Working Apart Together (WAT Relationship)

New Ways of Working and organizational commitment and job satisfaction, and the moderating effects of employee territoriality, task dependency and leadership support

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Abstract

New Ways of Working (NWW) are general practice in today's business life. NWW ask for flexibility from both the employer and the employee with all the consequences that entails. Despite the positive evaluations from organizations and media of NWW, researchers have seriously questioned the effects of this relatively new phenomenon on individuals, teams and organizations. This master thesis presents the results of a field study on the relationship between NWW and organizational commitment and job satisfaction, and the (potentially) moderating effects of employee territoriality, task dependency and leadership support. This study describes NWW as an umbrella concept of time and place independent ways of working which covers various aspects: flexible working hours, flexible workplaces in- and outside the office, and the use of advanced information and communication media. Almost all relationships between the NWW on the one hand, and organizational commitment and job satisfaction on the other hand, were expected to be positive. Only teleworking was expected to correlate negatively with organizational commitment. The three moderators were expected to have positive effects on the studied relationships. Through an online questionnaire, 275 participants shared their experiences with NWW. After using correlation and multiple regression analyses, the results showed that various aspects of NWW, e.g. flexible workplaces, indeed had a significant positive relationship with job satisfaction and organizational commitment. Employee territoriality and leadership support strengthened the studied relationships.

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1. Introduction

New Ways of Working (NWW) are well and truly a phenomenon of the contemporary business world. Nationally as well as internationally, working everywhere at anytime is paving the way in society. Especially among knowledge workers it is becoming general practice. A new design and new structure of the way of working is one of the answers of organizations to the changing market and changing needs of employees (Lim & Teo, 2000). Flexible timing of work, flexible workplaces in- or outside the office and various communication media are all aspects of NWW. Like Bijl (2007, 2009) and Baane, Houtkamp, and Knotter (2010), Ten Brummelhuis, Bakker, Hetland, and Keulemans, (2012) define NWW as a work design in which employees can control the timing and place of their work, while being supported by electronic communication. Often, New Ways of Working have been applauded; it is assumed that they would lead to more efficient work processes, while simultaneously reducing organizational costs (Rennecker & Godwin, 2005). However, less is known about the consequences on employee attitudes and well-being, like fatigue, dissatisfaction with the work environment and the work-family balance. Although the advantages of NWW are assumed to outweigh the disadvantages, the presence of possible drawbacks should not be ignored. This study focuses on the relationship between NWW on the one hand, and organizational commitment and job satisfaction of employees on the other hand. Besides concentrating on these main effects, this study focuses on the moderating effects of employee territoriality, task dependency and leadership support. Through field research, the question *'Do employee territoriality, task dependency and leadership support moderate the relationship between New Ways of Working and organizational commitment and job*

satisfaction of employees?' will be answered. Earlier studies enabled me to make predictions of possible research outcomes of this study. This field research is conducted through an online questionnaire which includes items that cover the research question. Those will be further discussed under methodologies.

Figure 1 gives an overview of the relationships between the various variables involved in this study. The independent variable 'New Ways of Working' consists of four dimensions which are approached separately. The same applies to the dependent variables, organizational commitment and job satisfaction. Although the main focus will be on organizational commitment as the dependent variable, both dependent variables will be discussed when relationships have empirical evidence. The three moderators refer to different domains. Employee territoriality relates to the personal domain which involves the extent to which employees let others notice that a particular workplace is reserved. Task dependency refers to the task and interpersonal domain between individuals and their colleagues and has to do with the degree to which individuals depend on their colleagues to effectively fulfill their tasks. Leadership support involves the support and facilitation by managers to their employees and relates to the leadership and interpersonal domain.

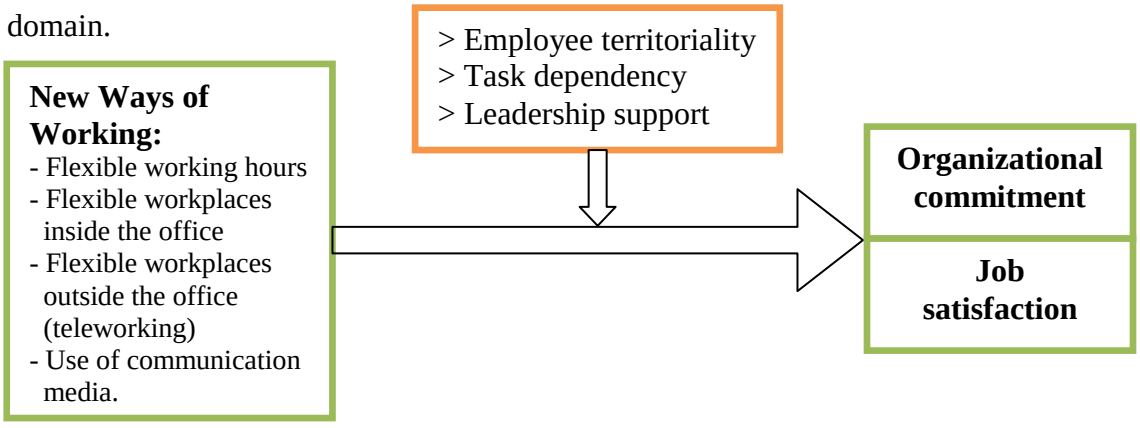

Figure 1. Model showing the direct relationships between the various aspects of New Ways of Working and organizational commitment and job satisfaction of employees, and the moderating effect(s) of employee territoriality, task dependency and leadership support.

Theoretical background and hypotheses

New Ways of Working. As aforementioned, NWW consist of various aspects; location of work, hours of working and technological support. With location of work is meant that people can work at the office or outside the office. In this study, teleworking and telecommuting are synonyms and refer to working outside the office.

Different views exist on which aspects of NWW affect employee commitment and job satisfaction. De Hauw (2014), postdoctoral researcher at Vlerick Business School, argues that employees often see the chance to work with flexible arrangements (more teleworking, flexible working hours) as a signal that the employer cares about their well-being, which gives them a more positive view about their employer and makes them more committed to and motivated in their work. According to Baane et al. (2010) giving this flexibility is about 'individualization'. Individualization gives employees the possibility to increasingly decide how often, how long, where and when they want to work. This enables employer and employee to make appointments about working conditions and results together. People value this flexibility in work location, in- and outside the office (teleworking), it positively affects their level of job satisfaction (Gajendran and Harrison, 2007; Morganson, Major & Oborn, 2010).

Despite the value people attach to the flexibility in work location, some people attach more value to a particular workplace than others (Brown , Lawrence, & Robinson, 2005). Therefore, when changing the fixed arrangement of working space into flexible workplaces at the office, creating and maintaining territories that root individuals more firmly in the organization will result in more organizational commitment by employees (Brown, 1987).

In addition, Kelliher and Anderson (2008, 2010) argue that working at flexible hours leads to a higher quality of work and a higher level of job satisfaction. When physical presence disappears (e.g. for teleworkers), the need for virtual connection arises. Katz and Aakhus (2002) state that NWW – through the availability of advanced information and communication technology – improve communication processes between co-workers, such as high pace information sharing and constant connectivity. NWW may particularly boost work engagement as it offers new ways for employees to build interpersonal relationships. New Ways of Working combine the use of flexible work arrangements with electronic availability, whereby connections between employees are guaranteed (Van Dyne, Kossek, & Lobel, 2007; Walther, 1992, 1995). Because employees using smartphone and e-mail are quicker available for coworkers and for longer periods of time (Derks & Bakker, 2010), coworker relationships may even flourish. This is in line with a study comparing computer-mediated versus face-to-face teams by Walther (1995). It was found that relationships were even more positive (e.g. higher affection) in teams using computer-mediated communication. These results suggest that employees have a higher dedication and a stronger drive on days on which they use the communication media offered by NWW, because this guarantees close connections between employees, and satisfies their basic need for belongingness (Baumeister & Leary, 1995). In contrast, Gajendran and Harrison (2007) wrote that the reduction in face-to-face interactions, the lower frequency and richness of communication between telecommuters and other organization members (Daft & Lengel, 1986), and, thus, the diminished social presence (Short, Williams, & Christie, 1976) telecommuters have at work, weakens the interpersonal bonds they have with their

coworkers or supervisors (Golden, 2006; Nardi & Whittaker, 2002). This absence from the office might also affect the organizational commitment of employees negatively. These negative consequences are likely to be especially severe for individuals who work away from their central work location for the majority of their work week (high-intensity telecommuting). Admittedly, technology makes virtual connection possible. Nevertheless, Oeij, Dhondt, Kraan, Vergeer, and Pot (2012) state in their study on workplace innovation (WPI) that the presence of IT to support the work processes did not show to have any relation to employee commitment. The workplace innovation index was measured through 4 subscales: 'autonomy', 'self-directed teamwork', 'internal flexibility' (e.g. flexible working times, multi-functional use of personnel and self rostering) and 'innovation'. Presence of WPI correlated with employee commitment.

The aforementioned arguments lead to the following hypotheses.

Hypothesis 1a: The more employees make use of the possibility to work at flexible hours, the more they will be committed to their organization.

Hypothesis 1b: The higher the number of teleworking days of employees per week, the less they will be committed to their organization.

Hypothesis 1c: The more employees make use of advanced communication media, the more they will be committed to their organization.

Hypothesis 1d: When employees are able to find suitable workplaces at their office, they will report a higher level of organizational commitment.

Hypothesis 2a: The more employees make use of the possibility to work at flexible hours, the higher their level of job satisfaction will be.

Hypothesis 2b: When employees are able to find a suitable workplace at their office, they will report a higher level of job satisfaction.

Hypothesis 2c: The higher the number of teleworking days of employees per week, the higher the level of job satisfaction will be.

In the following paragraphs I propose the expectations I have about the moderating effects of employee territoriality, task dependency and leadership support on the relationship between NWW on the one hand, and job satisfaction and employee commitment to the organization on the other hand.

Employee territoriality. The first moderator I will investigate is the effect of territoriality with regard to physical space. The degree to which individuals behave territorial differs per employee, it relates to the personal domain. Organizations ask for flexibility among employees when introducing New Ways of Working. People will have to disassociate themselves from objects and privileges of status. In this line of thought, fixed desks and offices are history. However, people are creatures of habits (Baane et al., 2010, p. 124). Therefore, certain changes can evoke negative attitudes among employees. People scoring high on psychological ownership will probably show these negative attitudes. According to Brown et al. (2005), people make claims on and defend their control of a variety of (organizational) objects, spaces, roles and relationships. When losing an object, people will lose a part of themselves and this may lead to territoriality. Brown et al. (2005, p. 578) define territoriality as ‘an individual’s behavioral expression of his or her

feelings of ownership toward a physical or social object'. This definition includes behaviors for constructing, communicating, maintaining, and restoring territories around those objects in the organization toward which one feels proprietary attachment (e.g. "This is my office and not yours!").

The current study is interested in territoriality with regard to physical space. Territoriality with regard to physical space has been shown to engender a sense of belonging to social groups (Altman, 1975; Lewis & Sturgill, 1979), which in an organizational context may result in reduced turnover, increased performance and job satisfaction. Baane et al. (2010, p. 124) state that flexible workplaces will be occupied by regular users again, over time. Also, they say that a lack of workplaces can lead to 'deck chair behavior' in which people come to work early in order to secure 'their' workplace. Brown et al. (2005) categorize this as 'power-oriented behavior'. Power-oriented behavior is the relatively common occurrence of individuals who behave territorially over objects that are subjectively or symbolically valuable. This can be a seat at work which someone wants to protect as their own, which results in a sense of emotional indignation or loss if that seat is used by another person. This is simply because of a feeling of belonging to this object. Letting others notice that a particular workplace is reserved, is the type of (power-oriented) territorial behavior this study focuses on. Moreover, people often tend to sit close to people from their own department in the flexible workplaces as this is said to be more practical and pleasant. This is 'control-oriented marking' (Brown et al., 2005). One should constantly be alert about symptoms of 'falling back in old patterns' behavior (Baane et al., 2010, p. 124). However, research shows that a positive consequence of territorial behavior for organizations is its influence on the organizational commitment

and level of satisfaction of individual members who engage in such behavior (Brown et al., 2005). Brown et al. (2005) mention three ways in which territorial behavior will increase the organizational commitment of members who engage in it. First, identity-oriented marking (personalization) will increase the degree to which members identify with and attach to those organizational objects they mark (Brown, 1987). Second, territorial behaviors will increase organizational commitment by creating and maintaining territories that root individuals more firmly in the organization. Behaviors that increase the sense of having a place of one's own will increase the rootedness and the sense of belonging that an individual member has with the organization. Finally, both marking and defending territories often require significant personal (voluntary) investments of time and energy, which can increase the organizational commitment of individuals making such investments (Becker, 1960; Meyer & Allan, 1984; Wallace, 1997).

In the eyes of Brown et al. (2005), territoriality has significant implications for managers and organizations, for example concerning the design and arrangement of physical space in organizations. In the last few decades, many organizations have changed the arrangement of working space while aiming at cost reduction. As Brown et al. (2005) suggest, some costs have often not been entered into the equation, such as a loss of employee commitment, a loss of job satisfaction or the potential increase of conflicts when employees' territories are threatened, lost or nonexistent.

Hypothesis 3a: The (positive) relationship between the possibility to find a suitable workplace at the office and organizational commitment, will be (positively) moderated by the degree of territoriality employees report.

This implies that there is a more positive relationship between the possibility to find a suitable workplace at the office and organizational commitment for employees who report a high degree of territoriality.

Hypothesis 3b: The (positive) relationship between the possibility to find a suitable workplace at the office and job satisfaction, will be (positively) moderated by the degree of territoriality employees report. This implies that there is a more positive relationship between the possibility to find a suitable workplace at the office and job satisfaction for employees who report a high degree of territoriality.

Task dependency. It is widely known that individual autonomy increases with New Ways of Working (Baane et al., 2010; Elsbach, 2003; Gajendran & Harrison, 2007; Standen, 2000). This makes clear and regular communication a key issue in NWW. Langfred (2004) and Orton and Weick (1990) argue that the higher the individual autonomy in a team, the more employees will work independently. They agree that, as a consequence, the need for monitoring and communication will be higher to avoid potential coordination and work process losses. Despite this higher degree of individual autonomy, a situation in which people seem to communicate less with each other, Cabrera, Collins, and Salgado (2006) suggest there is a high level of knowledge sharing when flexworking. A lack of clear instructions and procedures can explain this increase in knowledge sharing (Van Der Kleij, Blok, Aarts, Vos, & Weyers, 2013). This makes people dependent on one another.

In telecommuting, task interdependence reflects the need for communication and coordination between telecommuters and other organizational members (Gajendran & Harrison, 2007). Telecommuting is an alternative work arrangement in which employees perform tasks elsewhere that are normally done in a primary or central workplace (e.g. the office), for at least some portion of their work schedule, using electronic media to interact with others inside and outside the organization (Bailey & Kurland, 2002; Baruch, 2001; Feldman & Gainey, 1997). In this study telecommuting and teleworking are used as synonyms. A high degree of reciprocal interdependence (Thompson, 1967) between telecommuters and their work group members may hamper performance and hinder collaboration, because interactions are mediated by relatively lower bandwidth channels (Bell & Kozlowski, 2002; Bordia, 1997). Over time, these difficulties could also put pressure on the teleworker's interpersonal connections with work group members. However, telecommuting is likely to have relatively favorable outcomes when jobs involve mainly pooled or sequential interdependence (Thompson, 1967). In contrast to reciprocal interdependence in which employees have a two-way connection (cyclical), pooled and sequential interdependence are the looser forms of interdependence (non-cyclical) with less intensive interaction and effective planning (Thompson, 1967).

When depending on others to perform tasks, communicating can be done electronically or via face-to-face interactions. Lee and Kossek (2005) stated that task coordination can be maintained when employees stay connected electronically. According to Baane et al. (2010, p. 125), a minimum of face-to-face interactions can be essential in certain situations. This so called 'physical minimum' depends on the particular project, team or task and is needed for effective cooperation. Especially when conflicts or problems occur,

the problem-solving ability can be hindered by a lack of physical presence. Therefore, clear and regular communication and sufficient contact moments seem to be of crucial importance. The hypotheses related to these issues are as follows:

Hypothesis 4a: Employees who experience a high degree of task dependency will report a higher level of organizational commitment.

Hypothesis 4b: The (negative) relationship between teleworking days per week and organizational commitment, will be (negatively) moderated by the degree of task dependency. This implies that there is a more positive relationship between teleworking days per week and organizational commitment for employees who are highly dependent on their colleagues to fulfill their tasks.

Leadership support. As a final moderating variable, the role of leadership support will be investigated on the relationship between NWW and employee commitment to the organization. Most employees rely on line managers' support, and, therefore, the quality of the relationships between employees and their line manager influences employees' perceptions of HRM practices. This has an impact on their performance (Guest & Conway, 2004; Hutchinson & Purcell, 2003). Employees' satisfaction with HRM practices and employees' assessment of their line managers' leadership behavior were directly related to higher levels of experienced job autonomy and affective commitment, in a study by Purcell and Hutchinson (2007). Moreover, experienced support from their manager develops trust in the workplace, influencing positive employee outcomes

(Whitener, Brodt, Korsgaard, & Werner, 1998; Zhang, Tsui, Song, Li, & Jia, 2008). This was also found in the study by Sardeshmukh, Sharma and Golden (2012): employees who perceived their supervisors as supportive, and who perceived more collegial support and collegial commitment, experienced higher levels of trust resulting in workflow. Peters, Poutsma, van der Heijden, Bakker, and de Bruijn (2014) discussed the necessity of a (new) supportive culture besides the technological changes, for a sustainable success of NWW. For example, a culture focusing on coaching cooperation and collegial commitment. Leadership can play a role in this. Baane et al. (2010, p. 74) describe it as managing from a distance, facilitating, coaching and inspiring employees in NWW. Changing an organizational culture towards more trust and cooperation takes time, and can face resistance, from both employees and managers (Peters et al., 2014). It should be realized, though, that certain (new) working practices, such as teleworking, can undermine the social cohesion or trust relationships in the organization (Kurland & Cooper, 2002; Sardeshmukh et al., 2012). In line with this, Baane et al. (2010, p. 74) mention that it is important that managers pay attention to social cohesion in NWW. They see it as a new, additional task for the managers. An explanation for the reduction of social cohesion might be the reduction of face-to-face interactions. As more people work outside the office and work at flexible hours, the number of face-to-face interactions with coworkers and managers decreases. The reduction in face-to-face interactions, the lower frequency and richness of communication between telecommuters and other organization members (Daft & Lengel, 1986), and, thus, the diminished social presence (Short et al., 1976) of telecommuters weakens the interpersonal bonds they have with their coworkers or supervisors (Golden, 2006; Nardi & Whittaker, 2002). In a meta-

analysis by Gajendran and Harrison (2007), it was found that telecommuter's relationships with their managers and coworkers only suffered from telecommuting when people worked away from their central work location more than 2.5 days a week (high-intensity telecommuting). In the same study it was found that positive relationships existed between working outside the office, job satisfaction and relationships between employees and their managers.

Hypothesis 5a: Employees who have facilitating and coaching managers will feel more committed to the organization.

Hypothesis 5b: Employees who have facilitating and coaching managers will feel more satisfied about their job.

Hypothesis 5c: The (positive) relationship between the possibility to find a suitable workplace at the office and organizational commitment, will be (positively) moderated by the degree of leadership support employees experience. This implies that there is a more positive relationship between the possibility to find a suitable workplace at the office and organizational commitment for employees who have facilitating and coaching managers.

Hypothesis 5d: The (positive) relationship between the extent to which employees use the possibility to work at flexible hours and organizational commitment, will be (positively) moderated by the degree of leadership support employees experience. This implies that there is a more positive

relationship between the extent to which employees use the possibility to work at flexible hours and organizational commitment for employees who have facilitating and coaching managers.

Hypothesis 5e: The (positive) relationship between teleworking days per week and job satisfaction, will be (positively) moderated by the degree of leadership support employees experience. This implies that there is a more positive relationship between teleworking days per week and job satisfaction for employees who have facilitating and coaching managers.

2. Method

In order to test the hypotheses, a field study was conducted at Astellas Leiden, a Japanese pharmaceutical organization that contributes toward improving the health of people around the world through the provision of innovative and reliable pharmaceutical products. Astellas defines NWW as Activity Based Working, meaning that the way one works and the place where one works depends on the activity that needs to be performed. This has a strong link with time and place independent working. For a better understanding of this study I will continue using the term 'New Ways of Working'.

Participants

Astellas Leiden has a workforce of approximately 800 people. The 800 employees work either in the offices or in the laboratories. All of them were asked to participate in this study. Together with a fellow student I conducted a quantitative study by means of an online questionnaire on NWW. The online questionnaire was developed by using Qualtrics software (2015) which can be used for data collection. The questionnaire was translated into English, due to the different nationalities of employees. Of the 800 potential respondents, 339 employees started the questionnaire of whom 275 employees completed the survey. This gave a final response rate of 34.4%. For the reliability of my results I only used the data from the 275 respondents. Among the 275 participants were 57% female and 43% male respondents. On average, respondents were in the age group of 45 – 49 years old. The ratio between payroll and non-payroll was respectively 76% and 24%. This means that approximately three quarters of the participants are on the payroll of Astellas. 80% worked in non-managerial positions and 20% worked in

management positions. As I am not interested in the influence of demographics in my hypotheses, this will be given less attention in my subsequent analyses.

Astellas – Mirai House

In 2012, the employees of Astellas location Leiderdorp moved to the newly designed sustainable building at Bio Science Park Leiden. Astellas Leiden houses offices, laboratories and a Japanese inner garden. Astellas Leiden is also called Mirai House, meaning future house. Its modern design creates a pleasant, open and transparent working environment for Astellas employees, in addition to an agreeable and welcoming environment for their (international) visitors. Employees' voices on the interior of the new building were heard, e.g. on types of workplaces (private/common areas) and color preferences per department. Since its opening, Astellas Leiden works according to the principles of 'activity based working' and 'time and place independent working'. This creates flexibility in how often, how long, where and when employees want to work. At the office side of the building, two departments share a floor. As no one has a fixed workplace, employees of the different departments are mixed in over 'their' floor. This is typical for the work context of Astellas. At Astellas Leiden, all workplaces are flexible and adjusted to the needs of the employees. Besides silence and meeting areas, the restaurant area is employed as a place to work. The restaurant has a double duty, on the one hand it serves as a restaurant, on the other hand it is used as a social meeting point. Both working outside the office and working at flexible hours are allowed but not stimulated by the employer. The main reasons why employees work outside the office are the travel time and distance to the office, the nature of the job and the work-life balance.

Procedure

After the Board of Astellas Leiden had given the green light, the questionnaire was distributed among all employees. The communication manager sent an email with a short description of the study and a link to the online questionnaire. In the introduction of the questionnaire it was mentioned that participation was voluntary and anonymous and that the data would be handled confidentially. Filling out the questionnaire would take approximately 15 minutes. The questionnaire was online for three weeks (10th of June 2015 – 3rd of July 2015), so employees had enough time to fill it out. After one week, a reminder mail was sent to remind and stimulate employees to participate in the research. Also on the day before the survey closure, employees received a reminder mail. The quantitative data that was collected via Qualtrics was analyzed with SPSS statistics 20.0.

Measuring instruments

For the various theoretical constructs, existing and validated statements from previous studies were used. The independent variable was NWW which could be subdivided into four aspects: flexible working hours, flexible workplaces inside the office, flexible workplaces outside the office (teleworking) and the use of communication media. The dependent variables were organizational commitment and job satisfaction. The three moderators were employee territoriality, task dependency and leadership support. The complete questionnaire counted 46 questions, several of which consisted of one or more sub-questions. The first part of the questionnaire paid attention to the four aspects of NWW in the organization. It was followed by questions aimed at measuring the various psychological constructs and the demographic characteristics of the respondents. Several

items together measured a psychological construct, mostly on a 5-point Likert scale. Organizational commitment, job satisfaction, employee territoriality, task dependency and leadership support were of particular interest to me.

In order to verify whether the items measured the various constructs adequately, two types of analyses were performed. Firstly, the items intended to measure a particular construct were subjected to a principal component analysis by means of Varimax rotation. This gave an impression of the dimensionality of the items (Green, Lissitz, & Mulaik, 1977). For some constructs, territoriality and leadership support, not all items loaded on the same component. These scales were reconstructed and reinterpreted, only with the items that loaded on the first component. The second step was the reliability analysis. The Cronbach's alpha of each (reconstructed) scale indicated whether several items together formed a reliable scale. In Appendix 1, the employed items per construct, after Varimax rotation and the reliability analysis, can be found.

New Ways of Working. NWW is an umbrella concept that can be divided into four dimensions. Each dimension was measured through one or several question(s) in the questionnaire. Working at flexible hours was indicated by question 17, "Do you make use of the possibility to determine your own working hours?". Answers varied from "Never" to "Very often" on a 5-point Likert scale. Question 5 was about the possibility to find a suitable flexible workplace at the office: "In general, are you able to find a suitable workplace at the office?" (1 = Never ; 5 = Always). To determine the degree to which people worked outside the office, the answers to question 8 were used, "How many days a week do you (in general) work outside the office?". The final dimension of NWW is the

use of communication media which was measured by question 20, “How often do you use the following devices for your job? mobile phone (no internet), tablet, laptop, smartphone” (1 = No; 5 = Yes, always (including weekends)).

Organizational commitment. The items for assessing organizational commitment came from the 15-item Organizational Commitment Questionnaire (Mowday, Steers, & Porter, 1979). For this study we limited it to 5 items, of which one item was reversed scored. High scores on this measure reflect a strong feeling of organizational commitment by employees to their organization. The questionnaire included items such as “I am proud to tell others that I am part of this organization”, “I think that my values and the organization's values are very similar” and “I feel very little loyalty to this organization”. Cronbach’s alpha for this scale was .82. Participants rated the statements on a scale that ranged from 1 (“Strongly disagree”) to 5 (“Strongly agree”).

Job satisfaction. Job satisfaction was assessed by using five items from Brayfield and Rothe’s index of job satisfaction (1951). Together they formed a reliable scale ($\alpha = .78$). In the questionnaire items like “Most days I am enthusiastic about my work” and “My job is like a hobby to me” were used. Two items were reversed scored, e.g., “I am often bored with my job”. The statements were rated on a scale from 1 (“Strongly disagree”) to 5 (“Strongly agree”).

Territoriality. In his study on territoriality, Brown (2009) discussed four types of territorial behaviors; control–oriented marking, identity–oriented marking, anticipatory

defending and reactionary defending. For his survey he used 23 items. In contrast, in this study only 9 items were used. Respondents were asked to indicate on a 5-point Likert scale to what extent they had engaged in each behavior in the past three months. The response choices ranged from 1 ("Never") to 5 ("Very often"). Cronbach's alpha was low, .50. To make the scale more reliable, a Principal Component Analysis (PCA) was carried out with Varimax rotation. On the basis of this analysis four items loading on the first component were retained. These four items resulted in a reliable scale ($\alpha = .68$). The items explained territoriality in terms of letting others notice that a particular workplace is reserved. Appendix 1 shows the four items that were used.

Task dependency. In this study task dependency was measured with five items from a survey by Van Der Vegt, Emans, & Van De Vliert (2001). The statements were rated by participants on a scale ranging from 1 ("Strongly disagree") to 5 ("Strongly agree"). Cronbach's alpha for this scale was .79. Examples of items are: "I have to work closely with my colleagues to do my work properly" and "I depend on my colleagues for the completion of my work". One item, i.e., "I have a one-person job; I rarely have to check or work with others", was reversed scored.

Leadership support. This construct was measured by a combination of items from various earlier conducted studies on leadership (Baane et al., 2010; Castens, 2004). For this study, I used 8 items to measure leadership support with a scale ranging from 1 ("Strongly disagree") to 5 ("Strongly agree") ($\alpha = .89$). One item was removed due to a low corrected item-total correlation of .154. By removing this item, Cronbach's alpha

became .91. The 7 remaining items measured the degree to which employees experienced a supporting, trustful and open relationship with their manager. The questionnaire included items as: “I experience my manager as a coach” and “My manager and I really trust each other in our work”.

Analyses

The statistical analyses were performed by using Pearson’s correlation and multiple regression analyses. Pearson’s correlation measures linear correlations between two continuous variables X and Y, e.g. the relationship between the number of teleworking days and organizational commitment. Correlations can be positive or negative and are indicated by strength according to Cohen (1988) : $r < .20$ (weak), $r = .20 - .50$ (moderate), $r > .50$ (strong). Multiple regression analysis can be used to examine the combined effect of various independent variables (predictors) on one dependent variable (the criterion). In addition, hierarchical regression analysis can be employed to determine whether the relationship between two variables (X and Y) is moderated by the value of a third variable (Dawson, 2014). The standard method for this entails the addition of an (linear) interaction term in a multiple regression model. So in SPSS statistics 20.0 main effects as well as interactions effects were put in the system after having standardized the predictor variables to Z-scores. For the measurement of each relationship, the independent variable (predictor 1) was put in block 1, the moderator (predictor 2) in block 2 and the interaction variables in block 3. Differences in the magnitude of the square of the multiple regression coefficient (R^2) indicate the amount of additional variance explained in the dependent variable.

3. Results

Table 1, on the next page, gives a general overview of the means, standard deviations of and correlations between the four indicators of NWW and the psychological constructs mentioned before. Each scale had a range from 1 to 5. Besides, the collected data from the questions on the four dimensions of New Ways of Working, the measurement of the psychological constructs was used to check if the results corroborated the earlier mentioned hypotheses. The plots in *Figure 2*, *Figure 3* and *Figure 4* were generated using the interactive program on the website from Dawson (2014). The program helped to interpret two-way interaction effects by entering the unstandardized regression coefficients and the standard deviations of the variables in a worksheet. The figures were created in the worksheet.

Table 1. Means, standard deviations and correlations between study variables (*N* = 275)

	M	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
1. Flexible working hours	3.18	1.18	*1*								
2. Flexible workplaces inside the office	4.25	.70	*.025*	*1*							
3. Flexible workplaces outside the office (teleworking)	1.29	1.21	*.366****	*-.098*	*1*						
4. The use of advanced communication media	2.60	1.14	*.211****	*-.251****	*.191***	*1*					
5. Organizational commitment	3.86	.65	*.114*	*.200***	*-.096*	*.166***	*1*				
6. Job satisfaction	3.89	.58	*.218****	*.203***	*.029*	*.194***	*.563****	*1*			
7. Task dependency	3.94	.61	*.024*	*-.069*	*-.012*	*.187***	*.178***	*.194***	*1*		
8. Employee territoriality	1.22	.43	*-.076*	*-.096*	*-.060*	*.032*	*-.020*	*-.016*	*-.039*	*1*	
9. Leadership support	3.64	.79	*.123**	*-.159***	*-.065*	*.120**	*.416****	*.449****	*.192***	*-.045*	*1*

*Correlation is significant at *p < .05, **p < .01, ***p < .001 (two-tailed).*

New Ways of Working, organizational commitment and job satisfaction

The first four hypotheses looked at the correlations between the various aspects of new ways of working and organizational commitment. Hypothesis 1a: "*The more employees make use of the possibility to work at flexible hours, the more they will be committed to their organization.*" should be rejected as the variables do not correlate significantly with one another (r = .114, ns). Also hypothesis 1b, "*The higher the number of teleworking days of employees per week, the less they will be committed to their organization.*" should be rejected due to the non-significant negative correlation between teleworking days and organizational commitment (r = -.096, ns). However, the use of communication media did have a weak significant positive relationship with organizational commitment (r = .166, p = .003). This means that hypothesis 1c can be accepted which stated that the use of communication media for work purposes would positively be associated with organizational commitment. Respondents confirmed hypothesis 1d, "*When employees are able to find suitable workplaces at their office, they will report a higher level of organizational commitment".* The results showed a weak positive correlation between the possibility to find suitable workplaces at the office and organizational commitment (r = .200, p = .001).

Hypotheses 2a, 2b and 2c focused on the correlations between the various aspects of new ways of working and job satisfaction. Hypothesis 2a, "*The more employees make use of the possibility to work at flexible hours, the higher their level of job satisfaction will be",* can be accepted. There was a moderate positive relationship between the degree to which people make use of the possibility to work at flexible hours and job satisfaction (r = .218, p < .001). Also the variables mentioned in hypothesis 2b had a significant moderate

positive correlation. It explained the positive relationship between the possibility to find suitable workplaces at the office and job satisfaction (r = .203, p = .001). Hypothesis 2c: *"The higher the number of teleworking days of employees per week, the higher the level of job satisfaction will be"* must be rejected because no significant relationship was found (r = .029, ns).

Employee territoriality, organizational commitment and job satisfaction

As mentioned before, this study approached territorial behavior in terms of letting others notice that a particular workplace is reserved. This is particularly interesting when offices only consist of flexible workplaces and are not equipped with fixed (individual) workplaces. Hypotheses 3a and 3b looked at the interaction effect between the possibility to find a suitable workplace at the office and employee territoriality, in relation to organizational commitment and job satisfaction.

Hypothesis 3a: "*The (positive) relationship between the possibility to find a suitable workplace at the office and organizational commitment, will be (positively) moderated by the degree of territoriality employees report*", can be accepted. The possibility to find a suitable workplace at the office explained 4% of the variance in organizational commitment. No variance in organizational commitment was explained by territoriality. The variance explained in organizational commitment increased 1.7% by adding the product of the possibility to find a suitable workplace and territoriality. This addition is significant, $F(1, 271) = 4.81$, p = .029 (B = .08, *SE (B)* = .04, t = 2.19).

Figure 2 shows that the relationship between the possibility to find a suitable workplace at the office and organizational commitment is positive, especially for those who show signs of territorial behavior (dotted line). So, territoriality strengthened the positive relationship between the availability of suitable flexible workplaces at the office and organizational commitment.

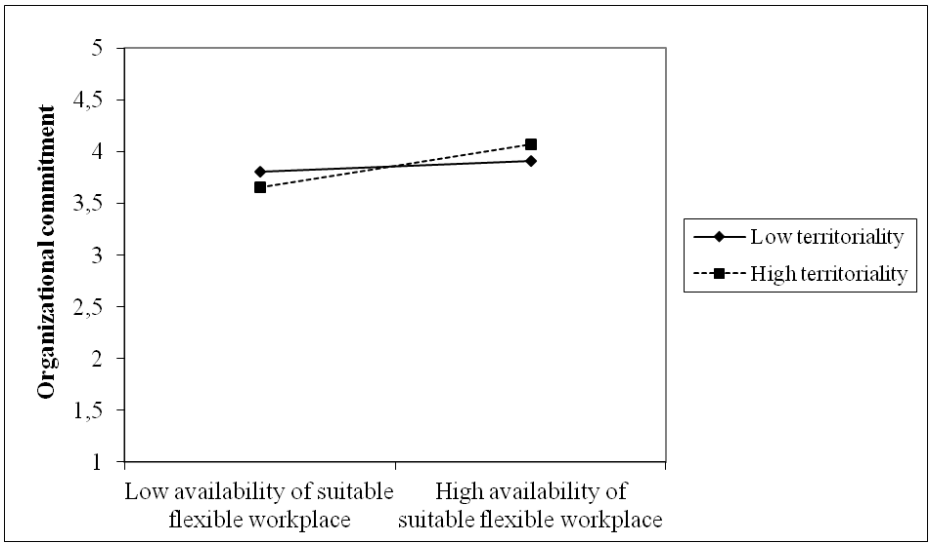

Figure 2. Moderating effect of territoriality on the relationship between the possibility to find a suitable workplace at the office and organizational commitment.

Hypothesis 3b predicted that there would be a more positive relationship between the possibility to find a suitable workplace at the office and job satisfaction for employees who report a high degree of territoriality. The results supported this expectation. The possibility to find a suitable workplace at the office explained 4.1% of the variance in job satisfaction. Also in job satisfaction, no variance was explained by territoriality. The interaction effect between the possibility to find suitable workplaces and territoriality increased the variance explained in job satisfaction by 1.7%. This difference increment in

explained variance was significant, $F(1, 271) = 4.83$, $p = .029$ ($B = .07$, $SE\ (B) = .03$, $t = 2.20$).

Figure 3 shows the positive moderating effect of territoriality on the relationship between the possibility to find a suitable workplace and job satisfaction. Especially for those who show signs of territorial behavior (dotted line), the availability of enough suitable flexible workplaces has a strong relationship with job satisfaction.

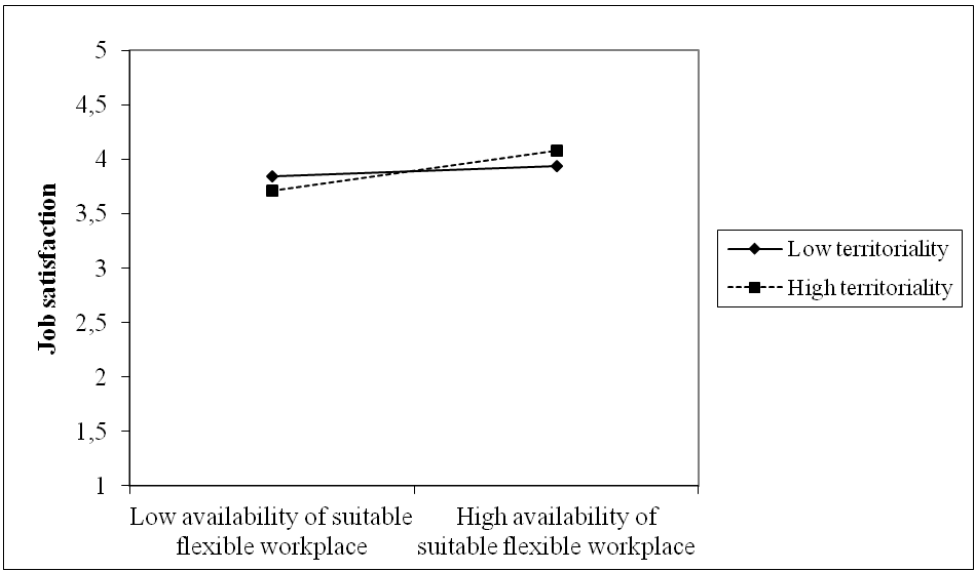

Figure 3. Moderating effect of territoriality on the relationship between the possibility to find a suitable workplace at the office and job satisfaction.

Task dependency and organizational commitment

As shown in *Table 1*, task dependency (moderator) was significantly positively related to the commitment of employees to their organization ($r = .178$, $p = .003$). This weak positive correlation corroborated hypothesis 4a: "*Employees who experience a high degree of task dependency will report a higher level of organizational commitment."* Thus, the more respondents depend on others to perform their tasks, the more committed they feel towards the organization.

The second hypothesis on task dependency (hypothesis 4b), "*The (negative) relationship between teleworking days per week and organizational commitment, will be (negatively) moderated by the degree of task dependency",* implies that there is a more positive relationship between teleworking days per week and organizational commitment for employees who are highly dependent on their colleagues to fulfill their tasks. There was not enough evidence to accept this hypothesis, $F(1, 271) = 3.24$, ns. The additional amount of variance in commitment that was explained by the interaction was low (R^2 = .011, B = -.061, *SE (B)* = .034, t = -1.80, ns).

Leadership support, organizational commitment and job satisfaction

The results supported hypothesis 5a, "*Employees who have facilitating and coaching managers will feel more committed to the organization",* therefore it can be accepted. A moderate positive correlation existed between leadership support (moderator) and organizational commitment (r = .416, p < .001). This means that leadership support explained 17.3% of the variance in organizational commitment. In hypothesis 5b it was expected that employees would feel more satisfied about their job when having facilitating and coaching managers. There was a moderate positive correlation between leadership support (moderator) and job satisfaction (r = .449, p < .001). Leadership support explained 20.4% of the variance in job satisfaction.

The following hypotheses focused on interaction effects. Hypothesis 5c, *"The (positive) relationship between the possibility to find a suitable workplace at the office and organizational commitment, will be (positively) moderated by the degree of leadership support employees experience",* must be rejected. This hypothesis assumed that there

would be a more positive relationship between the possibility to find a suitable workplace at the office and organizational commitment for employees who have facilitating and coaching managers. However, the results did not support this assumption sufficiently, $F(1, 271) = 3.04$, ns. The additional amount of variance in commitment that was explained by the interaction was low ($R^2 = .009$, $B = -.053$, $SE\ (B) = .030$, $t = -1.74$, ns). Although there were two main effects, there was not a significant interaction effect between the possibility to find a suitable workplace at the office and leadership support on organizational commitment.

The interaction effect between the extent to which employees use the possibility to work at flexible hours and leadership support on organizational commitment was significant, $F(1, 271) = 7.73$, $p = .006$ ($B = -.10$, $SE\ (B) = .04$, $t = -2.78$). The variance explained in organizational commitment increased 2.3% by adding the product of the extent to which employees use the possibility to work at flexible hours and leadership support. However, hypothesis 5d which expected a more positive relationship between the extent to which employees use the possibility to work at flexible hours and organizational commitment for employees who have facilitating and coaching managers, must be rejected. The reason for this can be seen in *Figure 4*. *Figure 4*, on the next page, shows that leadership support (dotted line) weakens (instead of strengthens) the positive relationship between the extent to which employees use the possibility to work at flexible hours and organizational commitment.

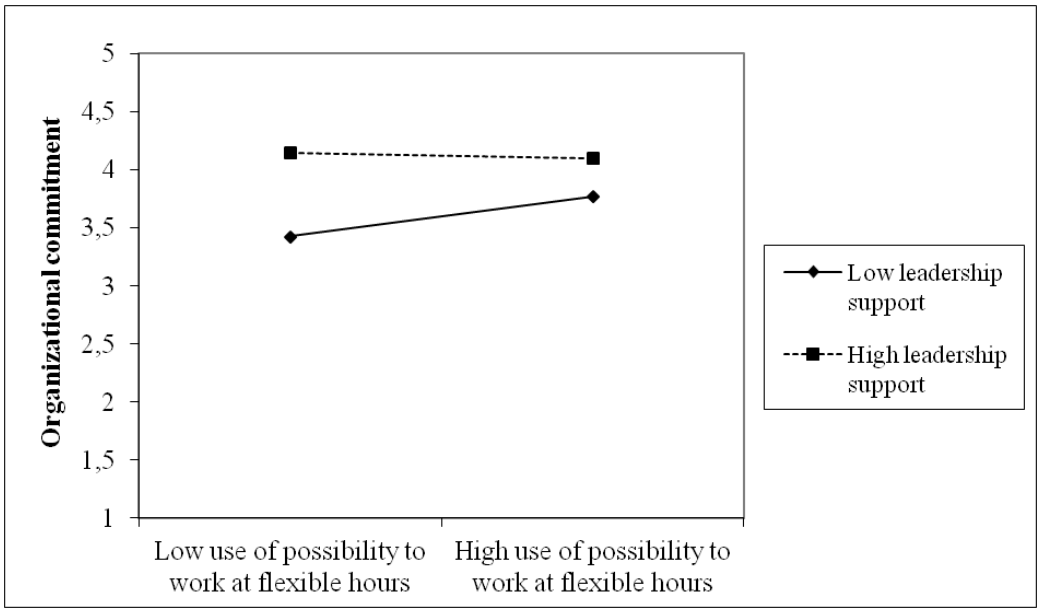

Figure 4. Moderating effect of leadership support on the relationship between the extent to which employees use the possibility to work at flexible hours and organizational commitment.

The final hypothesis, hypothesis 5e, was that leadership support would strengthen the (positive) relationship between the number of teleworking days and job satisfaction. Because the interaction effect between teleworking days and leadership support was far from significant, hypothesis 5e must be rejected, $F(1, 271) = .70$, ns. The additional variance explained was 0.2% ($B = -.026$, $SE\ (B) = .031$, $t = -.836$).

4. Discussion

The first purpose of this thesis was to gain a deeper understanding of the relationship between NWW and organizational commitment on the one hand, and NWW and job satisfaction on the other. The second aim was to conduct research on the influence of employee territoriality, task dependency and leadership support – as moderators – on these relationships. In this section, I will discuss the most important findings, the limitations of this study, some suggestions for future research and practical implications.

Most important findings

By means of an online questionnaire, data was collected from a sample of 275 participants working at Astellas Leiden. With the collected data, analyses were done to check the likelihood of hypotheses. Results have shown that not all expected relationships were significant, therefore these should be rejected.

First of all, various relationships between aspects of New Ways of Working and organizational commitment were investigated (hypotheses 1a, 1b, 1c and 1d). Although the extent to which employees used the possibility to work at flexible hours and the opportunity to telework did not significantly relate to organizational commitment (hypotheses 1a and 1b), hypothesis 1c and 1d were supported by the findings. Hypothesis 1c stated that employees who make more use of communication media for work purposes, would feel more committed to the organization. This was in line with earlier findings on the positive role of communication media in NWW (Baumeister & Leary, 1995; Derk & Bakker, 2010; Walther, 1995). Hypothesis 1d expected a positive correlation between the possibility to find suitable workplaces at the office and

organizational commitment. Significant results supported this relationship as well as the findings by Brown et al. (2005). Also, this field study looked at the relationship between NWW and job satisfaction. In comparison to its non-significant relationship with organizational commitment, the extent to which employees make use of the possibility to work at flexible hours had a significant positive relationship with job satisfaction (hypothesis 2a). This was in line with findings by Kelliher and Anderson (2008, 2010) and De Hauw (2014). Based on studies by Gajendran and Harrison (2007) and Morganson et al. (2010), I expected the possibility to find suitable flexible workplaces at the office to correlate positively with job satisfaction (hypothesis 2b). Indeed, the results showed a significant positive relationship. Hypothesis 2c expected more teleworking days per week to result in a higher level of job satisfaction of employees but did not get significant support from the results. A reason for this could be the content of the variable 'teleworking' in this study. This study looked at the extent to which employees telework instead of taking the qualitative side of teleworking into account. In a qualitative approach, the possibility to telework might have shown a stronger relationship with job satisfaction as this would create a feeling of autonomy which is said to relate positively to job satisfaction (Baane et al., 2010; Gajendran and Harrison, 2007; Morganson, Major & Oborn, 2010). In principle, all employees are allowed to telework at Astellas Leiden.

The second part of this study focused on the influence of employee territoriality on the relationship between the availability of suitable flexible workplaces at the office and organizational commitment on the one hand, and job satisfaction on the other hand. Statistical evidence was found for the strengthening moderating effect of employee

territoriality on the relationship between the possibility to find a suitable workplace at the office and organizational commitment (hypothesis 3a). Outcomes of studies by Altman (1975) and Lewis & Sturgill (1979) were related to this; territoriality with regard to physical space has been shown to engender a sense of belonging to social groups. Hypothesis 3b focused on the interaction effect of the possibility to find a suitable workplace at the office and territoriality on job satisfaction. This hypothesis was supported by significant results and was also acknowledged in other studies (Altman, 1975; Lewis & Sturgill, 1979).

Thirdly, this study examined the moderating effect of task dependency on the relationship between NWW and organizational commitment. According to Thompson (1967) and Baane et al. (2010), being in contact with colleagues when performing tasks contributes to the feeling of organizational commitment by employees. Hypothesis 4a, which expected a positive relationship between task dependency (moderator) and organizational commitment, was supported by the results. Apparently, in itself a higher task dependency was associated with a higher level of organizational commitment. However, hypothesis 4b did not find significant support from the collected data. Hypothesis 4b assumed that there would be a more positive relationship between teleworking days per week and organizational commitment for employees who are highly dependent on their colleagues to fulfill their tasks. When thinking of a reason for this non-significant result, I could imagine that someone who is task dependent on others gets tired of colleagues who telework (often) instead of teleworking (a lot) oneself and depending on others to fulfill tasks.

The final moderator in this study was leadership support. As New Ways of Working ask for a facilitating and coaching management style (Baane et al., 2010; Peters et al., 2014), this study paid special attention to leadership support in relation to organizational commitment and job satisfaction. The highly significant results indicated moderate positive relationships between leadership support and organizational commitment on the one hand (hypothesis 5a), and between leadership support and job satisfaction on the other (hypothesis 5b). No significant interaction effect was found between the possibility to find a suitable workplace at the office and leadership support on organizational commitment (hypothesis 5c). Despite the significant results of hypothesis 5d, this hypothesis must be rejected, too. Hypothesis 5d expected leadership support to strengthen the (positive) relationship between the extent to which employees use the possibility to work at flexible hours and organizational commitment. As more people work outside the office and work at flexible hours, the number of face-to-face interactions with coworkers and managers decreases, to foster social cohesion and organizational commitment (Baane et al., 2010). Therefore, I expected leadership support to contribute. On the contrary, leadership support weakened the (positive) relationship between the possibility to work at flexible hours and organizational commitment. This change in the direction of the relationship is an interesting and yet unexplained finding. The final hypothesis, hypothesis 5e, expected the amount of teleworking days per week to interact with leadership support in relation to job satisfaction. The result was not significant. According to Purcell and Hutchinson (2007) the level of job satisfaction by employees is influenced by their assessment of leadership behavior of managers which was directly related to higher levels of experienced job autonomy and affective commitment by

employees. Thus, when teleworking would have been approached from a qualitative point of view, it might have had a stronger relationship with job autonomy which in turn may have given significant results for hypothesis 5e.

Limitations and future research

With the interpretation of the current study certain limitations should be taken into account. Five limitations will be discussed below.

First of all, no statements can be made about causality because there was only one time of measurement. This study is a cross-sectional study in which it is not possible to ascertain causality, e.g. hypothesis 1b expected that more teleworking leads to less organizational commitment by employees, however it could also be argued that employees who feel less committed to the organization will telework more. So when interrelationships were discussed, the terms ‘correlation’ or ‘association’ were used instead of ‘effect’ as this would have referred to the direction of the relationship. In future research, a longitudinal study would be recommended to look at causality between variables. This enables the researcher to differentiate short and long term effects, which can be interesting when looking at the effects of NWW on employees. For example, a longitudinal study could measure if employees feel more or less committed to their organization, the longer they work according to the principles of New Ways of Working.

Secondly, in the current study no differentiation could be made between employees who work according to the principles of NWW and employees who do not. The principles of NWW are implemented throughout the entire organization, Astellas Leiden. When differentiation between two groups of employees is possible, the effects of NWW are

more clearly demonstrable. In subsequent studies, this can be done by having a control group of employees who do not work according to the principles of NWW, or by means of a longitudinal study with a measurement before the implementation of NWW and a post-measurement.

Furthermore, data was collected through an online questionnaire on the basis of self-reporting. This could mean that the results are influenced by 'common method variance'. Common method variance refers to the variance that is attributable to the measurement method rather than to the constructs the measures represent. In this study it means that the questionnaire might have strengthened or weakened the relationships between various variables. Respondents can overestimate and underestimate their situation. Self-reporting requires good judgment from the respondent and strongly depends on the well-being of someone at that particular moment. Despite the fact that the introduction of the questionnaire stated that participation was voluntary and anonymous and that the data would be handled confidentially, respondents might have given socially desirable answers to questions on sensitive issues. It is difficult to find a solution to this limitation, evaluations of others (colleagues and supervisors) might give a more objective picture.

The fourth limitation is the length of the questionnaire. The complete questionnaire counted 46 questions, several of which consisted of one or more sub-questions. In retrospect, it would have been better to reduce the number of questions. As a result, this would have decreased the average response time of participants. This again, could have made it easier to find an organization in which we were allowed to conduct our research. Organizations often used the length of the questionnaire (in combination with the

duration to fill out the questionnaire) as the reason for rejecting our research request. Also, a shorter questionnaire might have led to a higher number of respondents.

The final limitation of this study relates to the scale for employee territoriality. In this study, employee territoriality was measured by nine items from the study by Brown (2009). Brown (2009) discussed four types of territorial behaviors; control–oriented marking, identity–oriented marking, anticipatory defending and reactionary defending. For his survey he used 23 items. In this study only 9 out of the 23 items were used to measure employee territoriality. The large variety of subjects covered in the nine items on employee territoriality might explain why there were several underlying dimensions for territoriality instead of one. It may be put into question whether the four remaining items that were used in the statistical analyses are sufficient to give a realistic impression of employee territoriality. Future research could focus on one type of territorial behavior with at least six items measuring the construct.

Practical implications

Despite its limitations, this field study contributes to research on NWW. From the findings it can be concluded that giving employees the flexibility to decide where and when they want to work, positively relates to their degree of commitment to the organization and their level of job satisfaction. These relationships are moderated by employee territoriality and leadership support. In order to get a clear and coherent picture of the effects of NWW, these findings and other earlier mentioned points of interest on 'working apart together', significant and non-significant, will need to be further investigated.

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6. Appendix - Appendix 1

Organizational commitment:

1. I talk about Astellas as a great organization to work for
2. I am proud to tell others that I am part of this organization
3. I really care about the future of Astellas
4. I think that my values and the organization's values are very similar
5. I feel very little loyalty to this organization (R)

Job satisfaction:

1. Each day of work seems like it will never end (R)
2. Most days I am enthusiastic about my work
3. My job is like a hobby to me
4. My job is usually quite interesting
5. I am often bored with my job (R)

Task dependency:

1. In order to complete their work, my colleagues have to obtain information and advice from me
2. I depend on my colleagues for the completion of my work
3. I have a one-person job; I rarely have to check or work with others (R)
4. I have to work closely with my colleagues to do my work properly
5. I have to obtain information and advice from my colleagues in order to complete my work

Employee territoriality:

1. Used facial expressions to express disagreement or dislike towards the infringer who took my favorite workplace
2. Told people that a particular workplace was mine
3. Explained to the infringer that a particular workplace was already claimed
4. Enlisted support of others to protect a particular workplace when I was not there (e.g. during break or meeting)

Leadership support:

1. My manager and I really trust each other in our work
2. I have enough formal contact moments with my manager to be able to do my work properly
3. I experience my manager as a coach
4. My manager supports me in my work when necessary (by giving advice, by making arrangements, etc.)
5. My manager gives specific and meaningful feedback about my work
6. My manager asks for my opinion in important work-related matters
7. If I express opinions that are different from my manager's views, he/she listens to me nevertheless