility could not be predicted directly or indirectly by trust.

INTRODUCTION

Organizations today are confronted with an extremely competitive environment due to the global market in which they operate. Increased innovation, technological growth, fragmentation of the markets and rising expectations of the customer have led to rapid developments in today's business. For companies it is essential to change in accordance with new trends to be able to survive in such competitive and fast moving environments. Organizational changes can follow each other rapidly (Rousseau & Tijoriwala, 1999; Van den Heuvel, Schalk, Freese, & Timmerman, 2013). How organizations successfully deal with unpredictable, dynamic, and constantly changing environments has been an important topic in industry and academics for a few decades (Eby, Adams, Russell, & Gaby, 2000; Sherehiy, Karwowski, & Layer, 2007). Harvey, Koubek and Chin (1999) stated that an organization's maximum feasible level of performance depends on the extent to which the knowledge and skills of the workforce match the requirements of the dynamically evolving workplace. According to these researchers, every individual reacts differently to organizational change and some people can better adapt to a changing environment than others. This study will explore three aspects of individuals that may contribute to how well they react to organizational changes which are unplanned versus changes which are planned: employee agility, trust in the organization, and resistance to change. We will first explain these concepts separately; secondly, we will integrate them in a model.

Organizational change: Unplanned versus planned change

Employees can be confronted with different kinds of organizational changes (Oreg, 2006; Freese, 2007; Van den Heuvel, et al., 2013). Researchers distinguish between organizational change as something that can be planned and as something that occurs unplanned, for example as a response to developments in the market (Smith, Evans, & Westerbeek, 2005). With *unplanned* changes we mean changes that are the result of a suddenly occurring situation. They have a "disorganized character" (McNamara, 2006, p. 175). With *planned* changes we mean planned major changes by management, that is responsible for the implementation. The goal of a planned change may be to remedy a particular situation or to further develop a process or a structure in an organization, which can consequently influence the organization (McNamara, 2006; Freese, 2007). Being able to adapt successfully and efficiently to (un)expected changes in the business environment has led to the evolution of a new concept within business strategies, namely "agility" (Ganguly, Nilchiani, & Farr, 2009).

Agility

The concept of agility has been used in the academic literature since the 1990s – researchers at the Iaococca Institute (USA) in 1991 applied the term 'agile' to manufacturing systems that used practices allowing the organization to be able to adapt continuously to changes. Such organizations had speed, flexibility, response ability and a manufacturing system with an infrastructure that permitted rapid shifts between different products (Livari & Livari, 2011; Ramesh & Devadasan, 2007; Seethamraju, 2006). Therefore, agility research started in the manufacturing contexts. Since then the term agility has been used in the information technology and is now a concept in the human resources context.

Kidd (1994) defined agility as "A rapid and proactive adaptation of enterprise elements to unexpected and unpredicted changes" (p. 10). Yusef, Sarhadi, and Gunasekaran (1999) defined it as "A manufacturing system with capabilities (hard and soft technologies, human resources, educated management, information) to meet the rapidly changing needs of the marketplace (speed, flexibility, customers, competitors, suppliers, infrastructure, responsiveness)" (p. 88). Agility, according to Yusef et al. (1999), implies applying competitive bases such as speed, flexibility, innovation and quality in a successful manner. Using 'reconfigurable' resources and a knowledge rich environment is responsible for this.

Next, the term agility appeared in the Information Technology contexts (e.g. Edwards, Millea, McLeod, & Coutts, 1998) and shortly after that it was applied to organizations that were integrated, technologically savvy, proactive and able to respond quickly to high customer demands: this was termed enterprise agility (Crocitto & Youssef, 2003; Dyer & Ericksen, 2006). Despite differences in perceptions of enterprise agility, all definitions of agility emphasized speed and flexibility as the primary attributes of an agile business (Sherehiy, Karwowski, & Layer, 2007).

Agility then became applied to the workforce (e.g., Breu, Hemingway, Strathern, & Bridger, 2002; Harvey et al., 1999; Hopp & Van Oyen, 2003; Sohrabi, Asari, & Javad, 2014; Sumukadas & Sawhney, 2004). Harvey et al. (1999) defined the concept of agility as "*The ability to adjust to new or different conditions caused by varying demands of technological and organizational changes by altering one's acts, behavior, attitude, and mental state towards changes initiated internally (by the employee) or externally (e.g., by the organization or technology)*" (p. 15). When used in this context, agility refers to employees who are able to proactively deal with rapid changes as a flexible and an adaptive workforce. Workforce agility can be considered as one facet of what Hopp and Van Oyen (2003) refer to as production agility. It

can be attained through using contingent and temporary workers, flexible working hours, worker training, skill breadth, depth and knowledge. Agility in this context still refers to elements of the organization and not to the individual employees themselves. It is argued in the present study that to achieve agile organizations the employees themselves must be agile. Previous research (Chonko & Jones, 2005) has demonstrated that agility, as a whole, consists of an adaptive and a proactive component. *Adaptive agility* is the change or modification of individuals or their behavior in order to increase the fit with the new environment (response). On the other hand, *proactive agility* is the anticipation of problems related to change, the initiation of solutions, and the eventual solution of change related problems (initiation and anticipation; Chonko & Johnes, 2005). Van den Heuvel et al. (2013) found that type of change (unplanned versus planned) was a moderator in the relationship between the psychological contract between employer and employee and trust in the organization.

Trust in the organization

One concept that could be important for determining readiness for change is that of trust in the organization. (For the sake of brevity, in the following text we just use the term trust). The concept of trust has no universally accepted definition (Hosmer, 1995; Kee & Knox, 1970; Shapiro, 1987). Rousseau, Sitkin, Burt, and Camerer (1998) state that there is agreement that trust is a psychological state based on "a willingness to be vulnerable under conditions of risk and interdependence . . . which are necessary conditions for trust to exist" (p. 395). However, they also make the point that trust can change depending on levels of risk and interdependence in the relationship. Management research considering trust until the 1980s was largely concerned with the role of trust in everyday social interactions, and in the maintenance or stability of organizational systems (Morgan & Zeffane, 2003). Trust, however, is increasingly viewed as a tool to be used to gain competitive advantage. According to Morgan and Zeffane (2003) this view is the result of globalization, de-regulation and increased consumer expectations, which have led to organizations using less formal procedures (e.g. structures to be more flexible and better able to cope with change). In other words, organizations try to be more agile.

Much research has demonstrated the positive effects of employees who have confidence in their organization, such as their work performance and wellbeing (Psycones, 2006), organizational commitment, and a high level of cooperation and the acceptance of decisions (Bijlsma & Koopman, 2003; De Pater, Van Vianen, Bechtoldt,

& Klehe, 2009). Research typically shows that trust is a key factor in organizational success and human resource practice (Morgan & Zeffane, 2003). Having confidence in an organization is argued to be even more important as organizations change more rapidly than before and the employees' future is more insecure in such times of change (Tyler, 2003). The only thing employees can do is to have confidence that their management will consider their wellbeing while implementing organizational change (Tyler, 2003).

Mishra and Spreitzer (1998) examined employees' trust in their organization and the role of organizational trust in organizational change. Their study showed that trust can serve as a tool to overcome resistance to change and to help employees interpret the implementation process correctly. When there is no trust in one's organization, employees can feel threatened by the change, which can result in resistance and feelings of revenge. Organizational change can be difficult for everyone involved if the process and its consequences are not managed very well, which will lead to ambiguity and uncertainty, and in turn may foster mistrust and resistance to change. However, if employees trust their organization and their leaders, they feel more secure and have less resistance to change (Coyle-Shapiro & Morrow, 2003).

Zayim and Kondakci (2014) investigated the predictive value of organizational trust for cognitive, emotional and intentional readiness to change. In total, 603 public school teachers were included in this study. The results of their study provided empirical evidence for the relationship between intentional, emotional and cognitive readiness to change and the perceived confidence in an organization. So, having confidence in an organization can be considered as an important factor in times of organizational change as it facilitates readiness for change.

The present research will examine the relationship between employees' trust in their organization and their agility. Employees who may distrust the organization also experience resistance to change. Therefore, it is expected that resistance to change will mediate the relationship between trust and agility.

Resistance to change

There is a tendency for organizations to focus on the financial or material outcomes of change at the expense of the human aspect (e.g., Beer & Nohria, 2000) despite the fact that people are key to effective change (Lang & Bliese, 2009; Zayim & Kondakci, 2014). Ignoring the human element and in particular a lack of supportive attitudes in the workforce are the two most common reasons for change initiatives to fail (Bouckenooghe, Devos, & Van den Broeck, 2009). Organizational change brings

uncertainty (Judge, Thoresen, & Welbourne, 1999; Lines, Selart, Espedal, & Johansen, 2005). Uncertainty is likely to be a key determinant of resistance to change (Burke, Lake, & Paine, 2008).

Resistance to change concerns individuals' negative responses to change based on their experience of organizational changes (e.g., Avey, Wernsing, & Luthans, 2008; Piderit, 2000). Responses to organizational change can be assessed along three dimensions: cognitive, affective and behavioral (George & Jones, 2001; Oreg, 2006; Piderit, 2000). The *cognitive* dimension encompasses the beliefs and knowledge someone has regarding the change. The *affective* dimension concerns the emotions someone has about the change. The third dimension of resistance, the *behavioral* dimension, reflects someone's evaluation of the change, based on experiences of changes. When employees have a positive attitude towards the change and score low on all three the resistance dimensions, the implementation of the change will be easier (Oreg, 2006).

Mishra and Spreitzer (1998) have shown that trust in the organization is an important instrument to resistance to change. It is also argued that those individuals who are better able to cope with change are more likely to be agile and more easily adapt (Balan & Titu, 2009; Gunasekaran, 2001). We now turn to the integration of the concepts of employee agility, trust in the organization, and resistance to change in an unplanned and planned change context, from which we develop our hypotheses.

Model and hypotheses

The focus of our study is to investigate the relationship between trust in the organization (independent variable) and employee agility (dependent variable) by testing resistance to change as mediator in this relationship. Figure 4.1 depicts our hypothesized model. Importantly, we distinguish between two organizational change contexts, namely a context in which the organizational change is unplanned and an organizational context in which the change is planned. Specifically, we expect that in an *unplanned* change context there will be a (partial) direct relationship between trust and particularly *adaptive* agility, because in this context employees need to be adaptive to deal with the change. In a *planned* change context, we expect that there will be a (partial) direct relationship between trust and predominantly *proactive* agility, because in this context employees are expected to be proactive and concur with the planned change (see Figure 4.1).

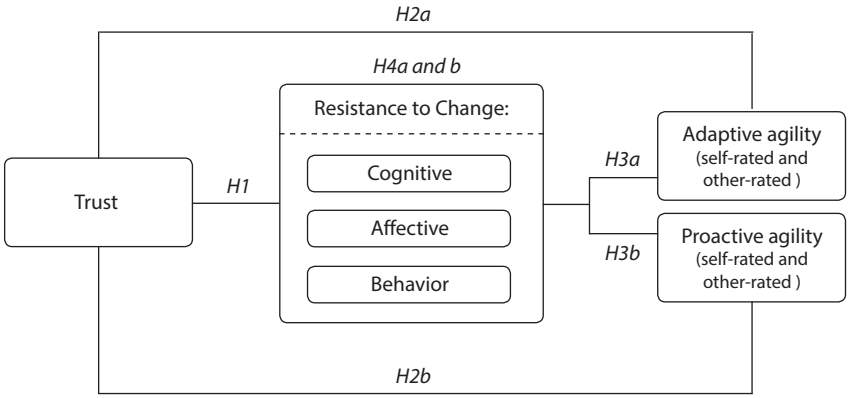


Figure 4.1. Hypothesized model.
Note: a = unplanned organizational change context, b = planned organizational change context.

The hypotheses tested are the following:

Hypothesis 1: Trust is negatively related to resistance to change in a) an unplanned organizational change context and b) a planned organizational change context.

Hypothesis 2: Trust is positively related to a) adaptive agility in an unplanned organizational change context and b) proactive agility in a planned organizational change context.

Hypothesis 3: Resistance to change is negatively related to a) adaptive agility in an unplanned organizational change context and b) proactive agility in a planned organizational change context.

Hypothesis 4: Resistance to change mediates the relationship between trust and adaptive and proactive agility in a) an unplanned organizational change context and b) a planned organizational change context.

METHOD

The relationship between trust in the organization, resistance to change and agility was investigated in two different studies. Study 1 was conducted in a financial company in the Netherlands to test the hypotheses in an unplanned change context. The change was the result of unexpected circumstances in the environment of the organization. Study 2 used a sample of business people (from the service industry) in the Netherlands to test the hypotheses in a planned change context. The change was the result of a proactive plan to change.

STUDY 1

Sample and procedure

Ten managers of a large Dutch financial organization were informed in 2014 about the study and received the request whether they and their employees would be prepared to participate in the study. Change here was the result of a suddenly occurring situation, namely a response to a development in the market. After having received permission from the managers, their team members received an invitation per email regarding the study. Subsequently, 173 employees each received two emails, namely an introduction email with information about the study, and an email with the survey to be completed. In the introduction email, the researcher and the study were introduced, and the advantage of participating in the study was emphasized, namely that after filling in the e-survey all respondents could request a personal rapport about their agility. Everyone who had received the introduction email received an email with the e-survey immediately after the introduction email. The respondents filled out the e-survey, via two links in the email (Cubiks, 2014). After filling out the e-survey, respondents needed to write down three names of colleagues who could rate them on their own agility. These colleagues subsequently received an invitation to rate the respondent on his or her agility. Secondly, participants filled out the e-survey in Survey Monkey; herewith we gathered data about their demographics, resistance to change and trust in the organization. Of the 173 employees 90 (response rate 52%) completely filled out the e-survey and therefore could be included in the study. This sample size implied a power of .87 (given an $\alpha = 0.05$ and an effect size of .20). All participants received an individual feedback report in exchange for their participation. Filling out the questionnaires took approximately 30 minutes.

Measures

Agility (self-rated). The agility scale was constructed by the lead author of this article in collaboration with *Cubiks* (2014). The scale was designed after carefully reviewing the available literature on agility (e.g., Alavi, Abd. Wahab, Muhamad, & Arbab Shirani, 2014; Pulakos, Arad, Donovan, & Plamondon, 2000) and consisted of two subscales of agility: adaptive agility (17 items; e.g., 'I offer solutions when things go wrong.') and proactive agility (14 items; e.g., 'I apply what has been learned from new situations'). All items are scored on a 5-point Likert scale ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'. Alpha values are .87 for both adaptive and proactive agility. The intercorrelation between the two scales is $r = .36$ (Cubiks, 2014).

Agility (other-rated). A rephrased version of the agility scale was used. The statement 'I offer solutions when things go wrong', for example, was changed to 'He/She offers solutions when things go wrong'. The alpha values are .88 for both adaptive and proactive agility. The intercorrelation between the scales is $r = .39$ (Cubiks, 2014).

The intercorrelations between adaptive and proactive (both self-rated and other-rated) agility are as follows: self-rated adaptive agility x other-rated adaptive agility, $r = .28$; self-rated adaptive agility x other-rated proactive agility, $r = .07$; self-rated proactive agility x other-rated adaptive agility $r = .05$; and self-rated proactive agility x other-rated proactive agility, $r = .19$ (Cubiks, 2014).

Resistance to change. Oreg's (2006) resistance to change scale was used, , consisting of 15 items. It includes an affective dimension (5 items; e.g. 'I was afraid of the change'), a behavioral dimension (5 items; e.g., 'I looked for ways to prevent the change from taking place'), and a cognitive dimension (5 items; e.g., 'I believed that the change would harm the way things are done in the organization'). Answers are given on a five-point Likert scale ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'. The reliabilities of the affective, behavioral and cognitive subscales, respectively, are .89, .88 and .62 (Oreg, 2006).

Trust. The trust scale of Psycones (2006) was used, consisting of the following three items: 'I remain confident that senior management has the best intentions for me'; 'In general, I remain confident that the organization delivers on her promises and duties towards me and my colleagues'; and 'I remain confident that my manager has the best intentions for me'. Responses are given on a five-point Likert scale, ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'. This scale has a reliability of .81 (Psycones, 2006).

RESULTS

Study 1: Unplanned change context

Hypothesis 1 stated that trust and resistance to change would be negatively related in an *unplanned change context*. This hypothesis was confirmed for the *affective* ($r = -.25$, $p < .01$) and *behavioral* ($r = -.30$, $p < .01$) dimensions of resistance to change, but not for the cognitive dimension of resistance to change (see Table 4.1).

Hypothesis 2a, stating that the relationship between trust in the organizational and adaptive agility (self- and other-rated) in an unplanned change context would be positive, was not supported. There was no direct significant correlation between organizational trust and adaptive agility for either dimensions of agility (self-

Table 4.1. Study 1: An unplanned change context: Descriptive statistics and intercorrelations for all study variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.29	.43											
2. Age	40.3	11.1	.04										
3. Educational level	2.31	.69	.01	.17									
4. Resistance-affective	4.08	.54	.01	.11	-.07	(.61)							
5. Resistance-behavioral	4.01	.56	-.22	-.05	.13	.26*	(.71)						
6. Resistance-cognitive	3.88	.53	-.08	.21	.09	.31**	.47**	(.63)					
7. Trust	3.80	.68	-.01	-.21	-.18	-.25*	-.30**	.11	(.78)				
8. Agile-self adaptive	4.20	.37	.22	-.21	-.23	-.34**	-.17	.20	-.14	(.87)			
9. Agile-self proactive	3.88	.53	.17	-.11	-.01	-.13	-.09	-.06	.13	.36**	(.87)		
10. Agile-other adaptive	4.03	.41	.08	-.07	-.19	-.08	-.17	.00	.07	.28*	.05	(.88)	
11. Agile- other proactive	3.86	.48	.04	-.22	-.21	-.02	-.18	-.07	.06	.07	.19	.39**	(.88)

Note: $N = 90$. For gender, 1 = female, 2 = male. Educational level, 0 = secondary school, 1 = lower vocational education, 2 = higher vocational education, and 3 = higher university education. Reliabilities (α) are provided in the diagonal. Scores range from 1 (= strongly disagree) to 5 (= strongly agree). *$p < .05$ (2-tailed). **$p < .01$ (2-tailed).

and other-rated), namely respectively $r = .20$, *ns* and $r = .00$, *ns* (see Table 4.1). (Hypothesis 2b relates to study 2.)

Hypothesis 3a stated that resistance to change is negatively related to adaptive agility in an unplanned change context. Results indicated that the affective, but not the behavioral and cognitive dimensions of resistance to change was related to self-rated (but not other-rated) adaptive agility ($r = -.34$, $p < .05$). Resistance to change was not related to proactive agility (self- or other-rated; see Table 4.1). Therefore, hypothesis (3a) only was partially supported. (Hypothesis 3b relates to study 2.)

Hypothesis 4a stated that resistance to change mediated the relationship between trust and adaptive agility in an unplanned change context. The PROCESS tool in SPSS (Hayes & Preacher, 2014) was conducted to investigate this hypothesis. Results indicated that trust was a significant and substantive predictor of affective resistance to change ($\beta = -.25$, $p < .05$), and that affective resistance to change was a significant predictor of self-rated adaptive agility ($\beta = -.34$, $p < .01$; see Figure 4.1). These results partially supported the mediation hypothesis, namely for trust and adaptive self-rated agility, but not for other-rated adaptive agility and the behavioral and cognitive dimensions of resistance of change. In general, approximately 30% of the variance in adaptive agility (self-rated) was accounted for by the predictor ($R^2 = .29$). In sum, hypothesis 4a was partially supported. (Hypothesis 4b relates to study 2.) The results are in Figure 4.2.

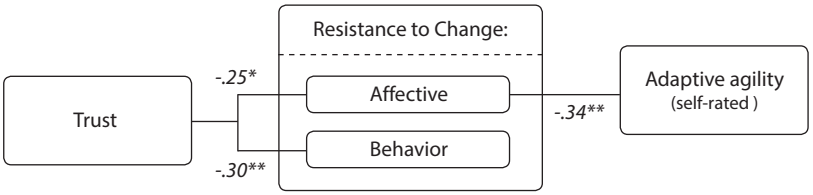


Figure 4.2. Study 1: Significant results in an unplanned change context.
Note: $R^2 = .29$.

Discussion study 1

The purpose of study 1 was to investigate the relationship between trust and proactive and adaptive agility with resistance to change as a mediating variable in an unplanned change context. The results showed a negative relationship between trust and affective resistance to change, but trust was unrelated to the cognitive and behavioral components of resistance to change. This study implies that having more confidence in an organization will lead to less affective resistance to change. No direct

relationships between trust in the organization and either forms of agility (proactive and adaptive) were observed. Resistance to change was significantly and negatively related to self-rated adaptive agility.

Study 1 provided initial support for the idea that trust in the organization is negatively associated with affective resistance to change in an unplanned change context and that affective resistance to change is negatively associated with self-rated adaptive agility. This study contributes to the existing literature by showing that there is a relationship between trust in one's organization, the affective dimension of an attitude (resistance to change) and employees' adaptive agility. Employees who have confidence in their organization, will show less resistance against change and will be better able to adapt. When individuals are less resistant to change, they may be more willing to take risks: if individuals have good organizational trust, they may have greater readiness for change and have less resistance to change, making them more agile. These outcomes may be of help for organizations to increase the agility of their employees. For managers it is important to understand the connection between organizational trust and agility, and to manage their employees with that in mind. With overlapping organizational changes, frequently occurring in today's business environment, it seems more important to create a strong mutual trust between the employee and the organization. The manager has a crucial role in observing the amount of confidence the employee has in the organization and in meeting the organization's obligations (Zhang, Tsui, Song, Li, & Jia, 2008).

STUDY 2

Study 2 examined the relationship between trust in the organization, resistance to change and agility in a planned context. Hypothesis 1 remained the same as for study 1, but now hypotheses 2b, 3b, and 4b are relevant (see Figure 4.1).

METHOD

Sample and procedure

The procedure for completing this research was the same as for study 1. The sample came from a large service organization where multiple changes took place in a planned context. Changes were a permanent part of their organizational identity. From the group of employees, 250 people received two emails, an introduction email with information about the study, and an email with the e-survey that had to be

filled out. Of the 250 employees 98 persons (response rate 39%) completely filled out e-survey (the power equaled .89 given an $\alpha = 0.05$, and an effect size of .20).

All participants received an individual feedback report in exchange for their participation. Filling out the e-survey took approximately half an hour.

Measures

Trust, *resistance to change* and *agility* were assessed with the same measures as in study 1 (see Table 4.2).

RESULTS

Study 2: Planned change context

Hypothesis 1 stated that trust and resistance to change would be negatively related in a *planned change context*. This hypothesis was only supported for cognitive resistance to change ($r = -.39$, $p < .01$), but not for the affective and behavioral dimensions of resistance to change (see Table 4.2).

Hypothesis 2b, stating that the relationship between trust in the organizational and proactive agility (self- and other-rated) in a planned change context would be positive, was not supported. There was no direct significant correlation between trust and adaptive agility (self- and other-rated), respectively $r = .22$, *ns*, and $r = .09$, *ns* (see Table 4.2). Therefore, there was no support for hypothesis 2b.

Hypothesis 3b stated that resistance to change would be negatively related to proactive agility (self- and other-rated) in a planned change context. This hypothesis was supported for self-rated proactive agility ($r = -.29$, $p < .01$), but not for other-rated proactive agility ($r \leq |.19|$, *ns*), and was only found for the cognitive dimension of resistance to change (see Table 4.2). So for hypothesis 3b there was only partial support.

Hypothesis 4b stated that resistance to change mediates the relationship between trust and proactive agility self- and other rated in a *planned change context*. The PROCESS tool in SPSS (Hayes & Preacher, 2014) was used to investigate this hypothesis. Results indicated that trust was a significant predictor of *cognitive* resistance to change ($\beta = -.39$, $p < .01$; see Figure 4.3), but not for the affective and behavioral components, and that cognitive resistance to change was a significant predictor of self-rated proactive agility ($\beta = -.29$, $p < .01$), but not of other-rated proactive agility. These results supported the mediation hypothesis 4b, but only

Table 4.2. Study 2: A planned change context: Descriptive statistics and intercorrelations for all study variables

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.33	.47											
2. Age	1.97	1.44	.06										
3. Educational level	2.34	.72	.02	.15									
4. Resistance-affective	3.22	.63	.00	.13	-.06	(.65)							
5. Resistance-behavioral	2.22	.53	-.23	-.03	.10	.27*	(.78)						
6. Resistance-cognitive	2.17	.73	-.09	.21	.09	.34**	.57**	(.56)					
7. Trust	3.75	.69	-.02	-.21	-.18	.13	-.12	-.39**	(.78)				
8. Agile-self adaptive	4.21	.46	.23	-.22	-.24	.01	-.33*	-.24	.21	(.87)			
9. Agile-self proactive	3.96	.45	.18	-.10	-.01	-.08	-.21	-.29*	.22	.36**	(.87)		
10. Agile-other adaptive	4.11	.50	.09	-.06	-.23	-.18	-.22	.00	.09	.28*	.05	(.88)	
11. Agile- other proactive	3.95	.49	.04	.22	-.23	-.05	-.19	.08	.09	.07	.19	.39**	(.88)

Note: $N = 98$. For gender, 1 = female, 2 = male. Age, 0 = < 20 years, 1 = between 20 and 30 years, 2 = between 30 and 40 years, 3 = between 40 and 50 years, 4 = between 50 and 60 years, and 5 = 60 years and older. Educational level, 0 = secondary school or lower, 1 = lower vocational education, 2 = higher vocational education, and 3 = higher university education. Reliabilities (α) are provided in the diagonal. Scores range from 1 (= strongly disagree) to 5 (= strongly agree). *$p < .05$ (2-tailed). **$p < .01$ (2-tailed).

for cognitive resistance to change and self-rated proactive agility. In general, approximately 35% of the variance in self-rated proactive agility was accounted for by the predictor (R^2 = .34).

Additionally, we found a not-hypothesized significant relationship between the behavioral component of resistance to change and adaptive self-rated agility (see Figure 4.3).

In sum, study 2 complemented the findings of study 1, showing that trust was once again negatively associated with resistance to change and resistance to change mediated the relationship between trust and proactive agility (self- and other-rated), but now in a planned change context. In addition, resistance to change was negatively associated with proactive agility (see Table 4.2).

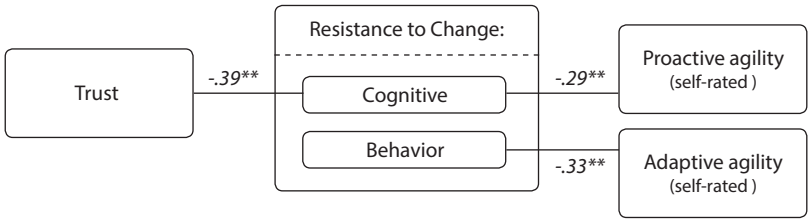


Figure 4.3. Study 2: Significant results in a planned change context.
Note: R^2 = .34.

Discussion study 2

The purpose of study 2 was to investigate the relationship between trust in the organization and agility in a planned change context and to establish if there was a mediating role of resistance to change in this relationship. Results showed a negative relationship between trust and *cognitive* resistance to change, but not for the affective and behavior component of resistance to change. There was no direct relationship between trust and employees' agility in the context of planned change. Cognitive resistance to change was, however, related to less proactive agility. It can therefore be concluded that trust and proactive agility (self-rated) are indirectly related, but only through cognitive resistance to change.

Study 2 thus provided support for the idea that trust in the organization is negatively associated with resistance to change (the cognitive dimension; Van den Heuvel & Schalk, 2009) and that resistance to change (cognitive) is negatively associated with proactive agility (self-rated) in a planned change context. The study also provided evidence that could support Mayer, Davis, and Schoorman's (1995)

model of trust. Trust in the organization, it seems, is negatively related to one's belief that organizational change would be harmful. It does indeed seem that when the employee trusts the employer, an employee will report less resistance to change and increased proactive agility (self-rated). In our sample, we also found a significant negative but not hypothesized relationship between the behavioral component of resistance to change and *adaptive* self-rated agility. This finding seems explainable, as it indicates that the more actively an employee is inclined to prevent a planned change to take place, the less prepared this employee will be to adapt to that planned change.

GENERAL DISCUSSION

The objective of this study was to investigate the relationship between trust, resistance to change and agility (adaptive and proactive both self- and other-rated) in two contexts: a) in an unplanned change context and b) in a planned change context. Resistance to change was operationalized as a three-dimensional construct with affective, behavioral and cognitive dimensions (Oreg, 2006). The results of this research showed that:

1. In an unplanned change context (study 1), there are three important findings: First, having trust in an organization has a negative relationship with both affective and behavioral resistance to change. Second, affective resistance to change has a negative relationship with agility. Third, affective resistance to change mediates the relationship between trust and adaptive agility.
2. In a planned change context (study 2), there are also three important findings: First, trust in the organization has a negative relationship with the cognitive dimension of resistance to change. Second, cognitive resistance to change correlates negatively with proactive agility. Third, cognitive resistance to change mediates the relationship between trust and proactive agility.

When a change is occurring in an unplanned context, people may react adaptively. In a planned change context, the change should have been fully discussed with employees, making them more aware and prepared for it (Rees & Hall, 2013; Vakola, 2014). An unplanned change context may have a greater effect on emotions (affective) and intentions (behaviors) instead of on the cognitive dimension of resistance to change. Such a change will lead to employees behaving less predictable but according to their emotions (Rees & Hall, 2013). When the change is unplanned, employees are

not able to prepare for it and will be looking for ways to cope with it (adaptive). The unexpected change will cause feelings of resistance. This is a first possible explanation for why trust in an unplanned context leads to adaptive agility through the affective component of resistance.

A planned change was per definition already known to employees and may for that reason result in a cognitive response. Individuals may sooner accept the change and their feelings may not be affected too much about it. Individuals will think about how they perceive the change, but they will not be in a survival mode. For that reason, it is conceivable that an indirect relationship between trust in the organization and proactive agility occurs through the cognitive component of resistance to change.

Self / other ratings

An important finding is that only self-rated agility has indirect relationships with trust in the organization. Other-rated adaptive and proactive agility could not be predicted directly or indirectly by trust. Employees evaluated their own agility in a different manner from how others evaluated them, with significant medium-sized correlations in both samples between self- and other-rated adaptive agility but not between self- and other-rated proactive agility. We know people generally see others different from how they see themselves (Allik, Realo, Mõttus, Borkenau, Kuppens, & Hřebíčková, 2010). Yet, because a part of selection processes and promotion policies within human resources practices is based on the notion that self-ratings and perceiver-ratings are interchangeable (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010), it is important to realize that this often is not the case. Also, it is important to investigate whether self-other agreement on agility can be improved.

Limitations and directions for future research

A limitation of this research is the use of a correlational design instead of a longitudinal one. Therefore, we cannot draw conclusions about the direction of the relations found in this study. Another limitation is the finding that self-rated agility but not other-rated agility could be predicted. For future research, it therefore is important to investigate whether these findings will be replicated in other samples, and whether other-rated agility can be better predicted than within our samples.

Practical implications

These findings have important implications for organizations wishing to enhance the agility of their workforce. Agility may be an answer to complex and fast-paced organizational environments. When applied to employees, it seems that a combination of adaptive agility in an unplanned change context and proactive agility in a planned change context is desirable.

In particular, our findings suggest that trust in the organization is likely to be indirectly beneficial in times of change. In unplanned changes, there is a negative relationship between trust and resistance to change (affective) and adaptive agility (self-rated). In planned changes there is a negative correlation between trust and resistance to change (cognitive) and proactive agility (self-rated). Apparently, coping with change is easier when an individual is expecting the change (Rees & Hall, 2013). Preparing employees for a planned change could be a solution to make them proactively agile. Individuals in general want to know what is going to happen and when they are knowledgeable, it will be easier for them to cooperate and to be proactive in dealing with the change.

Conclusion

This research draws attention to the relationship between trust in the organization, resistance to change, and agility in an unplanned change and a planned change context. In an unplanned context, trust has an effect on the adaptive component of agility (self-rated) through affective resistance to change. In a planned change, trust has an effect on the proactive component of agility (self-rated) through cognitive resistance to change.

5

Using the portfolio to develop agility among employees

Doeze Jager-van Vliet, S.B., Born, M.Ph., & Van der Molen, H.T. (2017)

ABSTRACT

The fast-paced and changeable nature of contemporary society results in organizations that increasingly seek employees who are energetic, flexible and adaptable: so called 'agile' employees. The present study used personal development portfolios including frequent feedback interviews (with mentors and peers) over 2.5 years to assist 32 employees working in an agile organization to set agility goals, and record and assess progress in their agility. Data were collected on employees' agility, and were related to their portfolio. Results showed that portfolio use significantly increased employees' agility and significantly enhanced the agreement between self- and other-rated agility. Findings favor the use of development portfolios in improving agility among employees.

INTRODUCTION

For organizations it nowadays is important to rethink their human resource management (HRM) strategies because of the fast moving environment in which they operate (Mooghali, Ghorbani, & Emami, 2016; Nijssen & Paauwe, 2012; Paauwe & Richardson, 2001; Right Management, 2010). Changeable organizations are becoming more the rule than the exception. A consequence of this greater complexity and dynamism of organizations is that workforce agility is becoming increasingly important (Alavi, Wahab, Muhamad, & Shirani, 2014). For organizations to survive in fast changing market conditions, their human capital plays a crucial role (Wright, Cropanzano, & Bonett, 2001). Organizations therefore need an HRM system which supports continuous learning, leading to a workforce high in agility (Lombardo & Eichinger, 2000). A development portfolio may help to reach this standard. Kicken, Brand-Gruwel and Van Merriënboer (2008) state that a development portfolio should provide the improvement in performance level across a certain time-span, with the improvement referring to an improved agility in the present study. By combining assessments from different sources such as peers and employees themselves (i.e., self-assessments), persons receive 360-degree feedback on their agility performance, which is expected to help identify gaps between their current and desired agility performance. The portfolio helps to set and reach performance goals (Klenowski, 2002).

The present research is focused on ascertaining how goal-setting, action-taking, and feedback by means of the development portfolio will influence employee agility. To this end, portfolios are investigated which have been used to assess agility performance goals of employees in an organization undergoing change. In other words, we aim to investigate the implementation of development portfolios as an agility facilitator and assessment tool.

Kicken et al. (2008) suggested that combining assessments of different assessors, i.e., 'multi-source' feedback, helps to identify progress towards performance goals. For feedback to be effective, it is important that self-assessment and assessments from other sources, such as feedback from peers and mentors, can be compared ('self-other rating agreement') (Kenny & West, 2010). The development portfolio is expected to be a method that can increase self-other rating agreement because it provides both the target (the employee) and the perceiver (the assessor) a structure, so that a insight is gained into the underlying processes involved in expressed behaviors (Kicken, Brand-Gruwel, Van Merrienboer, & Slot, 2008).

The underlying notion of the portfolio is that goals set within the portfolio will help to increase desired behaviors (DeNisi, 2011). The current study will assess

development portfolios in a work environment to identify the gap between assessments of the current and desired level of employee agility. Firstly, it is expected that the use of a portfolio will increase agility. Secondly, it is thought that feedback to the target will help to assess progress in their agility and thus it is expected that the use of a portfolio will increase self-other rating agreement regarding one's goal-related agility.

Goals and agility

Earlier research indicated that in the absence of goal-setting, feedback has no effect on performance (Latham, 2009; Locke & Latham, 2002). Goals need to be set related to current behavior and to desired behavioral change (Elliott & Dweck, 1983; Kluger & DeNisi, 1996). Goals often are set in order to develop and improve performance on existing tasks (Bandura, 1989; Bryan & Locke; Lee & Son, 1998). These goals should be SMART. Goals are SMART when they are Specific, Measurable, Attainable, Relevant, and have a Timeframe (Latham, 2009). Goals can be more or less difficult to reach.

All types of communication, for instance feedback sessions and personal development interviews, can provide feedback (Selvarajan & Cloninger, 2012). Feedback can be focused on behavior (progress) towards goals in development action plans, which come together in a portfolio. Research into performance appraisal and the adjacent fields of learning, feedback, and goal-setting theory shows that a broad range of development goal themes exists. Goals can be more self-oriented, for instance attaining more autonomy (Fukushige & Spicer, 2011) and developing learning strategies (Poell & Van der Krogt, 2003), and can be more other-oriented, such as improving cooperation and information sharing skills (Huang, 2012). Goals can simply be focused on developing a more pro-active instead of a reactive attitude towards work (Berings, Poell, & Gelissen, 2008).

The present study will focus on the development of adaptive and proactive agility goals (Chonko & Jones, 2005; Pulakos, Arad, Donovan, & Plamondon, 2000). Adaptive agility-related goals such as resilience, teamwork, coping with change, and decisiveness and will focus on proactive agility goals such as independence, eagerness to learn, and courage (Sherehiy & Karwowski, 2014). Thus, the mentor and employee for instance can discuss agility goals such as to create solutions (Poell & Van der Krogt, 2003), to adapt to change (Crick, Haigney, Huang, Coburn, & Goldspink, 2012), to change behavior on the job (DeNisi, 2011), to be active in sharing ideas and taking initiative in meetings (Asmuβ, 2008), to cooperate and share knowledge (Latham, 2009), and to take proactive initiative (McCarthy & Garavan, 2007).

Development portfolio and agility goal-setting

The development portfolio contains information on the processes necessary in order to get to the current behavior. Kicken et al. (2008) suggest that employee performance can be assessed from multiple viewpoints (e.g., mentors and peers), which presumably can provide an accurate assessment of current behavior. In order to get the feedback needed to close the gap between current and desired performance, it is vital for employees that they have clear personal development goals (Cleveland, Murphy, & Williams, 1989).

There are four phases involved in the setting of clear goals (Danielson & Abrutyn, 1997), in the present case agility goals. In phase one, '*collection*', employees assess the basic determinants (the 'what, where, when and why') of their current agility. Here, employees are concerned with the collection of feedback by others (colleagues, mentors) relevant to their agility goals. In phase two, '*selection*', employees ascertain the developmental domain that will be their focus for the agility goal-setting process. Once the general developmental domain has been chosen, a range of agility learning goals relevant to that domain will be identified. In turn, these agility goals will be specified into a more concrete form. In this stage, the aim is to arrive at an entire set of agility goals for the developmental domain, and it is from this set that subsequently particular agility goals will be chosen as the focus of the process. In other words, not all of the agility goals collected will necessarily be included in the final goal-setting process. An individual, for instance, may collect such varying goals as wanting to become more confident, and wanting to achieve formal qualifications, but may subsequently focus on increasing his or her confidence, since low confidence may impact one's ability to complete the qualification. Hence, employees may set agility goals related to courage and confidence, such as making public presentations, or completing an assertiveness training. The third phase, '*reflection*', involves the assessment of previous and current barriers to achieving agility goals. For example, an individual with low confidence wanting to make public presentations may not be familiar with presentation software and technology (and thus will require some informatics technical training). During the final phase, '*injection*', employees decide which of the full set of agility development goals they wish to focus on for the remainder of the goal-setting project. In the aforementioned example, the individual may finally decide to follow an assertiveness training and informatics technical training. Training intermediate goals will facilitate his or her public presentation, all of which will help to achieve the ultimate agility goal of increasing confidence and showing courage. Danielson and Abrutyn (1997) do not specify how many learning

goals should be selected. In the current study, participants were strongly encouraged to choose two learning goals in an agility context with rapid organizational changes.

Goal setting, action plan and feedback

Desired goals, in our case agility-related goals, cannot be reached before action is taken (Smither, London, & Reilly, 2005). Complex behavior can only be changed when conscious thought is given to the process (Baumeister, Masicampo, & Vohs, 2011). Effective action requires activities such as discussions with colleagues leading to specific intentions to take action (Berings, Poell, & Gelissen, 2008). By considering the 'what, where, when, and why' of the situation, a person can set specific goals (Doornbos, Bolhuis, & Simons, 2004). To return to the earlier example of the employee with low confidence, this individual may identify *what* the issue is (low confidence), *where* he experiences low confidence (e.g., public speaking), *why* (e.g., lack of experience and training), *who* he needs to approach to address the issue (e.g., to obtain training), and *when* (the timeframe within which he will resolve the issue).

There is a positive relationship between goal-setting, taking action and giving feedback (Locke & Latham, 2002). Talking about behavior during development plans often starts by giving feedback (DeNisi, 2011), assessing and negotiating personal qualities on competence scales (Dewettinck & Van Dijk, 2013) and/or by discussing performance (Prowse & Prowse, 2009) or tasks (Anseel, Van Yperen, Janssen, & Duyck, 2010). Feedback is the dominant aspect of most development plan interviews. Mentors can provide feedback (DeNisi & Kluger, 2000) and talk about their employee's behavior (Anseel, Lievens, & Schollaert, 2009), set goals carefully for the employee consciously (Locke & Latham, 2002), and stimulate the design of detailed action plans (Masicampo & Baumeister, 2011).

Within a personal development interview, meaningful feedback regarding behavioral change is utilized to help identify discrepancies between current and desired work performance (Hensel, Meijers, Van der Leeden, & Kessels, 2010). Determination of such discrepancies will facilitate the identification of the employee's strengths and weaknesses (Cleveland et al., 1989), which stimulate self-awareness and this is positively related to agility (Hosein & Yousefi, 2012). Also employees will identify role-specific competences (Avkiran, 1999). In addition, the process can highlight competences necessary for the organization in general (Wickramasinghe & De Zoyza, 2011). If they are fail to reach optimal standards, it is crucial that the organization considers how it can improve its employees' competences in order to address this issue. Feedback, competences and current performance are considered as

topics discussed in the personal development interview. Furthermore, there can be a focus on discrepancies between desired and actual performance, i.e., the identification of deficiencies or weaknesses (Biron, Farndale, & Paauwe, 2011; Holden & Griggs, 2011; Korthagen & Vasalos, 2005) and a focus on enhancing strengths (Kluger & Nir, 2010).

The present study aims to investigate how goal setting, action plans and feedback are used in organizations to assist employees in acting (adaptive and proactive) to change in ways that are productive and meaningful to them. Specifically, it is anticipated that the use of the development portfolio will positively influence employees' goal setting as follows: Self-rated agility scores will increase (Hypothesis 1), and other-rated scores of agility performance will increase (Hypothesis 2). Furthermore, it is thought that self-other rating agreement about agility will increase (Hypothesis 3).

METHOD

Participants and procedure

Thirty-two employees (12 males, 20 females) participated in the study. All worked for a Dutch non-profit service organization undergoing permanent change (an agile organization), as it constantly had to adapt to changes in law and technology. The mean age of the participants was 40.9 years (SD = 8.3) and all participants were of the Dutch nationality. Participants had worked in different departments (e.g., administration, finance) for ten years on average (M = 10.3, SD = 0.5) and all had a higher vocational education level. Participants were voluntarily recruited from a higher-education course that was launched by the organization in order to cope with the changing demands. All participants received feedback in exchange for their participation in the study; no other inducements or rewards were offered.

The study had a longitudinal design in line with recommendations by Ployhart and Vandenberg (2010) and was conducted over two-and-a-half years (between September 2013 and April 2016). It comprised ten time periods, each of ten weeks (see Figure 5.1). During the first ten-week period, participants set their agility goals and constructed their personal development plans. In doing this, they were asked to pay specific attention to their action plans. During the second ten-week period, participants collected proof of their (in)competence, were assessed by a peer (one of their colleagues), their supervisor or another manager (their mentor), and themselves, and constructed their portfolios. During each ten-week period, the participants

had feedback interviews with their mentor and their respective peers. They had free choice in who was their mentor. In almost all cases they chose their own supervisor. All but three mentors had one employee-mentee. Two mentors each had two, and one mentor had three employee-mentees. The mentor needed to minimally have a higher vocational educational level. After each block of ten weeks, participants each had an individual feedback meeting with their mentor and the lead investigator, who provided feedback on progress over the past ten weeks (e.g., did the individual with low confidence practice speaking up at meetings?). During all feedback meetings the mentors were asked to keep track of the SMARTness of the learning agility performance goals. Additionally, mentors specifically focused on the applicability of the learning agility goals of the organization, whereas peers were specifically concerned with weekly progress. Finally, their mentors (and the lead investigator) were focused on the action plan for the agility goals in the development portfolio.

After the first and second full year of the present study, individual feedback meetings were held to assess whether the participants had made progress on their agility goals. Participants who decided that they had made sufficient progress towards their learning agility goals could choose to develop new agility goals. Otherwise, and in the event that insufficient progress had been made, they would retain the current learning agility goals. At the end of the two-and-a-half year period, the participants and the others (i.e., the mentors and colleagues) once again filled out the agility questionnaire and were asked to write an extensive reflection (1200 words) on their personal progress in relation to their agility goals.

Design

Figure 5.1 shows the portfolio process and products, with different sets of products broken into numbered clusters (1–6). Figure 5.2 shows when these different sets of products were assessed over the ten (ten-week) periods, totaling 2.5 years.

Agility (cluster 1, Figure 5.1). In order to increase participants' self-insight into agility, all participants were asked to complete a self-developed agility scale (lead investigator and Cubiks, 2014). In order to obtain an insight in how others view them, the others (i.e., the mentors and colleagues) also completed the other-rated agility questionnaire. This enabled an estimation of self-other agreement of agility, and was conducted twice, once at the start of the study (T0) and again at the end (T1). (For more information on the agility measure, see below under the measures section.)

Personal agility goals (cluster 2, Figure 5.1). Participants constructed their personal adaptive and proactive agility goals. The following agility-related goals based

360-degree feedback	SMART Individual Agility Goals:	Goal commitment	Portfolio development	Feedback	Agility induction and self-other consensus
Goal and gap current and desired agility and personality measure	Resilience, teamwork, coping with change, decisiveness, courage, independence, and eagerness to learn	Action Plan	Including proof of (in) competence performance goal (e.g. assignment, certificate or diploma)	Interviews about (in) competence and portfolio content/ product	Agility performance Individual/ organizational goals
1	2	3	4	5	6

Figure 5.1. The six clusters in the portfolio process and products.

Period	Measures				
1 (ten-weeks)	*Self-other agility agreement*	*Agility score (self-and other)*	*Individual goals*	*Organizational goals*	*1, 2, 3, 4, 5, 6*
2 (ten-weeks)					*4, 5*
3 (ten-weeks)					*4, 5*
4 (ten-weeks) end of year 1					*1, 2, 3, 4, 5*
5 (ten-weeks)					*4, 5*
6 (ten-weeks)					*4, 5*
7 (ten-weeks)					*4, 5*
8 (ten-weeks) end of year 2					*1, 2, 3, 4, 5*
9 (ten-weeks)					*4, 5*
10 (ten-weeks)	*Self-other agility agreement*	*Agility score*	*Individual goals*	*Organizational goals*	*1, 2, 3, 4, 5, 6*

Figure 5.2. Timing of primary measures during the study. Note that the numbers refer to the clusters in the portfolio products and process detailed in Figure 5.1.

on Alavi et al. (2014), Dyer and Shafer (2003), Pulakos et al. (2000), and Sherehiy (2008) were chosen: a) the adaptive agility goals of resilience, teamwork, coping with change, and decisiveness, and b) the proactive agility goals of courage, independence,

and eagerness to learn (for the measure of agility goals, see below in the measures section). As mentioned above, the goals had to follow the format of SMART learning goals (see the Appendix). The participants were encouraged to make their agility goals inspiring and energetic for themselves. For example, if the mentor felt that the personal agility goals did not fit both the employees and the organization, they could ask the employees to re-specify or change their agility goals. By the end of the first ten weeks, all participants had decided upon their learning agility goals for the following year.

Personal development action plan (cluster 3, Figure 5.1). During the construction of their personal development plans to agility, participants were personally asked by the mentors and colleagues (face-to-face) to answer the following open-ended question: "How will you achieve progress towards your personal goals? By answering this question, keep in mind your personal strengths and weaknesses." The personal development plan in the development portfolio contained the personal agility goals, a concrete action plan, and some personal strengths and weaknesses. The action plan was concerned with how participants wanted to achieve progress on their personal agility goals. In order to do so, they needed to write a detailed plan (min. 1,000 words, max 1,200 words) in which they listed who and what they would need in order to succeed. Thus, participants' lists in their action plan showed what they still needed to do in order to accomplish their personal agility goals (their desired progress; see the Appendix for an example).

Proof of (in)competence (cluster 4, Figure 5.1). Each participant was given a copy of the "Competence Workbook" (Winkler, 2011). In this workbook, participants could find detailed exercises that they could perform to work on their personal agility-related goals. For example, to be active in sharing ideas, employees need to organize a workshop each two weeks. When participants had completed a specific assignment, they asked one of their peers to give them feedback which served as proof of (in)competence. The proofs were added to the appendix of the portfolio.

Feedback interviews (cluster 5, Figure 5.1). The ten feedback interviews (an interview in each ten-weeks period) were semi-structured. All participants had their first feedback meeting with their mentors and peers. At the end of each ten-week period, all participants had an individual situational interview (Latham, Saari, Pursell, & Campion, 1980; Lingsma & Scholten, 2001) with the lead investigator. Although the nature of the feedback would differ for each evaluator (peer, mentor, lead investigator), all evaluators kept track of the SMARTness of the participants' personal goals. Additionally, mentors were specifically concerned with making sure that the progress in the participants' goals was directed towards becoming more agile. For example, an employee's goal is to share ideas, and the organization needs to find ways

to adapt to changes in the environment. The peers provided weekly informal feedback because of their daily interactions with the participant. Finally, the lead investigator provided feedback on the action plan, and whether it was complete and sufficiently specific to allow participants to make the desired progress. In sum, the ten feedback interviews were held with three different evaluators (one's mentor, one peer, and the lead investigator). Every assessor kept track of the SMARTness of the participants' personal agility goals, and gave additional feedback by using their expertise.

Portfolio (cluster 6, Figure 5.1). The portfolio had a clear structure: 1) set goals, 2) ask for feedback, 3) develop an action plan, 4) collect proof of (in)competence, 5) ask for feedback, and 6) measure outcomes. Every participant had to set agility-related goals for each period of ten weeks. After each period of ten weeks, the participants received face-to-face feedback from their peers, mentors and lead investigator on their (in) competence, set agility-related goals and performance in order for the portfolio to be effective. After the ten (ten-weeks) periods of in total 2.5 years, the total portfolio averaged 12,000 words (excluding the results of the agility questionnaires and attachments of proof of competences).

Measures

Agility. The self-rated agility scale was constructed by the lead author of this article in collaboration with Cubiks (2014). The scale was designed after carefully reviewing the available literature on agility (e.g. Alavi et al., 2014; Pulakos et al., 2000) and consisted of two subscales of agility: adaptive agility (17 items; e.g., 'I offer solutions when things go wrong') and proactive agility (14 items; e.g., 'I apply proactively what has been learned to new situations'). All items were scored on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Alpha values were .87 for both adaptive and proactive agility. The intercorrelation between the two scales was r = .36 (Cubiks, 2014).

A rephrased version of the self-rated agility scale formed the other-rated agility scale. The statement 'I offer solutions when things go wrong' was, for example, changed in to 'He/She offers solutions when things go wrong'. The alpha values were .88 for both adaptive and proactive agility. The intercorrelation between the scales was r = .39 (Cubiks, 2014).

Goals. One proactive agility-related goal, and one adaptive agility-related goal was formulated and was written down in the portfolio. The portfolio included self- and other-rated agility questionnaires, the action plan and reflection (see Figures 5.1 and 5.2).

Analysis

Data were analyzed using (clustered) Wilcoxon signed-rank test analyses (to test for significant differences; Rosner, Glynn, & Lee, 2006). The first measure (T0) was taken at the beginning of the portfolio process (prior to) goal-setting in the portfolio, and the second at the end of the portfolio process (T1), 2.5 years later.

RESULTS

Hypothesis 1 stated that self-rated scores of adaptive and proactive agility performance would increase after having developed the portfolio. The Wilcoxon signed rank test analysis showed significant differences between T0 and T1: self-rated adaptive and proactive agility scores both were significantly higher at T1 (respectively $M = 3.77$, $SD = .41$ and $M = 3.78$, $SD = .39$) than at T0 (respectively $M = 1.98$, $SD = .21$ and $M = 2.2$, $SD = .23$); ($z = 1.99$, $p = .04$; $z = 1.98$, $p = .04$). Therefore, hypothesis 1 was supported.

Hypothesis 2 stated that other-rated scores of adaptive and proactive agility performance would increase after having developed the portfolio. The Wilcoxon signed rank test analysis showed significant differences between T0 and T1: other-rated adaptive as well as proactive agility scores were significantly higher at T1 (respectively $M = 3.27$, $SD = .43$ and $M = 3.22$, $SD = .46$) than at T0 (respectively $M = 1.10$, $SD = .25$ and $M = 1.14$, $SD = .27$); ($z = 2.43$, $p =. 02$; $z = 2.45$, $p =. 02$). Therefore, hypothesis 2 was supported.

Hypothesis 3 stated that self-other agreement about adaptive and proactive agility would increase after having developed the portfolio. The Wilcoxon signed rank test analysis showed significant differences between self- and other-rated adaptive as well as proactive agility scores on T0 (adaptive and proactive *difference* = respectively 0.80 and 1.06); ($z = 2.06$, $p = .03$; $z = 1.97$, $p = .04$). The Wilcoxon signed ranks test analysis showed no significant difference between self- and other-rated adaptive and proactive agility scores on T1 (adaptive and proactive *difference* = 0.50) (both $z = 1.28$, $p = .73$; *ns*). Next, we used the clustered Wilcoxon signed rank test analysis and showed significant differences between the adaptive as well as proactive mean differences scores (respectively $W_{c,s} = 1.78$, $p = .04$, and $W_{c,s} = 1.98$, $p = .03$). Therefore, the decrease in differences was significant for both adaptive and proactive agility. In other words, at T0 there was a significant disagreement between self- and other-rating scores of adaptive and proactive agility, whereas there was agreement between self- other-ratings on adaptive and proactive agility at T1, with the results showing

a significant increase in agreement from T0 to T1. Therefore, hypothesis 3 could be supported. Figure 5.3 visualizes the results of hypotheses 1, 2 and 3.

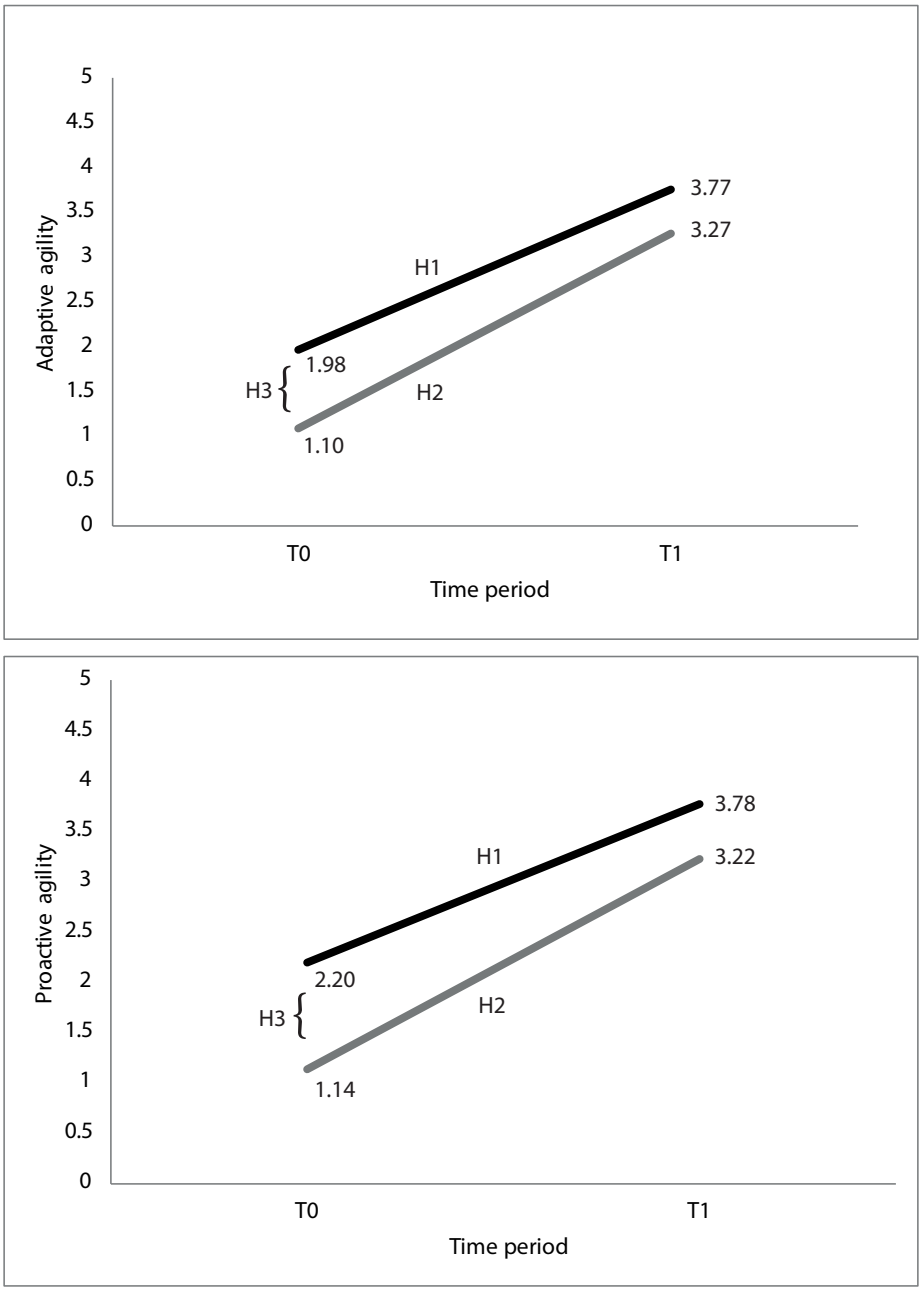


Figure 5.3. The visualized results of hypotheses 1, 2 and 3.
Note: black line = self-rated agility and grey line = other-rated agility.

DISCUSSION

The first aim of the present study was to investigate the implementation of the effectiveness of a development portfolio as an agility facilitator and an assessment tool. More specifically, the aim of the study was to investigate the portfolio process of goal setting in a context of organizational change, with the intention to increase employees' agility behavior and self-other agreement on agility. In particular, we investigated how agility goal setting and feedback are were used in organizations to assist employees in adapting to change and proactively initiating change in ways that are productive and meaningful to them. We expected that the use of the development portfolio has a positive influence on employees' agility goal setting and self-other agreement about employees' agility.

The first and second hypothesis, namely that self-rated and other-rated agility performance would increase after using the development portfolio, were both supported. Both agility scores were significantly higher at T1 than at T0. Hypothesis 3 stated that self-other agreement about agility would increase after using the portfolio development process. This hypothesis was also supported. Therefore, it can be concluded that agility goal-setting and giving feedback in a development portfolio seem to help improving agility performance and self-other agreement about adaptive and proactive agility. Our results confirm the notion of DeNisi (2011) that clear goal-setting helps to increase desired behavior oriented to achieving one's goals. Our results also confirm DeNisi's idea that complex behavior such as agility will be come clearer in the process of feedback in the sense that agreement between oneself and others on agility increases. Further, the findings are in line with a similar idea of Kicken et al. (2008) that behavior in an action plan in a portfolio increases insight for employees themselves and others. In our study, goal commitment by means of the portfolio process helped to increase the agility-related behavior (self- and other-rated), which finding supports research by Seijts and Latham (2000), who investigated the role of goal commitment for task performance. Another way to view the portfolio is that it stimulates self-awareness, which may have been one of the ways to increase self-rated agility. Hosein and Yousefi (2012) reported findings showing that self-awareness has a great role in workforce agility. From yet another angle, one could view the use of a portfolio as an HRM strategy. In this light, our results could be seen as supporting results reported by Mooghali, Ghorbani, and Emami (2016), who showed that HRM practices could have a significant and positive impact on agility. From the meta-analysis by Harris and Schaubroeck (1988) about self-supervisor, self-peer, and peer-supervisor rating agreement, it becomes clear that self-other agreement does not

always occur. We demonstrated that portfolio use may help improve such self-other agreement.

Practical implications

This study gives managers and HRM departments new insight into the dynamics of management agility goals of their employees via the use of a portfolio. The individual employee determines his or her agility goals, which are reinforced through the action plan. Porfolio use may lead to an increase in visibility and consensus about employees' agility. Most importantly, the present study shows that through a portfolio, agility performance will increase, which is necessary within the context of organizational change. These findings add to the insights by Dries, Vantilborgh, and Pepermans (2012) who showed that employee agility, in particular learning agility, positively predicted career advancement up and above job performance.

Limitations and directions for future research

The data all came from a single organization. Therefore, future research should seek to ascertain the generalizability of the current findings across a range of agile employment contexts. The current longitudinal research implied that we followed participants over two-and-a-half years in a widely used pretest-posttest design. However, we did not have a control group available who did not make use of a portfolio. A design with a control group would have been stronger to be able to exclude alternative explanations for the increase in agility and in self-other agreement across time such as maturation and history (cf. Robson, 1993, p.100–101). Yet, we believe it implausible that these findings were caused by other factors, because no major other transformations occurred in the organization or in the organizational context during the study period. Future research should try to incorporate a control group if this is feasible.

Conclusion

The present study showed that the development portfolio is a method that can increase agility among employees over a longer period of time, because it allows both the target (the employee) and the assessor (e.g., mentors and peers) to gain insight in the underlying processes involved in expressing agility behaviors. Making the process to achieve agility goals visible by means of the portfolio, improves self-other agreement on employees' agility.

APPENDIX: EXAMPLE OF AN ACTION PLAN

Hypothetical, but realistic action plan in an individual employee's portfolio intended to stimulate agile goals.

Drawing up an action plan

To structure improvements by increasing adaptive and proactive agile behavior, it is effective to draw up an action plan. In this action plan I will describe as concretely as possible what goals I want to achieve, with which actions I want to achieve those goals and how I will determine whether I have achieved those goals.

Prior to my action plan I have already received the baseline of my own agility level and I had a talk with my supervisor about my agility. Both results have been used as input for my action plan, which is written down below.

Step 1: The goals I want to achieve.

Criteria that must be reached/fulfilled: what behavior do I need to show to have reached my adaptive and proactive agile goals?

- What adaptive and proactive agile goals were derived from the baseline?
- What adaptive and proactive agile goals do I have? SMART formulated (see also "formulation SMART goals). "Before 1 March, I have spent four times in a team meeting sharing my knowledge with all team members".

Step 2: With what actions do I want to achieve these goals?

To achieve these goals, I must take action! Below I will describe for each sub-goal what actions I will undertake to achieve them.

- I will describe the actions by reference to the following aspects:
  - What should I get rid of? (For example, anxiety, shyness, insecurity)
  - What actions do I want to perform? (For example, I try or practice)
  - When will I perform these actions? (For example, before 1 March)
  - With whom (which concerned) will I perform these actions? (For example: Action 1: self-practicing in front of the mirror, Action 2: practicing with my partner, Action 3: practicing with my colleague, etc.)
  - How can these actions be implemented? (For example, at home alone in front of the mirror)

For each goal I use the following format:

Objective (SMART):

Actions	Date of Realization	With whom?	How to Implement?	How to Measure?
1				
2				
3				
4				
Etc.				

Step 3: Define how I know the goals have been achieved.

A SMART goal is measurable by formulating a clear standard and an objective method, which are accepted by the stakeholders. "How to Measure" in the last column of the format (see above), for example:

"Read evaluation in the portfolio in which ……..", or "Listen and look to the audio and video tape.", or "Count the moments I shared my knowledge with the team members."

Hypothetical, but realistic *example* of an action plan for an adaptive and a proactive SMART goal.

Adaptive agility goal (SMART): I will share my knowledge four times before 1 March with my teammates in a team meeting.

Actions	Date of Realization	With whom?	How to Implement?	How to Measure?
1. Practice to eliminate my insecurity and shyness and show teamwork	15 January	Self	Home where nobody's at the mirror. Eliminate my insecurity.	Audio and video recording
2. Try to eliminate my anxiety	1 February	Anja, Hans, Fatima	Show my audio and video publicly	Ask feedback
Negative result? Look for an alternative to achieve the goal Positive result? Continue with this (learning) development (personal and professional growth)!				
Consider alternatives	5 February	Self and others	Ask myself and others and make a list. Get rid of my shyness.	Listed on a list
Make a schedule what I practice with whom	15 February	Partner, colleague	Approach people to receive feedback	Read evaluation in the portfolio in which I describe what I have done
Plan a date	16 February	Anja, Hans, Fatima, practice Supervisor	Choose a date, arranging a place, etc.	Write down any changes to plans
Ask for feedback, after the presentation	28 February	Anja, Hans, Fatima, practice Supervisor	Fill in feedback form	Positive and negative feedback
Discuss the results with the practice supervisor. Look at how I can use these skills in the future and allow them to become part of my natural instinct.	1 March	Anja, Hans, Fatima, mentor	Schedule a consultation and share my knowledge	Read evaluation in the portfolio

Proactive agility goal (SMART): I am going to stay connected with my colleagues in city X without this being at the expense of spending time with new colleagues in the city of Y, before 1 March.

Actions	Date of Realization	With whom?	How to Implement?	How to Measure?
1. Show courage. Consult colleagues in city X to plan video calls in advance instead of calling spontaneously	December 1st	Myself and my (new) colleagues	Consult via WhatsApp. Get rid of my shyness.	Check December 2nd if action has been completed
2. Share more content on social media	December 1st – end of February	Myself	Download Snapchat and share content via Snapchat and Instagram	Compare shared content of before December 1st and at end of February
3. Make a more thoughtful selection of sparring partner colleagues in city Y whom I wish to speak with.	February 1st	Myself	Be more selective in accepting invitations. Get rid of my insecurity	Read evaluation in the portfolio
Negative result? Look for an alternative to achieve the goal. Positive result? Continue with this (learning) development and personal and professional growth!				
Consider alternatives	5 February	Self and others	Ask my self and others and make a list. Get rid of my shyness	Listed on a list
Make a schedule of what I practice with whom	17 February	Colleagues	Approach people	There is a schedule
Plan a date		Anja, Hans, Fatima, Elly, Cees, Lilly, mentor	Choose a date, arranging a place, etc.	Read own evaluation in the portfolio overview
Ask for feedback	25 February	Anja, Hans, Fatima, Elly, Cees, Lilly, mentor	Fill in a form	Positive and negative feedback
Discuss the results with the practice supervisor. Evaluate how I can use these skills in the future and allow the skills to become part of my natural behavior	1 March	Anja, Hans, Fatima, mentor	Schedule a consultation and I share my knowledge	Audio and video recording

6

Summary and discussion

Introduction

In occupational and organizational psychology, the notion of *agility*, that is the capability to adapt, presently is receiving strong interest (Alavi, Wahab, Muhamad, & Shirani, 2014; Hosein & Yousefi, 2012; Mooghali, Ghorbani, & Emami, 2016; Pulakos, 2000; Sherehiy, 2008). Already at the end of the last century Harvey, Koubek and Chin (1999) worked towards a model for employee agility. They emphasized the role of internal (personal) factors, such as personality and needs, and external (situational) factors, such as work pressure. Chonko and Jones (2005) distinguished two components within the notion of agility: an adaptive and a proactive component. Adaptive agility relates to adapting to a changing organizational context. Proactive agility relates to actively looking for changes or initiating innovation in one's work organization.

So far, research has mainly focused on the agility of organizations themselves, but this inevitably necessitates more insight in the agility of organizations' employees. For gaining such insights it is relevant to see what determines the agility of employees (determinants both in the person as well as in his or her environment), in order to predict their agility better. The organizational environment changes ever faster and consequently the pressure on employees and organizations increases further to adapt to changes, to anticipate changes and to initiate changes.

Subject of research

The research in this thesis was focused at the following question: Which factors contribute to agile employees? In view of the factors that can play a role in the agility of employees, it is important to distinguish between internal (factors within the person) and external factors (factors in the environment) (Harvey et al., 1999).

Internal factors that may play a role in the agility of employees are: a) the motives (needs) of employees; b) their willingness (behavior intention/tendency) to change (Metselaar, 1997); and c) their resistance (attitude/opinion) against change (Oreg, 2006). Following Paul, Van Peet and Reezigt, (2012) willingness and resistance in this thesis are interpreted as opposites. In other words, the two notions form each other's opposites in a continuum with conceptualized willingness as a behavioral intention, whereas resistance as is seen as an *attitude* complex (Bouckenooghe, 2010). We investigated the needs identified by McClelland (1985), namely the '*Need for Achievement*', the '*Need for Power*' and the '*Need for Affiliation*', and complemented this with the '*Need for Change*' after Murray (1938). The concept of willingness to change is a behavioral intention which consists of four components (Metselaar,

1997): 1) observed consequences for one's own work (for example the possibilities to complete work according to one's own judgment), 2) emotions regarding the change (for example interpreting the change process as a challenge), 3) the observed added value of the change for the organization (for example the strength of the organization at its market), and 4) the cognitive commitment to the change (for example the perceived involvement in the change process). The concept resistance against change is an attitude complex consisting of affective, behavioral and cognitive attitude components (Oreg, 2006; Paul et al., 2012). The affective component refers to the feelings one has about the change, such as the fear for a change. The cognitive component refers to the conviction and knowledge one has about the change, such as the thought that it would make one's work more difficult. The behavioral component refers to the judgment one has about the change based on experience with earlier changes, such as objections that were signaled in previously experienced changes.

External factors that may play a role in the agility of employees are: a) characteristics of the organizational context in which the changes take place, b) one's trust in the organization and the external consequences, c) the (external) agility goals of the employees and d) feedback by others about the perceived agility. The context in which the changes take place can include a planned and an unplanned change environment (McNamara, 2006). A planned change context is an environment where organizational changes take place consciously and continuously. In this context, employees are stimulated to initiate changes themselves, for example by strategic and pro-active anticipation. An unplanned change context is an environment in which a change takes place suddenly, requiring subsequent adaptation by the employees, for example a necessary organizational reaction as a consequence of environmental change. Furthermore, it is important to know whether employees have trust in their organization (Zayim & Kondakci, 2014). Already in earlier empirical research (Van den Heuvel, 2014) it was found that one's trust in the organization has a significant negative relation with the resistance against change. In this thesis, we investigate whether trust in the organization through positive thoughts (less resistance against the change) could lead to more agile behavior of employees. Next to characteristics of the context, and one's trust in the organization, agility goals of the employees may be affect their agility. Through the use of a portfolio (a tool to visualize an employee's professional development; Kicken, Brand-Gruwel, & van Merriënboer (2008)) the agility goals of the employee can be visualized for others to be perceived, and using the portfolio may increase the agility of the employee. Agility goals can address in particular four adaptive agility facets: resilience after set-backs ('*resilience*'), the amount of cooperation ('*teamwork*'), the adaptation to changing situations ('*coping*

with change'), taking effective decisions ('*decisiveness*'), and three proactive agility facets: showing guts ('*courage*'), implementing new ways to solve problematic situations ('*independence*') and focusing on learning new things ('*eagerness to learn*') (Asari, Sohrabib, & Reshadic, 2014; Pulakos, Arad, Donovan, & Plamondon, 2000; Sherehiy, 2008) . We further investigated whether there was agreement between the judgment of the employee and the judgment of others (colleagues) with respect to the employee's agility (Anseel, Van Yperen, Janssen, & Duyck, 2011).

Research questions

The following four research questions are central to this thesis: (1) What is the relation between the different *needs/motives* and the adaptive and proactive agility of employees; (2) How high is the agreement between others (i.e., the *consensus*) and the agreement between the self-image and the image as perceived by others (i.e., the correspondence) in judging the motives of employees; (3) What is the relation between the degree to which employees *trust* their organization in a planned change (strategic anticipation) and in an unplanned change (sudden change, caused by necessity) organization and their adaptive and proactive agility; and (4) Can a *portfolio* (containing: one's own agility goals, a plan of action, proof of the progression in the steps in the direction of the agility targets, and reflection during feedback moments with others on the steps in the direction of the agility targets) increase the agility of the employees and increase the correspondence on their agility? These research questions are studied and answered in four subsequent empirical studies, as described below.

Summary of the four empirical studies

The goal of the first empirical study (chapter 2), entitled **'The mediating role of willingness to change in the relationship of employees' Need for Change, Need for Achievement, Need for Power, Need for Affiliation and agility**, was to investigate the relation between work-related needs and agility amongst employees. Further, we checked the role of the *mediator variable* 'willingness to change'.

According to the needs theory of McClelland (1985), the behavior of employees in organizations is determined partly by different motives. These motives ensure that employees pursue behavior that brings satisfaction to them, and that employees avoid behavior that brings dissatisfaction. In this part of the research we focus on four important work-related motives, also called *needs* (McClelland, 1970; Murray, 1938). The motives concerned are the Need for Change, Achievement, Power, and Affiliation. Our research question focused on the way these needs were related

to agility and whether willingness to change would be a mediator in this relation. Employees with a strong *change motive* have the need to pursue changes proactively. Individuals who are driven by a strong *performance motive* feel well when they can work in a goal-oriented way and achieve difficult goals. People with a strong *power motive* will find their satisfaction mainly in actions with which they can exert influence on other people. Finally, people that are characterized by a strong *relation motive* will feel well when they are in company of others and can maintain, enter into or restore social relationships.

From earlier research it was already concluded that positive relations exist between the motives mentioned above and the Big Five personality characteristics (extraversion, openness to experience, conscientiousness, agreeableness and neuroticism), (Sanz, Gill, Garcia-Vera, & Barrasa, 2008), as well as between the Need for Achievement and work performance (Engeser & Langens, 2010; Jex & Britt, 2008). We emphasized in our research the proactive component of employees' agility as we expected that needs that originate within the employee will impact mainly on the self-initiation of changes.

The data were gathered under 100 employees of a large service organization through an online questionnaire, which consisted of measurements of their needs, their willingness to change, and their agility (self-assessed and assessed by colleagues). We found a positive relation between all four motives on the one side and agility on the other side. A direct relation was found between the change motive and proactive agility (self-assessed), but not between the change motive and adaptive agility. The change motive and proactive agility (self-assessed) was partially mediated by the component 'emotions' of employees' willingness to change. It was also found that the Need for Achievement had a direct relation with proactive agility (self-assessed), but not with adaptive agility. Further, a relation between the power motive and adaptive agility (self-assessed) was found, which was mediated by the component 'consequences for work' of willingness to change. Employees who scored higher on the power motive experienced positive consequences of an organization change for their own work, which subsequently strengthened their adaptive agility. The relation between the power motive and proactive agility (self-assessed) was mediated by the component 'emotions' of willingness to change: Employees with a stronger power motive displayed more positive emotions due to an organization change, which in turn resulted in a higher proactive agility. Finally, the relation motive showed no relation with agility. A possible explanation for this latter observation could be that this motive is less relevant in the work domain, and is less related to direct work than the achievement and power motive (Rosso, Dekas, & Wrzesniewski, 2010).

Contrary to the above-mentioned relations between the (four) needs and employee self-assessed agility, no relation was found between the (four) needs and employee agility as assessed by others. A possible explanation for this finding is the often low correlation between self-assessed agility and the agility of employees assessed by others (cf. Funder, 1995).

The fact that there is a difference in the relation between the needs and self-assessed agility and agility as assessed by others is relevant in the 'Human Resource Management' context. When one's self-image and the image perceived by others do not correspond, it is difficult for the employee and others in the organization to agree on a possible development of the employee that is needed for the agility targets of the organization. In earlier work, Kenny and West (2010) argued that in addition to self-assessment, the views of others therefore should be used.

The second empirical study (chapter 3) is entitled **'Self-other agreement between employees on their Need for Achievement, Need for Power, and Need for Affiliation: A Social Relations study'**. The goal of this study was to investigate whether consensus (agreement between others) and correspondence (agreement between self-assessment and the perception of others) exists in the observation of one's motives (McClelland, 1985). For this, a *round-robin design* (Kenny, 1994) was used. This method was used to investigate employees in a project team who assessed themselves as well as all others in the team. Through this method, we could not only determine consensus and correspondence, but also determine whether possibly a distortion occurred in the perception of others (projection, also called *assumed similarity*). Projection in this context signifies whether employees attribute properties to others (i.e., other members of the project team) that these employees attribute to themselves.

The data were collected in a large care institution during meetings in which questionnaires were completed. In total, 42 project teams participated. Each team consisted of four employees. The total sample consisted of 168 persons. In the round robin design therefore 672 scores were available. For the three motives identified by McClelland, consensus was found. This meant that the other team members agreed with each other in the assessment of their colleagues in the project team on the Need for Achievement, Power, and Affiliation. Correspondence between the observation of the person him- or her-self and the observation by other team members (*self-other agreement*; Kenny & West, 2010) was found for the Need for Achievement and Power, but not for the Need for Affiliation. For the Need for Achievement, also assumed similarity in the perception was found. In other words, employees who rated themselves high on the Need for Achievement assumed that others scored high on

that motive as well, and employees who rated themselves low on this motive assumed that others' similarity would be also low on this motive. It is evident that the Need for Achievement is relevant in a working environment, which is an environment principally oriented towards performance. Therefore, this motive was possibly assumed to occur in similar proportions in one's colleagues. For the Need for Power, correspondence was found, but assumed similarity in perception was not found. The Need for Power in employees is much more pronounced and directed towards others than the two other motives, which could explain that there is more correspondence. Employees are most likely aware of the fact that not everyone has a power motive to the same degree, and hence less distortion might take place. For the relation motive, no correspondence or distortion was found.

The goal of the third empirical study (chapter 4), entitled **'The relationship between trust, resistance to change and adaptive and proactive employees' agility in an unplanned and planned change context'**, was to investigate the relation between the trust of employees in their organization and their adaptive and proactive agility. We expected that trust in the organization would show a positive relation with adaptive and proactive agility, and investigated whether that relation would be direct or indirect (through a mediator). We investigated whether the components of *resistance against change* would in this case play a mediating role. We did this in an organizational context in which an *unplanned* change (an unexpected change as a result of necessity) occurred and in organizational context in which a *planned* change (strategic anticipation by changing) occurred.

The data in the *unplanned* change context were collected in a large financial institution. The online questionnaire consisted of measurements of agility (assessed by the employees themselves and by others (colleagues), resistance against change and trust in the organization. The questionnaire was collected under a sample of 90 employees. The data in the *planned* change context was collected in a large employment agency. The online questionnaire again consisted of measurements of agility (assessed by the employees themselves and by others (colleagues), resistance against change and trust in the organization, and was collected under a sample of 98 employees. In both organizational contexts, there was no direct relation between trust and agility. There were, however, indirect effects both in the planned change context and in the unplanned change context. The study showed that the affective component of resistance against change in an unplanned-change context played a mediating role between trust in the organization and *adaptive agility* (self-assessed). This finding shows that, during unplanned change, employees with more trust in their organization have less affective resistance against the organizational changes, which

in turn resulted in showing more adaptive agility behavior. The study further showed that, in a planned change context, the cognitive component of resistance against change played a mediating role between trust in the organization and *proactive agility* (self-assessed). This finding shows that, during planned change, employees with more trust in their organization have less cognitive resistance against change, which in turn results in showing more proactive agility behavior. In conclusion these results indicate that in an unplanned-change context through trust in the organization a lower affective resistance can be achieved, resulting in employees showing more adaptive agile behavior. In a planned-change context through trust in the organization a lower cognitive resistance can be achieved, resulting in people showing more proactive agile behavior.

In the fourth empirical study (chapter 5), entitled '**Using the portfolio to develop agility among employees'**, the research focused on the use of a portfolio in an agility case. More precisely, we investigated the use of a portfolio to increase employee agility as well as achieving correspondence between the assessment by employees themselves and their colleagues with respect to their adaptive and proactive agility. To that end, we followed 32 employees of a large care institution for two and a half years. In this time-frame, they each kept a portfolio, in which they all pursued two individual agility goals. These goals were derived from research by Asari et al., (2014), Mooghali et al. (2016), Pulakos et al., (2000), and Sherehiy (2008). Every employee could choose one of the following four adaptive agility goals: strengthening their own resilience after set-backs, more co-operation, coping themselves to changing situations, or taking effective decisions. Furthermore, every employee could choose one of the following proactive agility goals: showing courage, using new ways to solve problems, and focusing on learning new things. The portfolio was intended for the employees to gain insight in their own strengths and weaknesses regarding these goals. Further, the portfolio intended to provide insight in the difference between the current and the desired agility performance (Kicken, Brand-Gruwel, Van Merriënboer, & Slot, 2008). During 2.5 years, the employees received feedback of colleagues and mentors very regularly about their progress in reaching their agility goals, and composed several action plans to reach these goals. They collected proof for their progression in reaching their goals. The results of this study showed that the portfolio indeed can play a role in increasing their (self-assessed and other-assessed) agility. Setting specific, measurable, achievable, responsible and time-related (SMART) agility goals in a portfolio resulted in a significant change in behavior towards the goals they had set themselves. An example hereof is an employee who structurally started to share knowledge with these colleagues during every work

consultation, so that organizational changes could be anticipated on, and that led him to pursue new markets himself. The findings show that the judgment about the agility of the employees, as given by themselves and their colleagues, matched more over the course of the 2.5 years. In short, the study showed that the portfolio is a possible tool to increase employees' agility and its visibility through setting agility goals (including development plan, action plan and feedback moments). The correspondence about an employee's agility thus can be increased through use of the portfolio.

General discussion and suggestions for future research

In this concluding paragraph we present a general discussion about the findings previously reported. As regards the first research question "Which of the three needs outlined in McClelland's acquired needs theory and Murray's Need for Change are related to employee agility, and is/are these relationships mediated by the willingness to change?". Our hypotheses were partially supported:

- The Need for Change correlated positively with self-rated proactive agility and partially with other-rated proactive agility. No correlation with adaptive agility was found. These findings seem to make sense, since people with a strong Need for Change are more inclined to be the masters of their own destiny and to initiate change (proactively) rather than to just react to it (adaptively).
- The Need for Achievement correlated significantly with self-rated proactive agility only. As in the previous case, this result makes sense since a strong Need for Achievement is expected to be better expressed by initiating change (proactively) rather than reacting to it (adaptively).
- A positive correlation was found between the Need for Power and self-rated adaptive and proactive agility. Interestingly, the Need for Power was the only need that is significantly associated with adaptive agility.
- The Need for Affiliation did not correlate with either adaptive or proactive agility, because this need is correlated to work to a lesser direct extent than the Need for Achievement and Power.
- The expected mediation role of willingness to change in the relationship between needs and employee agility was partially supported. Firstly, there was a strong positive correlation between willingness to change and both forms of self-rated agility. Secondly, a more substantial mediation effect was found for the Need for Power than for the Need for Change. Thirdly, stronger effects were found for self-related agility than other-related agility, most probably due to the fact that findings were based on the administration of self-report measures.

As regards the second research question "Are there similarities and differences in ratings of McClelland's three needs (Need for Achievement, Power, and Affiliation) between others, and between individuals themselves and how others perceive them?", our hypotheses were partially supported. Only part of the expectation was empirically supported, namely: Self-other agreement emerged for the Needs for Achievement and Power. Thus, need for self-reflection seems to benefit from someone else's feedback, comparable to employees' own opinion (Amudsen & Martinsen, 2014). Contrarily, the Need for Affiliation did not show self-other agreement. Assumed similarity occurred for the Need for Achievement but not for the Needs for Power and Affiliation. This finding may stimulate organizations to promote synergy among work teams and to be more responsive to employees' social needs.

As regards the third research question "Which contribution does "trust" in the organization and "resistance to change" have on an employee's agility?". Our hypotheses were fully supported. In an unplanned change context, trust in the organization was significantly and negatively related with both affective and behavioral resistance to change. In turn, affective resistance to change had a negative relationship with proactive agility. Furthermore, affective resistance to change in this context mediated the relationship between trust and adaptive agility. In a planned change context, trust in one's organization correlated negatively with the cognitive dimension of resistance to change which, in turn, correlated negatively with proactive agility. Cognitive resistance to change furthermore mediated the relationship between trust and proactive agility. Our results support the findings from previous research, namely (1) the relationship between confidence in the organization and resistance to change (Coyle-Shapiro & Morrow, 2003; Van den Heuvel, 2014); (2) the relationship between resistance to change and employee agility (Gunasekaran, 2001; Balan & Titu, 2009). These findings shed light on the role played by specific components of trust, resistance to change and agility in an unplanned/planned change. When an unplanned change occurs, people with low trust in the organization seem to experience a higher level of affective and behavioral resistance, which is probably related to the immediacy of the change. In contrast, when a planned change occurs, the cognitive component of resistance to change is likely to be involved, implying that individuals will have had time to accept the change. It is interesting to note that the two components of agility (adaptive and proactive) seem to be differently involved in both changes. In unplanned situations, employees need to be adaptive to cope with the impact of the change, whilst in the case of planned change, employees need to think about proactive strategies to initiate the change.

As for the fourth research question "What role does a development portfolio play in creating or sustaining agility in employees?" the findings shed light on the

role of portfolio development in determining employees' agility. Portfolio use, during 2.5 year increased agility scores and self-other agreement on agility. Therefore, the portfolio process can be considered a facilitator for agility. Portfolios seem to support employees' adaptation to organizational changes and pro-acting change through continuous feedback, and positively influencing employee's goal setting. The study showed a significant increase of agility performance over time. These findings contribute to the literature on the rationale behind goal-setting and performance. Controlling for the difficulty level of self-set goal influences, the relationship between achievement motivation and performance (Matsui, Okada, & Kakuyama, 1982) and goals predict performance outcomes and satisfaction better than Need for Achievement scores (Latham & Locke, 1991). In particular, setting clear goals in the portfolio enhances desired behaviors to those goals' achievement (DeNisi, 2011) because it connects individual aims with organizational aims. These findings favor the use of development portfolios in enhancing agility among employees, because it allows both the target (the employee) and the assessor (e.g., mentors and peers) to gain insight in the underlying processes involved in expressing agility behaviors. Making the process to achieve agility goals visible by means of the portfolio, improves self-other agreement on employees' agility behavior.

Implications for future research. Since this research has been pioneering in showing the entire set of eight grouped variables influencing employee agility, other studies corroborating the findings shown above are needed. In particular, future research will be asked to overcome the main limitations which have been identified in the four chapters, namely using alternative measures to identify other variables which are likely to predict or be correlated with agility (e.g. the "Big Five"), recruiting participants from different kinds of organizations (and countries) and change contexts to make findings more generalizable by controlling for possible sampling bias, and considering different designs (for example comparing an intervention using a portfolio with a no intervention control group) to analyze the predictive/causal role of each variable in the model.

Practical implications. Some practical applications of the findings in this thesis are summarized in Table 6.1 and 6.2. In Table 6.1, recommendations for employees are listed. Similarly, in Table 6.2, recommendations for employers are presented.

Table 6.1. Some practical applications of the findings in this dissertation: recommendations for employees

Based on the four studies, we formulate a *number of recommendations for employees:*

1. Be aware that others' insights regarding your own agility behavior can help to increase the correspondence between your self-assessed and other-assessed agility.
2. Be aware of your own adaptive (reactive) and proactive agility.
3. Be aware of the fact that not every motive is equally visible to others. One's power motive is more visible than the achievement motive and the relation motive.
4. Keep a portfolio and ask feedback about the degree to which your agility goals are met.
5. Be aware of the difference in resistance against change in situations with an unplanned change and situations with a planned change. In an unplanned change context, your own feeling about the change plays a role. In a planned change context, your own cognitive resistance against change plays a role in the relation between your trust in your organization and your agile behavior.

Table 6.2. Some practical applications of the findings in this dissertation: recommendations for employers

Based on the four studies, we formulate a number of recommendations *for employees:*

1. Assess employees in terms of their change motive and achievement motive to predict their agility.
2. The organization should decide whether proactive agility, adaptive agility or both are required from their employees. Based on that decision it can be determined which kind of agility of employees (adaptive, proactive or both) should be assessed.
3. Be aware of the chance that discrepancies in motives and needs will occur as assessed by employees themselves and as assessed by their colleagues.
4. Create a portfolio with agility goals together with the employee. The portfolio will probably increase the agility of the employee. It seems that feedback, present in the creation process and in the portfolio product (through the action plan) plays a crucial role. Feedback will further increase the correspondence between one's self-image and the image formed by the employee's colleagues.
5. Pay attention to employees' trust in the organization and their potential resistance against organizational change.

SAMENVATTING

Proactive and adaptive agility among employees
The relationship with personal and situational factors

Proactieve en adaptieve wendbaarheid van medewerkers
De relatie met persoonlijke en situationele factoren

Introductie

In de arbeids- en organisatiepsychologie staat het begrip *agility*, ofwel wendbaarheid, sterk in de belangstelling (Alavi, Wahab, Muhamad, & Shirani, 2014; Hosein & Yousefi, 2012; Mooghali, Ghorbani, & Emami, 2016; Pulakos, 2002; Sherehiy, 2008). Al in 1999 ontwikkelden Harvey, Koubek en Chin (1999) een medewerkerswendbaarheidsmodel. Zij benadrukten hierin de rol van interne persoonlijke factoren, zoals persoonlijkheid, en externe omgevingsfactoren, zoals werkdruk. Chonko en Jones (2005) onderscheidden binnen het concept wendbaarheid twee componenten: een adaptieve en een proactieve component. Adaptieve wendbaarheid heeft betrekking op de aanpassing van werknemers aan een veranderende context. Proactieve wendbaarheid heeft betrekking op het zelf actief op zoek gaan naar veranderingen of zelf vernieuwingen initiëren.

Tot op heden is er voornamelijk onderzoek gedaan naar de wendbaarheid van een organisatie, maar daar hangt onlosmakelijk mee samen dat er meer inzicht nodig is in de wendbaarheid van medewerkers. Voor de personeelspsychologie is het relevant om na te gaan wat de determinanten van de wendbaarheid van medewerkers zijn (zowel binnen de persoon als in zijn of haar omgeving). Die kennis is nodig om ook de mate van hun wendbaarheid beter te kunnen voorspellen. De omgeving van organisaties verandert namelijk steeds sneller, waardoor de druk op medewerkers en organisaties om zich aan de veranderingen aan te passen, op de veranderingen te anticiperen en zelf veranderingen te initiëren verder toeneemt.

Onderwerp van onderzoek

Het onderzoek in dit proefschrift was dan ook gericht op de volgende vraag: Welke factoren dragen bij aan de wendbaarheid van medewerkers? Ten aanzien van de factoren die daarbij een rol kunnen spelen is het van belang om naast interne factoren (factoren binnen de persoon) ook externe factoren (factoren in de omgeving) te onderscheiden (Harvey et al., 1999).

De *interne factoren* die een rol spelen bij de wendbaarheid van medewerkers betreffen: a) de motieven (behoeften) van medewerkers; b) hun bereidheid (gedragsintentie/neiging) tot veranderen (Metselaar, 1997); en c) hun weerstand (attitude/opvatting) tegen verandering (Oreg, 2006). Bereidheid en weerstand worden in deze dissertatie in navolging van Paul, Van Peet en Reezigt (2012) opgevat als elkaars spiegelbeeld. Met andere woorden, het gaat om twee begrippen die inhoudelijk elkaars tegenpolen vormen op een continuüm. Daarbij verwijst bereidheid naar een gedrags*intentie*, en weerstand naar een *attitude* (Bouckenooghe,

2010). We onderzochten de aloude behoeften die McClelland (1985) onderscheidde, te weten het prestatiemotief ('*Need for Achievement*'), het machtsmotief ('*Need for Power*') en het verwantschapsmotief ('*Need for Affiliation*') en vulden deze aan met het verandermotief ('*Need for Change*') van Murray (1938). Het concept bereidheid tot veranderen is een gedragsintentie die bestaat uit vier componenten (Metselaar, 1997): 1) waargenomen gevolgen voor het eigen werk (bijvoorbeeld de mogelijkheden om het werk naar eigen inzicht uit te mogen voeren), 2) emoties over de verandering (bijvoorbeeld het veranderingsproces als uitdaging ervaren), 3) de waargenomen toegevoegde waarde van de verandering voor de organisatie (bijvoorbeeld de slagkracht van de organisatie op de markt), en 4) de cognitieve commitment aan de verandering (bijvoorbeeld de ervaren betrokkenheid bij het veranderingsproces). Het concept weerstand tegen verandering is een attitude, die bestaat uit een affectieve, een gedragsmatige en een cognitieve component (Oreg, 2006). De affectieve component verwijst naar de gevoelens die iemand heeft over de verandering, zoals angst voor een verandering. De gedragsmatige component weerspiegelt het oordeel van iemand over de verandering, die gebaseerd is op ervaringen met eerdere veranderingen, zoals bezwaren die gesignaleerd zijn bij eerder meegemaakte veranderingen. De cognitieve component verwijst naar de overtuiging en kennis die iemand heeft ten aanzien van de verandering, zoals de gedachte dat de verandering het eigen werk moeilijker zou maken.

De *externe factoren* die een rol spelen bij de wendbaarheid van medewerkers betreffen: a) de veranderingscontext, b) het vertrouwen in de organisatie en de externe consequenties, c) (externe) wendbaarheidsdoelen van de medewerker en d) feedback van anderen over de waargenomen wendbaarheid. De veranderingscontext kan een geplande en een ongeplande omgeving betreffen (McNamara, 2006). Een geplande veranderingscontext is een omgeving waarin voortdurend veranderingen plaatsvinden. In deze context wordt gestimuleerd dat medewerkers zelf ook veranderingen initiëren, bijvoorbeeld door strategisch en proactief te anticiperen. Een ongeplande veranderingscontext is een omgeving waarin onverwachts een verandering plaatsvindt waaraan medewerkers zich vervolgens moeten aanpassen, bijvoorbeeld een noodzakelijke organisatorische reactie op de omgeving. Daarnaast is het belangrijk om te weten of medewerkers vertrouwen hebben in hun organisatie (Zayim & Kondakci, 2014). Al in eerder empirisch onderzoek (Van den Heuvel, 2013) werd gevonden dat het vertrouwen in de eigen organisatie een significant negatieve relatie heeft met weerstand tegen de verandering. Wij hebben onderzocht of vertrouwen in de organisatie via positieve gedachten (minder weerstand tegen de verandering) zorgt voor wendbaarder gedrag bij medewerkers. Met behulp van een

portfolio (hulpmiddel om de eigen professionele ontwikkeling zichtbaar te maken; Kicken et al., 2000) kunnen de wendbaarheidsdoelen van de medewerker zichtbaar gemaakt worden voor anderen en de wendbaarheid van de medewerker vergroot worden. Wendbaarheidsdoelen kunnen betrekking hebben op de volgende facetten van wendbaarheid, te weten vier adaptieve wendbaarheidsfacetten: veerkracht na tegenslagen ('*resilience*'), mate van samenwerken ('*teamwork*'), zich aanpassen aan veranderende situaties ('*coping with change*'), het nemen van daadkrachtige besluiten ('*decisiveness*'), en drie proactieve wendbaarheidsfacetten: lef tonen ('*courage*'), nieuwe manieren implementeren om problematische situaties op te lossen ('*independence*') en zich richten op het leren van nieuwe dingen ('*eagerness to learn*') (Asari, Sohrabib, & Reshadic, 2014; Pulakos Arad, Donovan, & Plamondon, 2000; Sherehiy, 2008). Tevens onderzochten we of er sprake was van oversteenstemming tussen het oordeel van de medewerker zelf en het oordeel van anderen ten aanzien van zijn of haar wendbaarheid (Anseel, Van Yperen, Janssen, & Duyck, 2011).

Vraagstellingen

De volgende vier onderzoeksvragen stonden centraal in dit proefschrift: (1) Wat is het verband tussen de verschillende *behoeften/motieven* en de adaptieve en proactieve wendbaarheid van medewerkers? (2) Hoe hoog is de overeenstemming tussen anderen (ofwel, hoe hoog is de *consensus*) en de overeenstemming tussen het zelfbeeld en het beeld gepercipieerd door anderen (ofwel, hoe hoog is de *correspondentie*) bij het beoordelen van de motieven van medewerkers? (3) Wat is de samenhang tussen de mate waarin medewerkers *vertrouwen* hebben in de organisatie in een *geplande* en een *ongeplande organisatiecontext* met hun adaptieve en proactieve wendbaarheid? en (4) Kan een *portfolio* (met daarin opgenomen: eigen wendbaarheidsdoelen, een actieplan, bewijslast over de progressie in de stappen in de richting van de wendbaarheidsdoelen, en reflectie op de feedbackmomenten met anderen over de stappen in de richting van de wendbaarheidsdoelen) de wendbaarheid van medewerkers vergroten en de correspondentie over hun wendbaarheid verhogen? Deze vraagstellingen worden respectievelijk in vier empirische onderzoeken bestudeerd en beantwoord, zoals hieronder wordt beschreven (zie ook Figuur S.1).

Samenvatting van de vier empirische onderzoeken

Het doel van het eerste empirische onderzoek (hoofdstuk 2) getiteld **'The mediating role of willingness to change in the relationship of employees'** Need for Change, Need for Achievement, Need for Power, Need for Affiliation and agility' was om

onder medewerkers het verband tussen werkgerelateerde behoeften en wendbaarheid te onderzoeken. Tevens gingen we hierbij de rol na van de *mediator*variabele 'bereidheid tot veranderen'.

Gedrag van medewerkers in organisaties wordt volgens de behoeftentheorie van McClelland (1985) onder meer bepaald door verschillende motieven. Deze motieven zorgen ervoor dat zij gedrag nastreven dat hun voldoening geeft, en dat zij gedrag vermijden dat hun teleurstellingen zou opleveren. In het onderhavige onderzoek richtten we ons op de volgende vier belangrijke werkgerelateerde motieven ofwel *behoeften* (McClelland, 1970; Murray, 1938). Het betreft het verandermotief, het prestatiemotief, het machtsmotief, en het verwantschapsmotief. De vraag was op welke wijze deze behoeften aan wendbaarheid gerelateerd zouden zijn en of bereidheid tot veranderen een mediator zou zijn in deze relatie. Medewerkers met een sterk *verandermotief* hebben de behoefte om proactief veranderingen na te streven. Individuen die gedreven worden door een sterk *prestatiemotief* zullen zich vooral goed voelen wanneer ze doelgericht te werk kunnen gaan en moeilijke doelen kunnen bereiken. Mensen met een sterk *machtsmotief* halen hun voldoening vooral uit acties waarmee ze invloed kunnen uitoefenen op anderen. Tenslotte zullen personen die worden gekenmerkt door een sterk *verwantschapsmotief* zich vooral prettig voelen wanneer ze zich in het gezelschap van anderen bevinden en sociale relaties kunnen onderhouden, aangaan of herstellen.

Uit eerder onderzoek is reeds gebleken dat er positieve verbanden bestaan tussen de hierboven genoemde motieven en de 'Big Five' persoonlijkheidstrekken (extraversie, openheid, consciëntieusheid, vriendelijkheid en neuroticisme) (Sanz, Gill, Garcia-Vera, & Barrasa, 2008) en tussen het prestatiemotief en werkprestaties (Engeser & Langens, 2010; Jex & Britt, 2008). We benadrukten in ons onderzoek de proactieve component van medewerkerswendbaarheid omdat we verwachtten dat behoeften die van binnenuit komen met name impact hebben op het zelf initiëren van veranderingen.

De data werden verzameld onder 100 medewerkers bij een grote dienstverlenende organisatie met behulp van een online vragenlijst, die bestond uit metingen van hun behoeften, wendbaarheid (zelfbeoordeling en beoordeling door andere collega's), en hun bereidheid om te veranderen. We toonden aan dat er een positief verband is tussen elk van de vier motieven enerzijds en wendbaarheid anderzijds. Daarbij bleek dat er een directe relatie is tussen het verandermotief en proactieve wendbaarheid (zelfbeoordeeld), maar niet tussen het verandermotief en adaptieve wendbaarheid. Het verandermotief en proactieve wendbaarheid (zelfbeoordeeld) werden gedeeltelijk gemedieerd door de component 'emoties' van

bereidheid tot veranderen. Ook bleek dat het prestatiemotief een directe relatie had met proactieve wendbaarheid (zelfbeoordeeld), maar niet met adaptieve wendbaarheid. Verder bleek de relatie tussen het machtsmotief en adaptieve wendbaarheid (zelfbeoordeeld) gemedieerd door de component 'consequenties voor het werk' van bereidheid tot veranderen: medewerkers die hoger scoorden op het machtsmotief bleken positieve gevolgen van een organisatieverandering voor hun eigen werk te ervaren, waardoor vervolgens hun adaptieve wendbaarheid sterker werd. De relatie tussen het machtsmotief en proactieve wendbaarheid (zelfbeoordeeld) werd gemedieerd door de component 'emoties' van bereidheid tot veranderen: medewerkers met een sterker machtsmotief bleken positievere emoties te vertonen ten opzichte van een organisatieverandering, die op hun beurt een proactievere wendbaarheid tot gevolg hadden. Tot slot bleek dat het verwantschapsmotief geen relatie vertoonde met wendbaarheid. Een mogelijke verklaring voor deze laatste bevinding zou kunnen zijn dat dit motief minder relevant is voor het uitvoeren van werkzaamheden c.q. werkprestaties, dat wil zeggen minder gerelateerd is aan het directe werk, dan het prestatie- en machtsmotief (Rosso, Dekas, & Wrzesniewski, 2010).

In tegenstelling tot de bovengenoemde samenhangen tussen de vier behoeften en de *zelf*beoordeelde wendbaarheid werd er geen samenhang gevonden tussen de vier behoeften en de door *anderen* beoordeelde wendbaarheid. Een mogelijke verklaring voor deze laatste bevinding is de vaak lage correlatie die er bestaat tussen zelfbeoordelingen en de door anderen beoordeelde wendbaarheid (Funder, 1995). Het feit dat er verschil is in de samenhang tussen de behoeften en de 'zelfbeoordeelde wendbaarheid' en de samenhang tussen de behoeften en de 'door anderen beoordeelde wendbaarheid' is relevant in de 'Human Resource Management' omgeving. Wanneer het zelfbeeld en het gepercipieerde beeld door de anderen niet overeenkomt, is het lastig voor de medewerker en de anderen in de organisatie om het eens te worden over de mogelijke ontwikkeling die een medewerker moet doormaken om aan te sluiten bij de wendbaarheid(sdoelen) van de organisatie. Al eerder is door Kenny en West (2010) betoogd dat er naast self-assessment gebruik gemaakt moet worden van inzichten van anderen.

Het tweede empirische onderzoek (hoofdstuk 3) is getiteld **'Self-other agreement between employees on their Need for Achievement, Need for Power, and Need for Affiliation: A Social Relations study'**. Dit onderzoek had tot doel om na te gaan of er consensus (overeenstemming tussen anderen) en correspondentie (overeenstemming tussen het zelfbeeld en het beeld gepercipieerd door anderen) is in de waarneming van iemands motieven (McClelland, 1985). Hiervoor werd

een *round-robin design* (Kenny, 1994) gebruikt. Deze methode houdt in dat alle medewerkers in een projectteam zichzelf en alle anderen in dat team beoordelen. Door deze onderzoeksmethode konden we naast de bepaling van consensus en correspondentie, ook nagegaan of er eventueel sprake was van vertekening in de perceptie (projectie, ofwel *assumed similarity*, van anderen). Projectie duidt aan of een medewerker anderen (leden van het projectteam) eigenschappen toedicht die deze zichzelf toedicht. De data werden verzameld in een grote zorginstelling tijdens bijeenkomsten waarbij ter plekke de behoeftenschalen werden ingevuld. In totaal deden 42 projectteams mee. Ieder team bestond uit vier medewerkers. De totale steekproef bestond uit 168 personen, waardoor in het round-robin design 672 beoordelingen beschikbaar waren. Voor de drie motieven van McClelland werd consensus gevonden. Dit betekent dat anderen het in hoge mate met elkaar eens waren over de beoordeling van elk van hun collega's in het projectteam op het prestatie-, machts- en verwantschapsmotief. Correspondentie in de waarneming tussen de persoon zelf en de waarneming door anderen (de *self-other agreement*; Kenny &West, 2010) was er voor het prestatiemotief en het machtsmotief, maar niet voor het verwantschapsmotief. Voor het prestatiemotief trad wel vertekening in de perceptie op. Met andere woorden, medewerkers die zichzelf hoog beoordeelden op prestatiemotivatie gingen ervanuit dat anderen daar ook hoog op scoorden, en medewerkers die laag op dit motief scoorden gingen ervanuit dat anderen daar ook laag op scoorden. Het is vanzelfsprekend dat het prestatiemotief relevant is in werkomgevingen, die immers in principe op het leveren van prestaties gericht zijn. Daarom werd dit motief wellicht bij collega's verondersteld even sterk aanwezig te zijn als bij de medewerkers zelf. Bij het machtsmotief was er sprake van correspondentie, maar niet van vertekening. Het machtsmotief is een veel uitgesprokener en op anderen gericht motief dan de twee andere motieven waardoor daar mogelijk meer eenduidigheid (correspondentie) over is. Medewerkers zijn zich hoogstwaarschijnlijk bewust van het feit dat niet iedereen een machtsmotief heeft, waardoor er minder gemakkelijk vertekening zal kunnen plaatsvinden. Bij het verwantschapsmotief was er geen sprake van correspondentie of vertekening.

Het derde empirische onderzoek (hoofdstuk 4), getiteld **'The relationship between trust in the organization, resistance to change and adaptive and proactive employees' agility in an unplanned and planned change context'**, had tot doel om de samenhang tussen het vertrouwen dat medewerkers in hun organisatie hebben en hun adaptieve en proactieve wendbaarheid te onderzoeken. We verwachtten dat vertrouwen in een organisatie een positief verband zou laten zien met adaptieve en proactieve wendbaarheid, en vroegen ons af of dat verband direct of indirect (via een

mediator) zou plaatsvinden. We bekeken of de componenten van *weerstand tegen verandering* in dit verband een mediërende rol zouden spelen, en onderzochten deze vraag in een organisatiecontext waarin er een *ongeplande* verandering (een onverwachte verandering als gevolg van noodzakelijkheid) plaatsvond en een organisatiecontext waarin er een *geplande* verandering (strategisch anticiperen door te veranderen) plaatsvond.

De data in de *ongeplande* veranderingscontext werden verzameld in een grote financiële instelling. De online vragenlijst bestond uit metingen van wendbaarheid (beoordeeld door de medewerker zelf en door collega's), weerstand tegen de verandering, en vertrouwen in de organisatie. De vragenlijst werd afgenomen onder een steekproef van 90 medewerkers. De data in de *geplande* veranderingscontext werden verzameld in een grote uitzendorganisatie. De online vragenlijst bestond eveneens uit metingen van wendbaarheid (beoordeeld door de medewerker zelf en door collega's), weerstand tegen de verandering, en vertrouwen in de organisatie, en werd afgenomen onder een steekproef van 98 personen. In beide contexten bleek er geen direct verband aanwezig te zijn tussen vertrouwen in de organisatie en wendbaarheid. Wel zagen we de volgende indirecte effecten in de context waarin er een geplande verandering was en in een context waar een ongeplande verandering speelde. Het onderzoek liet zien dat weerstand tegen verandering (de *affectieve component*) in een *ongeplande verandering* een mediërende rol speelde tussen vertrouwen in de organisatie en *adaptieve wendbaarheid (zelfbeoordeling)*. Deze bevinding betekent dat medewerkers met meer vertrouwen in hun organisatie minder affectieve weerstand tegen de organisatieverandering bleken te hebben, wat op zijn beurt tot gevolg had dat medewerkers meer adaptief wendbaarheidsgedrag vertoonden. Het onderzoek liet verder zien dat weerstand tegen verandering (de *cognitieve component*) in een *geplande verandering* een mediërende rol speelt tussen vertrouwen in de organisatie en *proactieve wendbaarheid (zelfbeoordeling)*. Dit resultaat houdt in dat medewerkers met meer vertrouwen in hun organisatie minder cognitieve weerstand tegen de verandering bleken te hebben, wat op zijn beurt tot gevolg had dat medewerkers meer proactief wendbaarheidsgedrag vertoonden. Deze resultaten wijzen erop dat er in een ongeplande veranderingscontext door middel van vertrouwen in een organisatie voor kan worden gezorgd dat er minder affectieve weerstand tegen verandering is, waardoor medewerkers vervolgens meer adaptief wendbaar gedrag zullen vertonen. In een geplande veranderingscontext kan er door middel van vertrouwen in een organisatie voor worden gezorgd dat er minder cognitieve weerstand tegen verandering is, waardoor mensen vervolgens proactief wendbaar gedrag zullen gaan vertonen.

In het vierde empirische onderzoek (hoofdstuk 5), getiteld **'Using the portfolio to develop agility among employees'**, hebben we ons gericht op het nut van een portfolio in een wendbare organisatie. We onderzochten het nut van het gebruik van een portfolio voor het verhogen van de wendbaarheid van medewerkers en het bereiken van correspondentie tussen de beoordeling door medewerkers zelf en door hun collega's over hun adaptieve en proactieve wendbaarheid. We onderzochten hiertoe gedurende 2,5 jaar 32 medewerkers uit een grote zorginstelling. Zij hielden tijdens deze periode elk een portfolio bij waarin ieder twee eigen wendbaarheidsdoelen nastreefde. Deze doelen waren ontleend aan Asari et al. (2014), Mooghali, Ghorbani, & Emami (2016), Pulakos et al. (2000), en Sherehiy (2008). Iedere medewerker kon een van de volgende vier adaptieve wendbaarheidsdoelen kiezen: het versterken van de eigen veerkracht na tegenslagen, meer samenwerken, zich aanpassen aan veranderende situaties, of het nemen van daadkrachtige besluiten. Bovendien kon iedere medewerker een van de volgende drie proactieve wendbaarheidsdoelen kiezen: lef vertonen, nieuwe manieren gebruiken om problemen op te lossen, of zich richten op het leren van nieuwe dingen. Het portfolio was erop gericht de medewerkers inzicht te geven in de eigen sterktes en zwaktes ten aanzien van deze doelen. Ook beoogde het portfolio inzicht te bevorderen in het verschil tussen de huidige en de gewenste wendbaarheidsprestatie (Kicken, Brand-Gruwel, Van Merriënboer, & Slot, 2008). De medewerkers ontvingen tijdens de 2,5 jaar zeer regelmatig feedback van collega's en mentoren over de voorgang ten aanzien van het bereiken van hun wendbaarheidsdoelen, en ze stelden meerdere actieplannen op om deze doelen te bereiken. Ze verzamelden bewijsmateriaal voor hun progressie in het behalen van de wendbaarheidsdoelen. De resultaten van deze studie gaven aan dat het portfolio een rol kan spelen in het vergroten van hun (zelfbeoordeelde en door anderen beoordeelde) wendbaarheid. Het stellen van specifieke, meetbare, acceptabele, realistische en tijdgebonden (SMART) wendbaarheidsdoelen in een portfolio bracht een significante gedragsverandering teweeg in de richting van de door hen gestelde doelen. Een voorbeeld hiervan is een medewerker die structureel ieder werkoverleg nieuwe kennis ging delen met zijn collega's, waardoor er geanticipeerd kon worden op organisatieveranderingen en waardoor hij zelf nieuwe markten ging aanboren. Bovendien lieten de resultaten zien dat het oordeel over de wendbaarheid van de medewerkers, zoals gegeven door hen zelf en door hun collega's, meer overeen ging stemmen in de loop van de 2,5 jaar. Kortom, deze studie liet zien dat het portfolio een mogelijk hulpmiddel is om wendbaarheid van medewerkers te vergroten. Tevens bleek dat de correspondentie (over de beoordeling van iemands wendbaarheid) kan worden verhoogd met behulp van het portfolio.

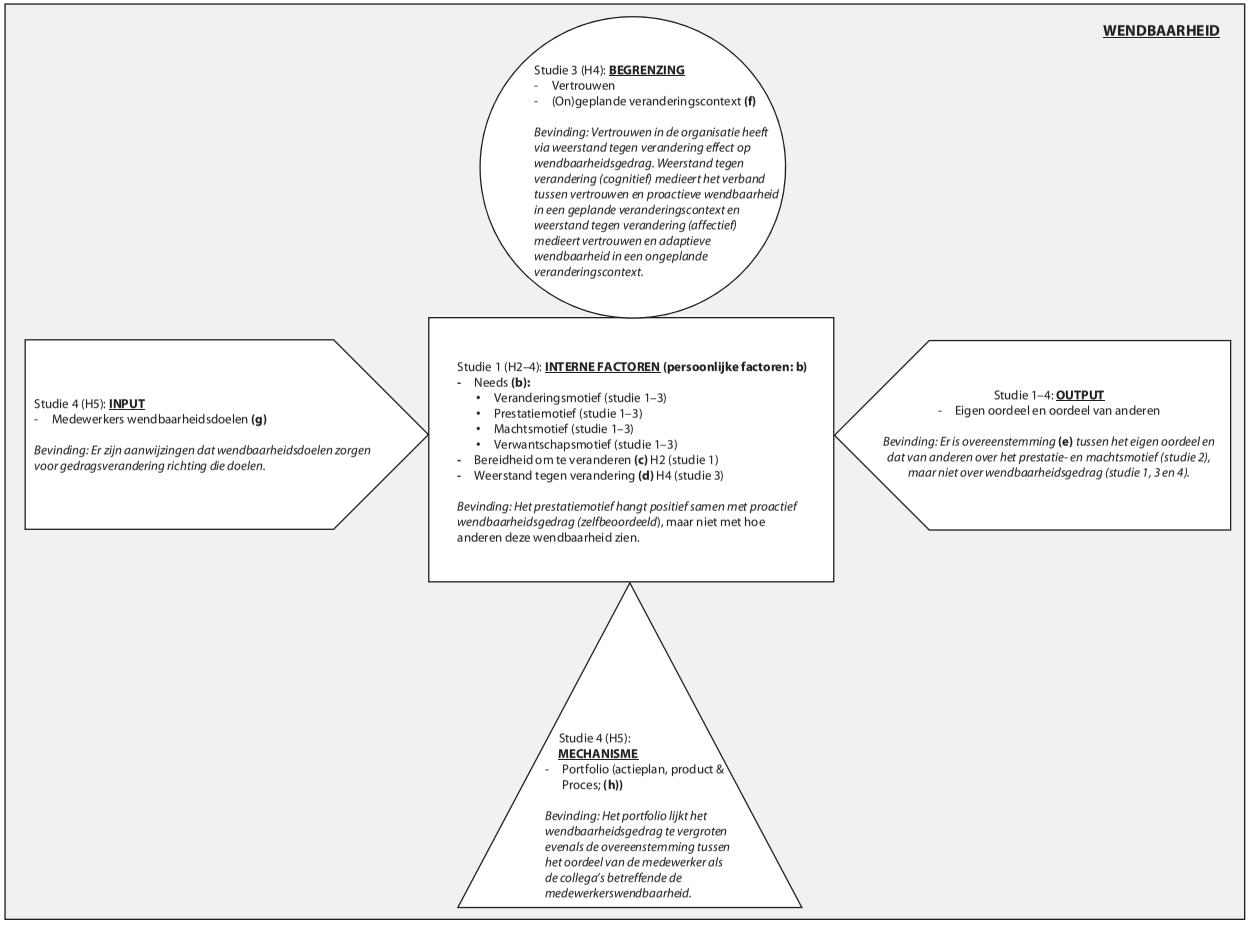
Praktische implicaties. De toepassingen van de bevindingen van dit proefschrift in de praktijk staan hieronder weergegeven. Daarbij maken we onderscheid tussen implicaties voor medewerkers en werkgevers.

Op basis van de bevindingen zijn de *belangrijkste aanbevelingen voor medewerkers:*

1. Wees u ervan bewust dat de inzichten van anderen ten aanzien van uw eigen wendbaarheidsgedrag kunnen helpen om de correspondentie tussen uw eigen oordeel en het oordeel van die anderen over uw wendbaarheidsgedrag te vergroten.
2. Wees u bewust van uw eigen adaptieve (reactieve) en proactieve wendbaarheid. Ten behoeve van inzetbaarheid binnen de organisatie is aansluiting tussen de eigen wendbaarheid en die van de organisatie noodzakelijk.
3. Wees u bewust van het feit dat niet ieder motief even zichtbaar is voor anderen. Het machtsmotief is zichtbaarder dan het prestatiemotief en het verwantschapsmotief.
4. Houd een portfolio bij en vraag feedback over de mate waarin de eigen wendbaarheidsdoelen zijn behaald.
5. Wees u bewust van het verschil in weerstand binnen een ongeplande en een geplande veranderingscontext. In een ongeplande veranderingscontext speelt de eigen emotie over de verandering een rol. In een geplande veranderingscontext speelt juist de eigen cognitieve weerstand tegen de verandering een rol in het verband tussen het vertrouwen in de eigen organisatie en een wendbare opstelling.

Op basis van de bevindingen zijn *de belangrijkste aanbevelingen voor werkgevers:*

1. Beoordeel medewerkers op hun verandermotief en hun prestatiemotief om hun wendbaarheid te voorspellen.
2. De organisatie dient zich af te vragen (bij selectie) of proactieve wendbaarheid, adaptieve wendbaarheid of beide wordt verwacht van de medewerkers om te bepalen op welk type wendbaarheid de medewerkers beoordeeld worden.
3. Wees u bewust van de kans op discrepanties in de beoordeling van motieven c.q. behoeften en wendbaarheid tussen het oordeel van de medewerker zelf en het oordeel over de medewerker door anderen.
4. Stel samen met de medewerker wendbaarheidsdoelen op in een portfolio. Het portfolio zorgt ervoor dat de wendbaarheid van de medewerker toeneemt. Het lijkt er namelijk op dat feedback hierbij een cruciale rol speelt, onder andere door het portfolioproces (met feedback) en het portfolioproduct (de uitvoering van het actieplan). Door feedback wordt bovendien de correspondentie tussen het zelfbeeld van de medewerker en het beeld gevormd door collega's verhoogd.
5. Besteed aandacht aan het vertrouwen dat medewerkers hebben in de organisatie en hun mogelijke weerstand tegen organisatieverandering.



Figuur S.1. Overzicht resultaten van de studies uit deze dissertatie.

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Sandra Doeze Jager,
14 december 2017

ABOUT THE AUTHOR

Curriculum Vitae
Portfolio

CURRICULUM VITAE

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PORTFOLIO

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Doeze Jager-van Vliet, S. B., Born, M. Ph., & Van der Molen, H. T. (2017). Using the portfolio to develop agility among employees. *Human Resources Development Quarterly*.

Doeze Jager-van Vliet, S. B., Born, M. Ph., & Van der Molen, H. T. (2017). De relatie tussen behoeften en wendbaarheid van medewerkers: De mediërende rol van bereidheid tot veranderen. *Gedrag en Organisatie*.

Presentations

Doeze Jager-van Vliet, S. B. (2014, 20 November). SRM Data-analysis "Self-other agreement between employees on their Need for Achievement, Need for Power, and Need for Affiliation: A social relations study" with Dr. D. C. Kenny. Erasmus University Rotterdam.

Conferences attended

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In work and organizational psychology, the notion of *agility*, that is the capability to adapt, presently is receiving strong interest. Already at the end of the last century Harvey, Koubek and Chin worked towards a model for employee agility. They emphasized the role of internal (personal) factors, such as personality, and external (situational) factors, such as work pressure. Chonko and Jones distinguished two components within the notion of agility: an adaptive and a proactive component. Adaptive agility relates to adapting to a changing organizational context. Proactive agility relates to actively looking for changes or initiating innovation in one's organization.

The following four research questions are central to this thesis: (1) What is the relation between different *needs/motives* of employees and their adaptive and proactive agility; (2) How high is the agreement between others (i.e., the *consensus*), and the agreement between one's self-image and the image as perceived by others (i.e., the correspondence) in judging the motives of employees; (3) What is the relation between the degree to which employees *trust* their organization in a planned change (strategic anticipation) and in an unplanned change (sudden change, caused by necessity) and their adaptive and proactive agility; and (4) Can a *portfolio* (containing: one's own agility goals, a plan of action, proof of the progression in the steps in the direction of the agility targets, and reflection during feedback moments with others on the steps in the direction of the agility targets) increase the agility of employees and increase the self-other correspondence on their agility? These research questions are studied and answered in four subsequent empirical studies.

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