An Identification and Illustration of the Social TMX and Task TMX Processes Samantha Esmeralda Korenhof University of Twente

## Abstract

In this study, a new perspective on the TMX process is provided by arguing that the process of TMX may be classified into two types of TMX: social TMX and task TMX. The aim of this study is to provide an understanding about how the processes of social TMX and task TMX contribute to the functioning of (new) teams, in the context of an organizational change process. Results from a qualitative case study indicate that there are several important categories which together comprise the processes of social TMX and task TMX. Furthermore, the results reveal that these two processes are interrelated so that one may directly facilitate the other. Furthermore, an illustration is provided on how the processes of social TMX and task TMX contribute to the formation and functioning of a new team. Finally, theoretical and practical contributions, study limitations, and suggestions for future research are discussed.

Keywords: TMX, social, task, teams, organizational change

In today's business world, the work environment is ever-evolving, a continuous process which is currently evolving towards more effectiveness and efficiency in the daily business. This evolving work environment now places a greater demand on employees for flexibility, adaptability, and capability to work with others for the successful achievement of organizational objectives (Love & Forret, 2008). As organizations and their employees change to meet these contemporary demands, the new organizational characteristics increase the importance and use of teamwork (Levi, 2007; Love & Forret, 2008; Van der Vegt & Bunderson, 2005). The use of teamwork increases organizational effectiveness and efficiency and provides the required flexibility to meet today's rapidly changing business world (Levi, 2007). Therefore, understanding teams and team processes is essential.

A team is described as a cohesive group of interdependent individuals and is comprised of several important elements. Firstly, teams are defined by the presence of both interdependence and cohesion. Interdependence determines the extent to which team members rely on each other for the completion of the team's task (Barrick, Bradley, & Colbert, 2007, p. 56) and cohesion is the affective state of team members which stems from the emotional ties and interactions between team members (Barrick et al., 2007; Dion, 2000; Levi, 2007). Without either of these elements, a team would not be a team. Secondly, two other important elements of teams described in the literature are task behaviors and social behaviors. Task behaviors are behaviors that focus on the accomplishments of a team's task, whereas social behaviors focus on the team members' social and emotional needs. Although one type of behavior may be more salient in specific types of situations than the other, both task and social behaviors are required for a team to function effectively (Levi, 2007; Paris, Salas, & Cannon-Bowers, 2000). The focus of this study is on the process of exchanges between team members. In this study, I argue that these two types of behaviors of teams may also be present in, and important for, the exchanges between team members and may be referred to as task team-member exchanges and social team-member exchanges.

An essential part of teams are the exchanges between team members, termed teammember exchanges (TMX). TMX are defined as an "individual member's perception of his or her exchange relationship with the peer group as a whole" (Seers, 1989, p. 119). Exchanges are essential because they make up the process of communication between team members. Because TMX are an essential part of teams, the classification of elements of task behaviors and social behaviors may also be found in the TMX process, as the results of Tse and Dasborough (2008) point out. In their results on studying exchanges and emotions in the TMX process, Tse and Dasborough (2008) stumbled upon two important elements of TMX: task-oriented exchanges and relational-oriented exchanges. They define task-oriented exchanges as exchanges that serve as a foundation on which individuals exchange resources with team members to accomplish their tasks and describe these exchanges as exchanges focused on sharing ideas, feedback, and work communication. Relational-oriented exchanges focus on the extent to which individuals consider their connections with team members as friendships going beyond their workplace connections, and are described as exchanges focused on helping, caring, concerning, and supporting (Tse & Dasborough, 2008).

The fact that Tse and Dasborough (2008) accidentally found these elements of TMX in their research on emotions in the TMX process, makes it reasonable to assume that these elements are important for TMX processes. Based on the literature on teams and TMX, I argue that the elements of task exchanges and relational (social) exchanges may be more than just elements: they may provide a classification in types of exchanges. These types of exchanges are referred to as task TMX and social TMX. I define task TMX as the process of sharing team capital between team members focused on task accomplishment. I define social TMX as the process of providing support among team members focused on the fulfilment of team members' social and emotional needs. Although task TMX and social TMX may seem similar to task-oriented exchanges and relational-oriented exchanges as elements of the TMX process). In other words, task TMX and social TMX may be regarded as two types of the same ingredient.

Although a classification in task TMX and social TMX may be proved based on the literature on teams and TMX, this classification has not yet been ingrained properly in the constructs important for TMX, creating a puzzle of obscurity. Even though studies on constructs important for TMX focused on either task or social behaviors, to date no research has focused on both constructs of task and social behaviors, by integrating this classification in the constructs. Due to this obscurity, three important questions remain unanswered. Firstly, how do social TMX and task TMX contribute to the functioning of teams? Levi (2007) and Paris et al. (2000) argue that both task and social behaviors are required for a team to function effectively. Thus, understanding the contribution of both social TMX and task TMX to the functioning of teams is essential. Secondly, in order to understand how these two TMX processes of social TMX and task TMX look like. Thus, the following question arises: which actions of team members together comprise the processes of task TMX and social TMX?

Thirdly, how are these two processes interrelated? Because task TMX and social TMX are two types of the same ingredient, it is reasonable to assume that these processes are interrelated in some way. The fact that contemporary literature on TMX fails to provide answers to these questions indicates that the literature shows an insufficiency in its understanding of TMX processes.

To gain more insights into the processes of task and social TMX, this study aims to answer the following main question: How do the processes of social TMX and task TMX contribute to the functioning of (new) teams, in the context of an organizational change process? To answer this question, three research questions will be answered: (1) Which actions of team members together comprise the processes of task TMX and social TMX? (2) How are the processes of task TMX and social TMX interrelated? (3) How do the processes of task TMX and social TMX contribute to the formation and functioning of a new team?

By examining the processes of TMX, this study contributes to both the scientific field as well as the practical field. The contribution of this study to the scientific field lies in the fact that this study solves a puzzle in the literature on TMX. As discussed earlier, the classification of task TMX and social TMX has not yet been embedded properly in the constructs important for TMX, creating a puzzle of obscurity. This study addresses this puzzle by examining the processes of social TMX and task TMX as a promising solution. Thus, this study contributes to the TMX literature by providing clarification in the construct definitions and the processes of social TMX and task TMX as a promising solution for this puzzle.

This study contributes to the practical field of organizations because the examination of TMX processes in the workplace and the understanding of employees' perception of their exchanges with team members is essential (Tse & Dasborough, 2008). Firstly, the connection between a team member and the team may have a significant and positive effect on individual attitudes and behaviors, such as providing a sense of identity, support, advice, and assistance (Love & Forret, 2008; Tse & Dasborough, 2008). Secondly, because in the daily work context most employees spend more time interacting with their team members than with their supervisors, it may be possible that team members exert an influence on each other that is greater than that of the direct supervisor (Seers, 1989). Lastly, TMX may also affect organizational outcomes by predicting various day-to-day actions that impact employees' coworkers (Love & Forret, 2008; Witt, Hochwarter, Hilton, & Hillman, 1999). Thus, examining TMX processes may prove relevant and important for the practical field, since it provides more insights into the processes of TMX, and therefore into the processes within teams.

To be able to conduct a proper study, methodological and conceptual choices are made. The focus of this study is on the process of exchanges between team members. Here, a critical ontological distinction is made: exchanges are processes rather than entities. Van de Ven and Poole (2005) argue that scholars on organization studies hold different views of the social world: a world made of things (i.e. a view that regards organizations as a noun) and a world of processes (i.e. a view that regards organizing as a verb). In this study, the latter view is embraced. TMX are regarded as a process, not as an entity. Exchanges are not entities which exist before taking place, they exist only when actually taking place, evolving over time. In this view, exchanges are a verb, rather than a noun. Task exchanges and social exchanges should then be considered as reifications of the exchange processes. Thus, this study focuses on the process of exchanges. The factual, or visible, exchanges between team members are studied through observations and the reported exchanges are studied by means of interviews, which together provide data on the processes of social TMX and task TMX.

Furthermore, the case in which task TMX and social TMX are studied is characterized by an organizational change process. This case is regarded as a suitable empirical context for this study (Van de Ven & Poole, 2005). Pettigrew (1990) argues that extreme contexts are most suitable for empirical studies. In extreme cases, the topic of interest is "transparently observable" (p. 275). Since often limited time and resources allow for only a small number of cases to be studied, situations in which the process of interest is transparently observable are most desirable for empirical studies. An organizational change process may be seen as an extreme context due to its disruptive nature and the many negative employee reactions it generates. Also, it is argued that when processes are identified in extreme contexts, the same processes may be identified in more normal contexts. In order to examine TMX processes properly, a definition of teams and TMX is provided first.

#### **Definition of Teams and Team members**

Teams are defined as a cohesive group of interdependent individuals who interact to achieve a shared objective, while being part of a larger organization (Levi, 2007; Paris et al., 2000). Teams exist in numerous forms, varying in size, duration (e.g. short-term, long-term, or permanently), and degree of authority (Johnson, Heinmann, & O'Neill, 2000; Levi, 2007). Teams are more than the sum of its parts, the collective teamwork is more than the achievements of the individuals' behavior separately (Levi, 2007; Paris et al., 2000). Team members are defined as the peer group members with whom one interacts on a daily basis.

One defining element of teams, interdependence, is defined as: "The extent to which contextual features outside an individual and his or her behavior (i.e. tasks and outcomes) define a relationship between entities as collective, so that one entity should affect and be affected by the other" (Barrick et al., 2007, p. 546). In other words, interdependence refers to the extent to which team members depend on each other for task completion. Team interdependence consists of two constructs: structural interdependence and psychological interdependence. Structural interdependence indicates the difference in level of interdependence due to the nature of the task, whereas psychological interdependence indicates interdependence among team members due to a team's social demands to cooperatively achieve the shared objective (Barrick et al., 2007). The degree of interdependence determines how much team members rely on each other for the completion of tasks. Also, interdependence influences interpersonal interactions within a team (Barrick et al., 2007; Van der Vegt & Janssen, 2003).

Another defining element of teams is cohesion. Cohesion is a group property defined as an affective state which comes from the emotional ties and interactions between team members (Barrick et al., 2007; Dion, 2000; Levi, 2007). Similar to interdependence, cohesion also consists of two constructs: task cohesion and social cohesion. Whereas task cohesion is an affective state related to a team's task performance, social cohesion is related to interpersonal and affective support between team members (Dion, 2000).

These elements are both an indissoluble part of the definition of teams. Teams without cohesion may show more resemblance with a task force and teams without interdependence may show more resemblance with a group of people sharing friendship, rather than a cohesive group of interdependent individuals working towards a shared objective.

## **Team-Member Exchanges (TMX)**

TMX are defined as an "individual member's perception of his or her exchange relationship with the peer group as a whole" (Seers, 1989, p. 119). TMX measure the reciprocity between a member and the peer group (Haynie, 2012; Seers, 1989; Tse & Dasborough, 2008; Witt et al., 1999). In other words, TMX measure a members' willingness to assist others in terms of help and information and his or her willingness to receive help and information from other team members (Seers, 1989).

The exchanges of team members may differ in quality. The quality of TMX are determined by the process of exchange among team members and indicates the effectiveness of one's connection to the team and its members (Liu, Keller, & Shih, 2011; Seers, 1989; Tse

& Dasborough, 2008). The quality of exchanges may vary in terms of content and process between team members (Tse & Dasborough, 2008). For example, low quality TMX may result in exchanges of resources and support only relevant for task completion. Low quality TMX may be described as exchanges with low levels of teamwork and a lack of trust and respect (Liu et al., 2011; Love & Forret, 2008; Tse & Dasborough, 2008). High quality TMX may result in exchanges of resources, support, mutual trust, and appreciation (Tse & Dasborough, 2008). Furthermore, according to Tse and Dasborough (2008), beneficial behavior between team members increases the quality of the exchanges.

#### **Capital and Support as Constructs of TMX**

In the literature on teams, two important elements of teams are distinguished by Levi (2007) and Paris et al. (2000): task behaviors and social behaviors. Task behaviors are behaviors that focus on the accomplishments of a team's task, whereas social behaviors focus on the team members' social and emotional needs (Levi, 2007). Although one type of behavior may be more salient in specific types of situations than the other, both elements of task behaviors and social behaviors are required for a team to function effectively (Levi, 2007; Paris et al., 2000).

A comparable distinction of elements is also found in the TMX literature. Tse and Dasborough (2008) researched individuals' perception of their relationships with team members and their emotional experiences within the TMX process. In their results, Tse and Dasborough (2008) stumbled upon two aspects of TMX: task-oriented exchanges and relational-oriented exchanges. Tse and Dasborough (2008) describe task-oriented exchanges as exchanges that serve as a foundation on which individuals exchange resources with team members to accomplish their tasks. Task-oriented exchanges may focus on sharing ideas, feedback, and work communication. Relational-oriented exchanges focus on the extent to which individuals consider their connections with team members as friendships going beyond their workplace connections, and are described as exchanges focused on helping, caring, concerning, and supporting (Tse & Dasborough, 2008). Tse and Dasborough (2008) rank task-oriented exchanges above relational-oriented exchanges. They define relational-oriented exchanges as connections going beyond workplace connections, indicating that workplace connections are a condition for relational-oriented exchanges. However, the question arises whether this ranking comes from the focus being on emotions in the TMX process, or whether this ranking is always present in task-oriented exchanges and relational-oriented exchanges. In other words, it raises the question of how these two elements are interrelated.

The results of Tse and Dasborough (2008) and the elements of task behaviors and social behaviors in the literature on teams, together argue that comparable elements of task and social exchanges are present in and important for TMX processes. In this study, team capital is used to study task TMX and team support is used to study social TMX. These two constructs are chosen because they are argued to be important for the TMX processes by Tse and Dasborough (2008). Capital and support are regarded as expressions of respectively task TMX and social TMX and should be seen as the reifications of these specific processes.

Team capital is "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet & Ghoshal, 1998, as cited by Yu, Hao, Dong, & Khalifa, 2013, p. 781). Team members function as the resources of team capital. Capital is important for task behaviors, due to the exchanges of resources. There are three forms of capital: structural, cognitive, and relational capital. Structural capital is the impersonal formation of connections among a team (Yu et al., 2013). Cognitive capital is the shared interpretations and meaning among the members of a team and relational capital is the affective nature of the connections in a team (Yu et al., 2013). The most important feature of relational capital is that the affective commitment creates a sense of responsibility to help team members, based on the shared membership in a team. These three forms of capital make that team members are motivated to share knowledge for the accomplishment of a team's task (Yu et al., 2013).

Team support is described as the perception of amount, content, and availability of social connections to provide aid in times of need (Cyranowski et al., 2013; Heaphy & Dutton, 2011). Support often refers to the role performed by significant others, such as family members, friends, and coworkers (Sosik & Godshalk, 2000; Thoits, 1995) and is important for social behaviors, due to the provision of help by team members. Four types of support are identified: emotional, appraisal, instrumental, and informational support (Cyranowski et al., 2013; House, 1981; Osseiran-Waines & Elmacian, 1994; Thoits, 1995). Firstly, emotional support is described as one's availability to listen to and be concerned for another's problems with empathy, caring, and understanding (Cyranowski et al., 2013; House, 1981). This type of support is described as the most important type of support. Secondly, appraisal involves the availability of individuals to provide affirmation and so contribute to the self-evaluation of others (House, 1981). Thirdly, instrumental support involves the perceived availability of individuals to provide functional aid in completing daily tasks. It involves direct help from one individual to the other in terms of aid-in-kind, labour, and time (Cyranowski et al., 2013; House, 1981). Lastly, informational support involves the availability of individuals to provide

information, advice, and suggestions to solve problems (Cyranowski et al., 2013; House, 1981). By discussing these constructs and their sub-constructs, an overview of the constructs relevant for this study is provided (see Table 1).

## **Types of TMX**

The classification of elements of task behaviors and social behaviors as discussed by Levi (2007) and Paris et al. (2000), does not show itself in the constructs as discussed above. Although studies on these constructs focused on either task or social behaviors, no research to date has focused on constructs of task and social behaviors, while integrating this classification in the constructs. When applying this classification to the constructs as discussed, the literature shows obscurity (see Table 1). What becomes apparent is an overlap between definitions and focus of these constructs, while they show a difference in their titles, creating obscurity. Moreover, the overlap in definitions is relatively high, so that it is highly possible that these constructs may actually refer to the same sort of behaviors. In other words, some of the definitions of the sub-construct is, based on its definition, focused on social behaviors. Similarly, some of the definitions of sub-constructs overlap so that they appear to focus on social behaviors, while the main construct is, based on its definition, focused on task behaviors.

For example, interdependence refers to the extent to which team members depend on each other for task completion and may therefore be seen as a task behavior of teams. However, of the two constructs of interdependence (i.e. structural and psychological interdependence), one does not show a convincing focus on task only. As its definition shows, psychological interdependence is interdependence among team members due to a team's social demands to cooperatively achieve the shared objective. Therefore, based on this definition, one could argue that psychological interdependence is focussed on both task and social behaviors. So, although interdependence as a whole may be classified as task behaviors, psychological interdependence can not be classified solely as task behaviors, as it also focuses on social behaviors (see Figure 1).

Likewise, the constructs of cohesion do not show a convincing focus on social behaviors only. Although cohesion is a defining social element of teams, its construct of task cohesion does not show the same convincing focus on social and emotional needs. Task cohesion is cohesion related by definition to the team's task performance. Therefore, based on its definition, it can be argued that task cohesion is focused on both task and social behaviors.

Thus, contrarily to cohesion as a whole, task cohesion can not be classified as solely based on social behaviors, as it also focuses on task behaviors (see Figure 1).

Similarly, when applying the classification of task and social behaviors on the constructs of capital and support, several sub-constructs do not show a convincing focus on task or social behaviors only. Capital is "The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet & Ghoshal, 1998, as cited by Yu et al., 2013, p. 781). Team members are the resources of team capital. Capital is important for task behaviors, due to the exchanges of resources. However, the three sub-constructs of capital (i.e. structural, cognitive, and relational capital) do not all show a convincing focus on task behaviors. Relational capital shows similarities with social cohesion, and therefore with social behavior. Relational capital is, based on its definition, focused on social or emotional needs and may therefore be seen as focused on both task and social behaviors (see Figure 1).

Support is the perception of amount, content, and availability of social connections to provide aid in times of need and is, based on its definition, important for social behaviors. However, the four types of support (i.e. emotional, appraisal, instrumental, and informational support) do not all show a convincing focus on social behaviors only. When studying the definitions of these four types of support, one could argue that emotional and appraisal support are focused on social behaviors, but that instrumental and informational support are focused on both social and task behaviors. Although support as a whole may be classified as social behaviors, both instrumental and informational support may not be classified as such, as they both also show a focus on task behaviors (see Figure 1).

By classifying these constructs into task behaviors and social behaviors based on their definitions, the puzzle of obscurity in the literature may be reduced. However, task and social behaviors may be more than just elements of teams and TMX. These can be seen as two types of exchanges, or metaphorically, two types of the same ingredient. These two types of exchanges may be referred to as task TMX and social TMX. In this study, I define task TMX as the process of sharing team capital between team members focused on task accomplishment. I define social TMX as the process of providing support among team members focused on the fulfilment of team members' social and emotional needs. This classification of types of exchanges may prove to be a promising solution to address and solve the puzzle of obscurity in the literature. However, in order to solve this puzzle and to properly understand the processes of task TMX and social TMX, one should have a proper understanding of these processes and how they contribute to the functioning of (new) teams.

#### **Organizational Change as Context**

The process of change may be regarded as an extreme case when studying organizational processes. This process may be seen as an extreme case due to its disruptive nature, making it a personally and emotionally demanding process (Dahl, 2011; Goodman & Loh, 2011; Shin, Taylor, & Seo, 2012). Organizational changes require alterations in work roles and the required skills to accomplish these new roles and often bring increased workloads (Nielsen & Daniels, 2012; Shin et al., 2012). Thus, organizational changes may have a great impact on employees, their jobs, and colleagues (Rafferty & Griffin, 2006). The disruptive nature of change can lead to extreme employee reactions, such as increased stress, turnover intentions, employee dissatisfaction, uncertainty ambiguity, depression, frustration, emotional insecurity, and decreased team performance (Dahl, 2011; Goodman & Loh, 2011; Nielsen & Daniels, 2012). This implies that change may be experienced as a long, emotionally intense, stressful, and fatiguing process (Shin et al., 2012). Consequently, employees may experience change as a demanding and disruptive process which triggers many negative reactions.

In order to examine the processes of task TMX and social TMX in organizational life, organizational change is used as a suitable empirical research context. Social and task TMX may be transparently observable during change because during change, the provision of timely and accurate information to employees is argued to be helpful for reducing uncertainty (Van Dam, Oreg, & Schyns, 2008). Through TMX, team members are able to provide the required information and support to each other. As Love and Forret (2008) argue, due to the task interdependencies and emotional ties between team members, individuals are likely to seek out members of their immediate work group as sources of information and support. Furthermore, Tierney (1999) argues that teams have a strong supportive nature, which provides safety for team members to engage in change behaviors, due to the degree of support, information flow, and helping behaviors characteristics for teams. Also, teams provide their members with social information cues, influential for task-related perceptions. Thus, these studies show that TMX may be transparently observable during organizational change, making this a suitable context for this study. To be able to study the processes of social TMX and task TMX in the context of an organizational change process, this study will focus on four stages of the change process as discussed by Isabella (1990). There four stages are anticipation, confirmation, culmination, and aftermath (Isabella, 1990).

The first stage, anticipation, involves organizational members who gather scattered bits of information to provide themselves and others with information about an upcoming organizational change. Because this stage involves gathering information on an change event which is yet to occur, the gathered information is mostly speculative (Isabella, 1990). However, this study focuses on the change process starting from the moment of confirmation and will therefore focus on the second, third, and fourth stages of the change process.

The second stage is confirmation. In this stage, organizational members rely on previous references to 'standardize' the change process and so construe a reality based on experience. These members interpret this stage by relying on references and experiences which have proved useful or successful in the past.

In the third stage, culmination, organizational members reconstruct their views of the change process, integrating new information on the change event and discarding information from previous references which prove to be irrelevant. By doing so, organizational members construct new realities, including new norms and behaviors, new relationships, and new interaction patterns (Isabella, 1990). During the culmination stage, organizational members hold different views and interpretations of reality as they attempt to make sense of the change process (Isabella, 1990).

The last stage, aftermath, involves the evaluation of the change process in terms of its consequences. By doing so, organizational members are able to put the change process in perspective and so create a sense of closure for the change experience (Isabella, 1990). Also, this change process may function as the standard for any possible future similar events (Isabella, 1990). By studying these stages of the change process, this study will be able to understand the processes of social TMX and task TMX in different stages of the change process and so how they contribute to the functioning of (new) teams.

#### The Present Study

Nowadays, the ever-evolving work environment is gearing towards more effectiveness and efficiency in the daily businesses. Consequently, the importance of teamwork has increased, since the use of teamwork increases the effectiveness and efficiency of organizations. Therefore, a proper understanding of teams and their processes is essential. This study aims to provide more insights into the processes of exchanges between team members to contribute to the understanding of TMX processes, and so of teams. When studying the literature on teams and TMX, two important elements are discussed: task behaviors and social behaviors. Although from the literature on teams and TMX a classification of task TMX and social TMX may be proven, this classification does not show itself in important constructs of TMX, creating a puzzle of obscurity in the literature. Moreover, I argue that the elements of TMX may be more than just elements: they may provide a classification in types of exchanges and

may be regarded as two types of the same ingredient. These types of exchanges may be referred to as task TMX and social TMX. Although these two types of exchanges may be extracted from the literature and may prove to be a promising solution to solve the puzzle of the obscurity in the literature, several important questions remain unanswered. Therefore, this study strives to answer the question of how the processes of social TMX and task TMX contribute to the functioning of (new) teams, in the context of an organizational change process, by answering three research questions. The first research question addresses which actions of team members together comprise the processes of task TMX and social TMX. The second research question addresses how these two processes of task TMX and social TMX are interrelated. The last research question addresses how the processes of task TMX and social TMX and social TMX contribute to the formation and functioning of a new team. By studying these two processes, their interrelation, and their contribution to the functioning of a (new) team, this study aims to provide more insights into the processes of TMX, and therefore into the important processes of teams. This may prove important since organizations increase the use of teamwork in their daily businesses.

# Method

In this research, a qualitative case study approach was used that involved collecting data on how the processes of social TMX and task TMX contribute to the functioning of (new) teams in the context of an organizational change process. The objective of this study was to gain more insights into the processes of social and task TMX. Case studies are used when the research subject is not easily distinguishable from its context and require the use of multiple data collection methods, since the triangulation of multiple methods provides stronger support for the research results (Eisenhardt, 1989). Therefore, the data was collected through the use of ethnographic observations and the Critical Incident Technique (CIT) which were guided by the graphic elicitation tools of timelines.

## **Participant Sample**

The participant sample of this study comprised of 21 members of the Front Office Desk of the facility department of several Dutch ministries. The work activities of the team members were relatively similar and included dealing with customer applications through telephone and e-mail services. On January 1<sup>st</sup> 2013, the team was formed as a result of a merger between two facility departments of several Dutch ministries. The team was formed of 8 members from one facility department and 9 members from the other facility department, while 4 new

members were employed directly into the new team. The team included 4 men and 17 women. Employment tenure of the participants with (one of) the facility departments ranged from 5 months to 6 years. All members of the team were included in this study and their participation was voluntarily. However, one team member was excluded from the data collection due to long-term illness.

The case of this study was characterized by a process of organizational change. On January 1<sup>st</sup> 2013, two facility departments of the Dutch ministries merged, forming a new and united facility department for all Dutch ministries. As a result, the employees of the Front Desk Office were merged to form new teams, one of which is this study's research object. Simultaneously, two ministries of this team's clientele moved to a new location, bringing about several changes in the daily life of the team members. The moving house of the ministries was completed in June, 2013.

#### Methods

To conduct a qualitative case study, three data collection methods were used: observations and CIT interviews, which were guided by the graphic elicitation tool of timelines. Participant observations were conducted with three objectives; (1) to observe the factual exchanges between team members in order to elicit data on processes of social TMX and task TMX, (2) to learn about the team, its members, and activities, and (3) to build rapport (i.e. social connections) with the team members, which would be helpful during the interviews. Following the observations, CIT interviews were conducted with all team members. In total, approximately 84 hours of observation were undertaken, followed by 22 interviews during 33 hours.

**Observations.** Through an ethnographic approach, data can be collected through a naturalistic perspective, deriving it strength from "the benefits of being there" (Tope et al., 2005, p. 471, as cited by McCann, Granter, Hyde & Hassard, 2013, p. 11). In other words, through observing organizational life, behavior relevant to the focus of the study can be observed *as it takes place*. Ethnographic observation entails the observation of, listening to, interacting and building relationships with organizational members, thereby focusing on their interactions and behavior (Cunliffe, 2010). This provides information on how members of organizational life make sense of and act in the day-to-day work context (Cunliffe, 2010). However, the social position, or the relationship, of the researcher with the participants influences what is being observed and so what type of data will be collected (Cunliffe, 2010; Vidich, 1995). Based on the relationship with the researcher, participants form an image of

the researcher, which then acts as a base for their responses (Vidich, 1995). Also, the relationship influences participants' willingness to report data (Vidich, 1995). Therefore, during the data collection, the researcher took on the role of participant observer, making the role of the researcher as observer explicit to the participants. Also, the participant observer role is described as researchers observing the participants for a brief period of time while also conducting interviews (Denzin & Lincoln, 1998).

Prior to the observations, all team members were informed of the study by an e-mail from their team supervisor and by a visit of the researcher. The objectives for the observations were met through listening to, observing, and talking with team members in formal and informal interactions. The researcher followed the work hours of the team and pulled up a chair to sit amongst them during observation hours. During these hours, the researcher interchanged between observing in silence, engaging in small talk, and talking to team members specifically about the study. When doing so, field notes were taken, writing down relevant information observed, including observations, impressions, thoughts, and the evolving relationship between team members and the researcher (Eisenhardt, 1989).

CIT interviews and timelines. The CIT was first introduced 60 years ago by Flanagan (1954) and is described as a set of qualitative interview procedures which involve the examination of significant incidents, with the objective to gain understanding of the incidents from the perspective of the individual and to examine the outcomes of such incidents on a specific topic (Flanagan, 1954; Gremler, 2004). It is a flexible technique, which requires modifications for each specific research it is used in (Schluter, Seaton, & Chaboyer, 2008). In this technique, incidents are defined as events, activities, or role behaviors which affect the processes or outcomes in an organization (Schluter et al., 2008). An incident is defined as critical when it makes a significant contribution, either positively or negatively, to the situation in question, which may be either an activity or phenomenon (Flanagan, 1954; Gremler, 2004; Schluter et al., 2008). The use of the CIT in this research is useful since the technique asks for data collected from the participants' perspective, letting the participant decide which incidents are most critical and relevant to discuss (Gremler, 2004). Also, according to Gremler (2004, p. 67), the technique is particularly useful "as an explanatory method to increase knowledge about a little-known phenomenon" and when rich data is required to thoroughly describe a phenomenon.

The CIT interviews were guided by the graphic elicitation tool of timelines. Starting interviews with a creative task might be helpful for the elicitation of information and may function as an ice breaker (Bagnoli, 2009). Through the use of drawings, the researcher

encouraged the interviewee to think in non-standard ways and allowed for the possibility of a creative way of interviewing. That is, being responsive to the participant's own interpretations of events (Bagnoli, 2009). Starting an interview with a graphic elicitation tool also may enhance participants' reflectivity about the process being explored (Bagnoli, 2009).

Following the observations, the CIT interviews were conducted. The interviews were planned in coordination with the team members, to minimize disturbance of the interviews on the daily work activities. The researcher informed each participant about the general outline of the interview and the use of the timeline prior to the interview, so that participants would have time to reflect on the past events. Through e-mail or face-to-face contact, the researcher informed the participants of the interviews by asking the participants to reflect on the change process. The participants were asked to reflect on which situations, either positive of negative, they found memorable and which had had an impact during this process (i.e. the critical incidents). The researcher informed the participants that during the interviews they would be asked to draw a timeline on which they could draw these remembered situations, to indicate at which point in time during the change process these situations had occurred. Also, the participants were asked to reflect on which role their team members played in these situations.

When conducting the interviews, the researcher asked the participants how they had experienced (reflecting on) the change process and asked them to elaborate on this by drawing a timeline, which would start on January 1<sup>st</sup>, 2013 and end at the present day. On this timeline, the participants were asked to draw events or moments, either positively or negatively, in the change process that were important to them (i.e. the critical incidents). The focus was not on the drawings as such, the timelines functioned as an ice breaker and were used to enhance reflectivity on the change process. Guided by the timeline, the researcher asked the participants to be as specific as possible in their elaboration on each incident, while asking follow-up questions. Such questions included asking about why these incidents were so critical and what role team members played in these incidents. By doing so, the researcher gained insights into the process of exchanges between team members during the organizational change process.

#### **Relationship between Researcher and Participants**

As discussed, the relationship of the researcher with the participants influences which data can be collected. To build rapport with the participants, the observation role of participant observer was chosen. By choosing this role, the researcher would identify herself as an observer and would make her role as observer explicit to the participants. To build rapport with the participants, the researcher engaged in interactions with the participants, such as engaging in small talk or going on lunch breaks together. Also, due to previous work experience at one of the former facility departments, the researcher was familiar with some of the team members, making it more accessible to (re)built rapport with former colleagues. The rapport built with these team members was strong, due to the previous collaboration between the researcher and these team members. With the other team members, rapport was built through engaging in small talk about private affairs or a similar educational background. By chance, some of the team members had enjoyed the same Bachelor education at the same university as the researcher. This created an easy topic for small talk. The rapport built with these team members and former colleagues paved the way to built rapport easier with all team members. It created a doorway to engage in small talk with all team members, about many topics, including some work-related topics due to the prior experience at the organization.

Although strong rapport was built with most team members, due to circulation between locations, the researcher did not have the chance to meet all team members prior to the interviews. Although these team members knew of the research and had discussed it with team members, the lack of rapport was noticeable during the interviews. This was mostly due to the fact that these team members did not have the opportunity to ask questions about the study during the observation period. Therefore, more follow-up questions were required for eliciting data from the interviews. However, due to the chosen role of participant observer, the researcher remained just that, a researcher and was therefore not fully accepted in the team. Nevertheless, the rapport built with the team members was strong enough to encourage the team members to speak openly and freely during the observations and interviews.

#### **Data-analysis**

To analyse the data, the data collected from the observations were combined with the data collected from the interviews. The data was analysed through inductive analysis. This process involved two levels of analysis (Schluter et al., 2008). The first level of analysis involved the analysis of the observation field notes and the interview transcripts through iterative reading and re-reading. Emerging categories and sub-categories regarding the actions of team members that together comprise the processes of task TMX and social TMX could then be identified (Schluter et al., 2008; Vough, 2012). In this study, I used a result-driven categories were derived from the literature, such as structural capital, relational capital, instrumental support and others. However, the categories found in the results were leading.

The second level of analysis involved reading and re-reading the field notes and transcripts 'horizontally', in order to make comparisons between differences and similarities in the data and the development of categories and sub-categories (Schluter et al., 2008).

To empirically test the coding scheme used to code the categories, a holdout sample was employed (Gremler, 2004). This procedure entails sorting small samples of incidents into piles that are related, to develop categories. After these tentative categories were developed, they were given definitions and additional data (e.g. incidents) were categorized into them. During this process, definitions were adjusted and new (sub-)categories developed when necessary. The process was completed when all incidents were categorized into categories that described as accurately as possible the same type of actions that comprise the processes of task TMX and social TMX (Flanagan, 1954; Vough, 2012). Following the recommendation of Strauss (1993), as referenced by Gremler (2004), the total amount of incidents collected was divided into two halves, of which one half served to develop the (sub-)categories and the other half served to determine the accuracy of the coding scheme. Each category was accompanied by representative quotes (Vough, 2012).

#### Validity & Reliability

As with all scientific research methods, the methods used in this research are susceptible to validity and reliability threats. Qualitative research generally scores lower on reliability. However, scores on validity are generally high for qualitative research (Babbie, 2010; Dooley, 2009). When conducting observational research, it should be considered that, since researchers have to do without the benefits of standardized instruments, the research is more susceptible to subjective interpretation bias from the researcher (Denzin & Lincoln, 1998). Often, observation results are only relevant for the studied object and are, without confirmation, difficult to generalize to other subjects (Denzin & Lincoln, 1998). Both reliability and generalisability increase when observations are conducted over a variety of time and places (Denzin & Lincoln, 1998). However, due to time and resource limitations of this study, conducting observations over a longer period of time and in a variety of places was not feasible. Conversely, according to Eisenhardt (1989), the resultant theory from case studies is likely to be empirically valid since it is closely tied to empirical evidence. Furthermore, the objective of this study was not to generalize the results to a wider population but to generate more insights in the processes of task TMX and social TMX, which may then be researched more in-depth by future studies. Also, by combining the data from the observations with the data of the CIT interviews, it was attempted to reduce the subjective interpretation bias. Categories which were found in the observation data, and which were also found in the interview data, were regarded as reliable categories, since the triangulation of the methods provided stronger support for the categories (Eisenhardt, 1989).

Naturally, when conducting CIT interviews, validity and reliability threats may also be encountered. The CIT is a naturally retrospective method and so may be flawed by recall bias and other undesirable biases, such as consistency factors or memory lapses (Gremler, 2004). Recall bias may come from the fact that this technique relies on incidents being remembered by participants, and their accurate and truthful descriptions. These descriptions may be biased due to the participant reinterpreting the incident (Gremler, 2004). However, as Perry (1997), as referenced by Schluter et al. (2008), argues, the recollection of incidents by participants is a form of reflectivity and so may be one of the strengths of the CIT. In this study, TMX is defined as an individuals' perception of his or her exchange relationship (Seers, 1989). Therefore, the focus of the CIT interviews was to collect data on participants' *perception* as opposed to factual data. Thus, participants' recall bias was of not much impact on the data collection. Memory lapses were sought to be reduced by informing the participants beforehand on the general outline of the interviews. Also, the timeline was used with the objective to enhance participants' reflectivity (Bagnoli, 2009).

When analyzing the data, the (sub-)categories derived from the results were not submitted for others to review for pragmatic reasons. It is often argued that asking others to review derived categories from the results may enhance the reliability of the data-analysis. However, Flanagan (1954) argues that there is no guarantee that the results viewed by other researchers are more reliable than results viewed by a single researcher. The affirmation of multiple judgments mostly provides more reassurance on the data-analysis (Flanagan, 1954).

# Results

In this section, the findings from the qualitative case study are presented. To recap the objectives of the current study, this study strived to answer the question of how the processes of social TMX and task TMX contribute to the functioning of (new) teams, in the context of an organizational change process. To answer this question, three research questions were designed and studied. Research question 1 asked: Which actions of team members together comprise the processes of task TMX and social TMX? Research question 2 asked: How are the processes of task TMX and social TMX interrelated? Research question 3 asked: How do the processes of task TMX and social TMX contribute to the formation and functioning of a

new team? All three research questions were answered using the combined data of the observations and the CIT interviews. In the following sections, I will subsequently discuss the results in relation to each research question.

#### The Processes and Interrelations of Task TMX and Social TMX

From the results, I concluded that the actions of team members can be categorized in multiple categories and sub-categories which together comprise the processes of task TMX and social TMX (see Table 2). This section elaborates on the main (sub-)categories and their interrelations, which are illustrated by quotes from the participants. First, the (sub-)categories which are solely focused on task TMX (1) or social TMX (2) are discussed. Then, the (sub-) categories focused on both task and social TMX are discussed (3), after which the (sub-) categories of task TMX that facilitate social TMX (4) and the (sub-)categories of social TMX that facilitate task TMX (5) are discussed. Thus, this section answers questions 1 and 2.

**1. Task TMX.** In this study, I defined task TMX as the process of sharing team capital between team members focused on task accomplishment. This section will discuss the (sub-) categories which are solely focused on the process of task TMX.

Structural capital. Structural capital is the impersonal formation of connections among team members (Yu et al., 2013). The participants explained that they formed impersonal connections mostly during the confirmation phase of the change process, due to task interdependence. As one participant described: "In the beginning when I was there with [colleague X] and [colleague Y], you noticed that we had to support each other. Because I knew nothing about FacilityNet. And [colleague X] did not know anything about the Ministries. You can not work if you do not have that. So in those terms you need each other, you need each others support. In that case, the bare necessities were asked. So no more, no less. It was strictly professional." The participants stated that those members with whom they had an impersonal connection were mostly asked to share factual information. These connections were seen as members of the team who help one with the accomplishments of the daily tasks. Consistent with the literature regarding the quality of TMX, structural capital involved team members with a low quality TMX. From the results, it showed that team members who share structural capital, were team members that exchange resources only relevant for task completion (Tse & Dasborough, 2008). By sharing structural capital, the team members engaged in the process of task TMX.

*Cognitive capital.* Cognitive capital is the shared interpretations and meaning of task-relevant knowledge among members of a team (Yu et al., 2013). Due to task interdependence and changing ways to execute tasks, team members created shared meanings of task-relevant knowledge, which may be focused on how to execute a particular task best. From the results, it became apparent that team members often discussed how customer requests could be handled best, by talking about their opinions, perspectives, and insights. For example, one participant explained: "Because there is now more time to talk about work with each other, it does not have to be personal. Like, 'what do you think, what is your opinion, how would you do this'." By creating shared interpretations and meaning on task-relevant knowledge, team members exchanged capital, engaging in the process of task TMX.

*Advice.* One way that team members created cognitive capital is through asking for advice. The category of advice is described as the act of asking for or providing team members with advice or suggestions in order to be supported in or to support one's daily tasks. As one participant noted: "Especially when you are working together, you can ask questions to a colleague, how she does things or how it can be done better. Yes, then I am glad my colleagues are there." Through exchanging advice on task-relevant knowledge, team members engaged in the process of task TMX.

**2. Social TMX.** In this section, the (sub-)categories found in the results which are solely focused on social TMX are discussed. Whereas task TMX focuses on sharing team capital for task accomplishment, social TMX is defined as the process of providing support among team members focused on the fulfilment of team members' social and emotional needs.

*Emotional support.* Emotional support is defined as one's availability to discuss emotional difficulties and to listen to and be concerned for another's problems with empathy, caring, and understanding (Cyranowski et al., 2013. House, 1981). In the results, two subcategories for emotional support were found: listening and caring.

*Listening*. The sub-category of listening is described as the provision of support through the act of talking to each other, listening to team members and giving or receiving one's attention as a matter of interest or importance of this team member and her emotional difficulties. One way to listen and give attention to team members is by showing an interest in someone. Team members argued that when someone would experience emotional difficulties, for example due to illness, they would show an interest in that person and her emotional difficulties. As one participant explained: "When someone has been sick, you ask them how they are. That is showing an interest in someone. I think that is normal, you have to show an

interest in colleagues." By showing an interest in someone, team members displayed actions of listening and giving attention to team members and their emotional difficulties. By doing so, team members engaged in the process of social TMX.

*Caring.* The second category of emotional support is the category of caring. Caring is described as the act of displaying support in the form of shared feelings or interpretations, concern for others and their emotional difficulties. As one participant explained: "You share certain things with each other because you are in the same situation. So you talk about it with each other. She joined the team later too, so we were in the same situation. [We talked about] that some were just answering the phone, so you share things with each other. You experience the same irritations, the same things." Participants explained that when discussing shared feelings or interpretations, they felt supported by their team member(s). Because they felt they were in the same situation, sharing feelings on the matter helped them to solve their emotional difficulties. By discussing and displaying support in the form of shared feelings or interpretations, team members engaged in the process of social TMX.

However, the act of displaying support in the form of shared feelings or interpretations may not always be constructive for the functioning of a team. In their research on exchange relationships at work, Love and Forret (2008, p. 351) discuss a "reverse buffering effect". This effect indicates that individuals might show support for complaints of their team members, which may result in a deepened experienced dissatisfaction. Similarly, Tse and Dasborough (2008) argue that emotional responses to TMX may spread among team members through emotional contagion. The results of this study provide support for these findings. From the results, it became apparent that when someone would voice a complaint about another team member, the change process, or a specific situation, they would often find support for their complaint with other team members, resulting in deepened negative feelings. Moreover, these negative feelings would then transfer to other team members. In other words, team members would not only show support for a complaint, the negative feelings would transfer to them, creating a negative spiral. As one participant explained: "If I had a cumbersome situation, I had the tendency to communicate this to others and subsequently I would take everyone with me in a downwards spiral. Because everyone became a little negative too, they would say 'yes, I agree'." Furthermore, this reverse buffering effect or emotional contagion was described by the participants as a way of creating shared feelings with new team members. As one participant argued: "I adjust to everyone, if you are sociable, then I will be sociable, if you are angry, then I will be angry with you."

Appraisal support – encouragement. Appraisal is the availability of individuals to provide affirmation and so contribute to the self-evaluation of others (House, 1981). From the results, I concluded that one way to provide appraisal support is through actions of encouragement. The participants explained that they had experienced difficulties or stressful experiences during the organizational change. During those experiences, they felt supported by their team member(s) through their words of encouragement. Here, encouragement is defined as the action or process of encouraging team members with the objective to provide support and so contribute to the self-evaluation of others. The results revealed that encouragement sometimes came in the form of a pep talk, at others times as a compliment. As one participant explained: "I also liked that we gave each other a pep talk, when someone was feeling down. It gives you a certain strength amongst each other. That is what you have to do in a team." By encouraging others, team members supported each other during difficult experiences, and so engaged in the process of social TMX.

*Social talk* – *Sociability.* From the literature, two types of support were identified as part of the process of social TMX: emotional support and appraisal support. However, the results revealed a third type: social talk. Based on the results, social talk is described as the act of making small talk among team members to provide one with a sense of sociability and relaxation and to empathize with team members. One important reason why social talk was of importance for the participants, and for the process of social TMX, was because of its provision of a sense of sociability.

Sociability. Sociability is described as the act of making small talk to provide team members with a sense of sociability at work. The results revealed that such small talk included asking questions about how one's weekend has been or making small talk while making coffee for the team. As one participant said: "But sometimes it is nice to make small talk with a colleague. [...] But regularly I am upstairs to collect my printed documents and then I stop to chat with my colleagues, like 'how was your weekend'." Providing each other with a sense of sociability through the act of small talk is therefore part of the process of social TMX.

**Relational capital** – *friendship-related relational capital.* Closely tied to, though different from, structural capital is relational capital. Whereas structural capital is the *impersonal* formation of connections, relational capital is the *affective* nature of connections among team members (Yu et al., 2013). In this study, a result driven categorization was used, based on preliminary categories derived from the literature. So, although I defined relational

capital as focused on both social and task TMX in the literature section, from the results I concluded that one sub-category of relational capital, friendship-related relational capital, is focused solely on social TMX.

Friendship-related relational capital. Friendship-related relational capital is the formation of affective connections between team members based on friendship. According to the participants, there were a few team members with whom they had a friendly connection. With these team members, private affairs or emotional difficulties were discussed or contact was maintained outside working hours via social media or smartphone applications. As one participant explained: "Not like family or anything, but as good friends, some of them. I do tell the good and the bad actually. Of course you keep some things to yourself but I tell a lot. Like a kind of friends actually." Since the connections of friendship-related relational capital help team members to discuss, and solve, emotional or social difficulties, this sub-category of relational capital is focused solely on social TMX. Furthermore, friendship-related relational capital is consistent with high quality TMX as discussed by Tse and Dasborough (2008). According to Tse and Dasborough (2008), high quality TMX may result in exchanges of resources, support, mutual trust, and appreciation and workplace friendship may play an essential role in the quality of TMX. The affective connections of friendship-related relational capital may be high quality TMX since it shows exchanges of resources and support based on appreciation and support.

**3. Task & Social TMX.** This section will elaborate on the found (sub-)categories that focus on both social TMX and task TMX equally and without any possible hierarchy. Through these categories, social TMX and task TMX co-exist, rather than proceeding as two distinct processes as discussed above.

*Social talk – Relaxation.* Social talk is important for the process of social TMX because this act provides team members with a sense of sociability, and so contributes to the fulfilment of social needs in a team. However, another category of social talk, relaxation, co-exists with the process of task TMX. Relaxation is defined here as the act of making small talk among team members to establish a balance between work pressure and relaxation at work. As one participants explained: "That social feeling makes that you are able to find a balance between working and a brief pause, just some chitchat. Also to recharge yourself so to speak, for the next part of your work." By contributing to a balance between the processes of task TMX and social TMX, this category focuses on both processes.

*Instrumental support – aid-in-kind.* House (1981) described the third type of support as instrumental support. Although instrumental support is the perceived availability of individuals to provide functional aid in completing daily tasks (task TMX), the results indicated that instrumental support was mostly offered or received as emotional aid (social TMX). Therefore, instrumental support is described here as the perceived availability of individuals to provide emotional aid in completing daily tasks. It involves direct help from one individual to the next in terms of aid-in-kind, labour, and time (Cyranowski et al., 2013; House, 1981).

*Aid-in-kind.* One important category of instrumental support is aid-in-kind. Aid-inkind is the act of helping team members by sharing work as an act of emotional aid in completing daily tasks. Participants explained that they provided aid-in-kind to their team members because they wanted to help them, rather than helping a team member out of necessity due to task interdependence. As one participants explained: "Not really colleagues, but a little more than that. That you do something because you want to do it, not because it is for your team member. So, 'I'll help you because I want to help you. Not because I have to help you because otherwise you do not know what to do'." Because team members displayed actions of instrumental support to both help a team member with their tasks as well as their emotional needs, when providing instrumental support, team members engaged in the process of both task TMX and social TMX.

*Relational capital – work-related relational capital.* Relational capital is the formation of affective connections among team members (Yu et al., 2013). One category of relational capital which is focused on both task TMX and social TMX is work-related relational capital.

*Work-related relational capital.* Work-related relational capital is defined as the formation of affective connections based on work-related affection and team members' task-relevant knowledge. The results indicated that team members often chose whom they asked questions, advice, or suggestions, based on their affective connections. Moreover, the choice also depended on team members' task-related knowledge. As one participant argued: "I do choose which colleagues I will ask a question. Who can offer me what. I do ask particular things of particular people." Work-related relational capital is focused on both social and task TMX because it is based on work-related affection. This sub-category of relational capital is consistent with literature on quality of TMX. As Tse and Dasborough (2008) argue, high quality TMX may result in exchanges of resources, support, mutual trust, and appreciation.

Work-related relational capital may be described as high quality TMX because it showed exchanges of resources and support based on work-related appreciation.

**4. Task TMX facilitates social TMX.** Besides being either two distinct processes or coexisting in balance, there are some (sub-)categories of the processes of social TMX and task TMX that directly facilitate the other. Although all (sub-)categories of task TMX may facilitate social TMX to some degree, the (sub-)categories discussed in this section directly facilitate the process of social TMX to a higher degree.

*Informational support.* Informational support is the availability of individuals to provide information, advice, and suggestions to solve task-related problems (Cyranowski et al., 2013; House, 1981). As discussed earlier, based on the definitions of social TMX and task TMX, I identify informational support as focused on both task TMX and social TMX. However, the results clarified that informational support may be seen as actions that refer to task TMX but which facilitate social TMX. One way informational support facilitates social TMX is through sharing information.

*Sharing information.* Sharing information involves the act of providing or asking for facts about work-related topics with the objective to support a team member in her daily tasks. Participants explained that when they had a task-related question, they felt free to ask their team member(s) for the answer, to be able to execute the task properly: "It is easy to ask your colleagues, like 'how should I do this' or 'do you know about this' or vice versa".

However, the results showed that information sharing among team members did not always occur. Participants argued that at the beginning of the change process, team members did not always share relevant information with each other, which caused irritations. As one participant said: "Or people told things which were not true. Or people gave you false information, [which caused] irritations between each other." Moreover, the act of holding back relevant information from team members was apparent, since team members explicitly told each other they would keep information to themselves. Besides causing irritations in the team, such an act was not beneficial for the accomplishment of the team's task and the functioning of the team. The fact that the act of holding back relevant information caused frictions between team members, makes that informational support, or the lack thereof, is focused on the process of task TMX, but negatively facilitates the process of social TMX.

**5.** Social TMX facilitates Task TMX. In this section, (sub-)categories of social TMX are discussed which directly influence the process of task TMX. Although all categories of social

TMX facilitate the process of task TMX to some degree, the categories as discussed in this section directly and clearly facilitate the process of task TMX to a higher degree.

*Emotional support – To vent one's feelings.* One important category of emotional support is the act of listening to team members and giving attention to their emotional difficulties. One way to listen and give attention to team members is through listening to a team member venting her feelings. To vent one's feelings is described as the provision of support through the act of listening to team members venting his or her feelings in order to provide emotional aid to this team member and her emotional difficulties. As participants explained, to vent one's feelings means one feels a sigh of relief and is able to help another customer afresh and with a calm state of mind: "If something like that happens, I can talk it off and then it's off your chest. Even if it is only like 'well, do you know what just happened, that's not normal, is it'. And when five colleagues agree with you, then you think 'okay, I can move on'. And when you don't have that, then you just bottle it up inside. If this happens a few times in a row, it feels like your head is full. But you do speak about it and that way it is off your chest. That gives you peace of mind to start afresh with the next customer."

Interestingly, although listening and emotional support are categories important for the process of social TMX, the category of venting one's feelings directly facilitates the process of task TMX. As the participants explained, through the act of listening to a team member venting her feelings, a team member was supported to feel a sigh of relief from her emotional difficulties, to move on from these difficulties, and so continue their daily tasks afresh. It can then be concluded that, through this category, the process of social TMX directly facilitates the process of task TMX.

*Appraisal support – affirmation.* The category of affirmation directly facilitates the process of task TMX. Affirmation is defined as the action or process of affirming or finding affirmation for something with the objective to provide support and so contribute to the self-evaluation of others. Thus, affirmation is important for the process of social TMX. Participants explained that by seeking and finding affirmation on work activities from team members in their daily operations, they felt supported. As one participant explained: "Just with the little things, when I just do not know what needs to be done or how something has been done. Then I am able to check it with the person who was working on it or who knows more about it. Yes, I feel supported then." In other words, the act of affirming something makes that team members are supported in the accomplishments of their daily tasks. Because this category of social TMX directly facilitates that team members feel supported in

accomplishing their daily tasks, it can be concluded that affirmation directly facilitates the process of task TMX.

Social talk - empathy. The category of empathy is described as the act of making small talk to remain updated on team members' well-being, both at and away from work, to be able to empathize with team members' current life situations. Several reasons are provided as to why this category is of importance, of which the most important reason states that this category provides a foundation for the process of task TMX. As one participant explained: "Not to have conversations about the weekend all day, but just to lay a foundation. From there on, it is easier to address someone or ask someone, 'oh, are you doing this, I was working on this'. This lowers the barrier, making it easier to communicate with each other." The act of making small talk to empathize with team members, and so the act of engaging in social TMX, thus lowers a barrier for team members to engage in task TMX. Also, to engage in small talk with objective to empathize means team members knew what was going on with their members, which may be influential at work. For example, a crying baby at night which may make one tired at work. What became apparent was the influence this type of social talk had on the process of task TMX. Because team members are updated on current life situations through the act of small talk, team members are able to take into account any possible life situations that may affect a team members' accomplishments at work. Therefore, the act of engaging in small talk with the objective to empathize with team members revealed that the process of social TMX directly facilitates the process of task TMX.

Instrumental support – assistance. A second important category of instrumental support, besides aid-in-kind, is assistance, or good fellowship. Assistance is defined as the act to make it easier or possible for team members to perform their daily tasks by offering them or receiving one's services or resources in order to provide aid when needed, and so is important for social TMX. The results revealed that instrumental support is mostly focused on providing aid when needed, and so is part of the social TMX process, as opposed to the task TMX process as discussed in the literature section. This category involved team members being considerate of each others' well-being and providing assistance to team members, which could be done in the form of changing shifts. One participant gave a clear example: "[That you] take it into account when someone is having some trouble. That you say like, 'I will cover for you or 'if you want that day [off] and that is not possible, I will cover for you'. Or something like that, just to help each other out." Although assistance, and instrumental support, are processes important for the process of social TMX, assistance directly facilitates the process of task TMX. This category involves providing aid when needed, which makes it

important for social TMX, and because the aid is work-related, this category directly influences the process of task TMX.

## Task TMX and Social TMX and the Formation and Functioning of a New Team

This study has examined the processes of social TMX and task TMX in the context of an organizational change process. By doing so, an illustration of how these processes contribute to the formation and functioning of a new team can be provided. This section will provide this illustration by discussing which, and how the, categories of social and task TMX contributed to the functioning and formation of a new team during three stages of a change process.

As discussed, this study focuses on three stages of the organizational change process as discussed by Isabella (1990). The first stage, anticipation, focuses on the stage prior to the actual start of the change process and will therefore not be discussed in this study. In the second stage, confirmation, organizational members 'standardize' the change process by relying on previous experiences with similar events which have proved useful in the past (Isabella, 1990). In the third stage, culmination, organizational members construe a new reality based on new information while discarding irrelevant information from previous experiences (Isabella, 1990). In the last stage, the aftermath stage, organizational members evaluate the change process to put things in perspective and so create a sense of closure (Isabella, 1990).

From the results, I concluded that although all categories of task TMX and social TMX play an important role to some degree at every point in time, others specifically play an important role during one or more stages of an organizational change process (see Table 3).

The confirmation stage. During the second stage of the change process, the categories of venting one's feelings, encouragement, and structural capital specifically played an important role. The task TMX category of structural capital should be seen as the reification of team members engaging in the process of forming impersonal formations to cope with the merger. Due to (new) task interdependencies, team members formed impersonal formations to cooperatively accomplish the team's task. In order to do so, the participants explained that they exchanged factual information which would help them deal with the novelty resulting from the merger. As one participant explained: "You ask each other [about] things continuously, because everything is new". By exchanging relevant information through impersonal connections, the process of task TMX contributed to the formation and functioning of this new team.

Furthermore, the participants explained that during this initial phase, they experienced an increased workload, emotional insecurity, ambiguity, and increased stress, which are argued to be classic employee reactions to change by Nielsen and Daniels (2012) and Goodman and Loh (2011). By engaging in the process of encouragement and venting one's feelings, team member supported each other to cope with the change and their reactions. To be able to vent one's feelings to team members meant that individuals felt a sigh of relief and were able to relieve some of their frustrations or stress and could continue working with a piece of mind. Through the encouragement of team members, individuals felt more supported to continue working in the stressful environment: "And that was really difficult sometimes. There were colleagues who did not want to continue working. You would take them for a cigarette and you would say like, 'come on, let's do this. Do not let it get to you'. Just giving each other positive input. It was really intense". By encouraging team members, and by listening to them venting their feelings, team members engaged in process of social TMX to form and to function in the new team.

The culmination stage. In the culmination stage, team members' reality changed. As Isabella (1990) argues, new norms, behaviors, relationships, and interaction patterns are constructed as team members integrate new information and discard irrelevant information from previous experience to construct a reality that helps them make sense of the change process (Isabella, 1990). From the results, it became apparent that in this stage, things started to change. As the categories of encouragement and venting one's feelings became less important, the categories of sociability, relaxation, empathy, and friendship-related relational capital grew more important (see Table 3). Participants explained that as the work pressure lowered and team members became more acquainted with one another, team members engaged more and more in actions of social talk: "It was really busy during this time. That is why no one really took the time for each other. With that I mean that when things are not so busy, you get to know people better and that says something about how someone works too. If you get to know people, you get to know what they can offer you." Furthermore, during this time, the team members engaged in more actions of social talk to socialize with each other and to find a balance between the work pressure and a moment of relaxation. Also, as team members became more acquainted, some impersonal connections evolved to become more personal and based on friendship. Thus, some connections between team members evolved from structural capital to friendship-related relational capital. Conclusively, during the culmination stage of the change process, the categories of social TMX grew more important for the formation and functioning of the new team.

The aftermath stage. The last stage of the change process, aftermath, is one in which the change process is evaluated in terms of its consequences and to put the process in perspective (Isabella, 1990). Two categories specifically played an important role during this stage: aid-in-kind and assistance. Participants explained that during this stage, the work pressure had decreased to a stable level and the reactions of the team members to the organizational change process had faded. The team was at a moment in time where the work activities and the connections in the team were formed and established. Because the work pressure had decreased and the connections between team members had evolved from impersonal to a certain degree of affective, both aid-in-kind and assistance played an important role. Team members helped each other when necessary and took the time to help each other: "But when work is uneventful, a colleague has the time to see if someone else is busy. Then that colleague will see the possibility to say, 'oh it is quiet [around here], so I can help'. It creates the possibility to help each other and make the work less burdensome." In conclusion, categories of instrumental support, and so of both task TMX and social TMX, became important during this stage of the change process.

# Discussion

In this study, TMX processes were at the centre of attention. When studying the literature on teams and TMX, I found that a classification in task and social behaviors may also be present in and important for TMX processes and I classified the TMX process into two types of TMX: task TMX and social TMX. In order to fully understand these processes and their contribution to the functioning of (new) teams, I studied the processes of task TMX and social TMX in three ways. Firstly, the actions which together comprise the processes of social TMX and task TMX were studied. Secondly, how these two processes are interrelated was also studied. Lastly, an illustration was provided on how social TMX and task TMX contribute to the formation and functioning of a new team. From the results, several (sub-)categories important for social TMX and task TMX were found. Also, the results have revealed that the processes of task TMX and social TMX are both equally important and that these processes are interrelated, so that one may facilitate the other. The data from this study enrich the understanding of how the processes of task TMX and social TMX contribute to the functioning of (new) teams. By engaging in actions or processes of social TMX and task TMX, team members are able to cohesively and interdependently accomplish the team's task. Although Tse and Dasborough (2008) found elements of task-oriented exchanges and relational-oriented exchanges in their research on emotions in the TMX process, according to my knowledge, this study is the first to argue that the process of TMX may be classified into two types of exchanges. Consequently, the present study made two important contributions to the TMX and team literature and the practical field of organizational life.

Firstly, by designing the classification of social TMX and task TMX, this study has contributed to the literature about teams and TMX. It has addressed and contributed to solving a puzzle of obscurity in the literature. This puzzle entailed the fact that although a classification of social TMX and task TMX can be derived from the literature on teams and TMX, this classification does not show itself in important constructs of TMX. By studying the processes of social TMX and task TMX, this study has contributed to the literature on teams and TMX by providing more clarification in the definitions of the important TMX constructs. Because these processes were studied through a result-driven categorization based on preliminary categories derived from the literature, the found categories of social TMX and task TMX, and their interrelations have provided more insights into the important constructs of TMX and task TMX and so have provided more clarity in their definitions. So, this study has contributed to the literature on teams and TMX by contributing to reducing the puzzle of obscurity.

Furthermore, by studying the process of TMX from this new perspective of social TMX and task TMX, this study has strived to gain more insights into and to deepen the understanding of the processes of TMX and so, in the processes of teams. From the results, I concluded that the processes of social TMX and task TMX are equally important and interrelated, so that one may facilitate the other. These insights in the process of TMX may contribute to understanding how social TMX and task TMX may be utilized in a range of communication situations in teams. For example, when forming a new team, the organization could decide to first introduce the new team members through providing opportunities for them to engage in social TMX. This may be done through creating opportunities for social talk, perhaps during a team outing. After which the actions of social talk may facilitate actions of task TMX. Alternatively, the organization could opt to introduce the team members first through providing opportunities for them to engage in task TMX. This may be done through introducing the team members in work-related situations first, during which the team members may start to form structural capital. In this case, the organization then relies on the structural capital to evolve to relational capital and so for task TMX to facilitate social TMX. Another example may involve the socialization of a new team member in a team. The organization could choose to socialize the new team member through actions of sharing information (task TMX), which may then facilitate actions of social TMX. In contrast, an organization could choose to introduce a new team member first through actions of social talk (social TMX), so team members can empathize with the new team member and vice versa. Doing so, the actions of social talk may then facilitate actions of task TMX. Thus, to have insights into the processes of social TMX and task TMX and their interrelations, means organizations are better informed on how to act different communication situations in teams.

Secondly, this study has contributed to the practical field of organizations because understanding TMX processes and employee perceptions of their exchanges with team members is essential (Tse & Dasborough, 2008). By the studying the processes of social TMX and task TMX, this study has provided more insights into the processes of TMX. Over the past years, the use of teamwork has increased due to organizational demands for more effectiveness and efficiency. Providing a clear understanding of the important processes in TMX, and so in teams, is therefore beneficial for organizations. Also, in organizational life, individuals have more team members to interact with and have more time to interact with team members than with their supervisor. This indicates that team members and their exchanges play an important role in teams and their functioning. Furthermore, because team members may have a great influence on each other in the daily work context, their actions affect the functioning of the team, and so the functioning of the organization as a whole. Therefore, understanding the processes of TMX provides organizations with an understanding of the important processes within teams and their functioning in the organization.

#### **Study Limitations and Opportunities for Future Research**

This study is only a starting point in examining the classification, and so the processes, of social TMX and task TMX. Several limitations should therefore be discussed. Firstly, this study has been conducted as a single case study, as only one team in one organization has been studied. However, this study's objective was not to generalize the results to a wider perspective but to build and understand a new perspective on TMX processes. Therefore, I encourage researchers to study the processes of social TMX and task TMX in a number and variety of cases, to be able to compare differences and similarities between cases. Moreover, as this study generates a first understanding of the processes of social TMX and task TMX to create a deeper understanding of these TMX processes. For example, future studies might focus on the influences of the processes of social TMX and task TMX in a variety of scenarios and teams, on the role of the supervisor in generating opportunities to engage in social TMX and task TMX, or on the role of team dynamics in these processes.

Secondly, several other important limitations of this study may be due to the methodology with which this study was conducted. Since data is not collected in a vacuum, the role of the researcher has had a decisive influence on the data collection (Vidich, 1995). It influences participants' willingness to report. To increase the participants' willingness to report on their experiences during the change process, and to secure a fruitful social position, the researcher aimed to build rapport with the participants. The researcher was able to built up rapport with the participants in a relatively easy manner, since some team members were former colleagues and some team members had enjoyed the same Bachelor education as the researcher, creating a doorway to engage in small talk with all team members. The rapport also had an effect on the CIT interviews, since it made that participants were more inclined and comfortable to talk about personal experiences and stressful situations. However, the field notes exposed that in some cases, some participants were by character, more comfortable expressing themselves on personal experiences and stressful situations than others. Furthermore, some participants had joined the team during the change process, giving them a different perspective on the process as team members who had experienced the full process and had a reference to the earlier situation. To be able to understand the researchers' social position and its influence on the collected data, field notes were taken on the evolving relationship between the researcher and the participants. Doing so would decrease the subjective influence of the researcher on the data, since the influential role was sought to be understood and evaluated during the data analysis. Despite the fact that participant observation may be subject to researcher subjectivity, it is thought of as one of the best techniques on which to base prearranged observational categories, since the researcher now has greater familiarity with participants' experiences and meanings, giving her an ideal position to draw up meaningful categories (Vidich, 1995).

Another methodological limitation of this study may be the type of team examined. According to Johnson et al. (2000) and Levi (2007), there are many types of teams, varying in shape, size, and purpose. For example, there are permanent teams, part-time teams, teams created for a specific project, teams compromised of members with similar skills or with different backgrounds. Some teams are like a rowing team – working in unison, others are like a basketball team due to the importance of interpersonal coordination of different roles, and still others are like gymnastic teams in which each member performs individually (Johnson et al., 2000). In sporting terms, the team examined in this study balanced between a rowing team and a gymnastics team. Whereas the members of the team mostly perform their tasks individually, all members work in unison to achieve a high service standard and to share

the workload. However, the type of team influences team members' interdependence and so the results of this study. As Van der Vegt and Janssen (2003) argue, the degree and type of interdependence is determined by, amongst others, role differentiation and the distribution of skills and resources. It largely determines interpersonal interactions. One type of interdependence, as discussed by Van der Vegt and Janssen (2003), is perceived goal interdependence. Perceived goal interdependence is the extent to which a team member perceives his or her achievement of goals as interdependent to the achievement of others' goals. Also, the higher the level of task interdependence, the more team members are able to influence each others' performance (Van der Vegt & Janssen, 2003). In other words, high levels of perceived goal interdependence makes that task interdependence is positively related to acts of supporting behaviors in teams. When more team members are supported in their daily tasks, they are more likely to contribute to achieving the shared goals of the team (Van der Vegt & Janssen, 2003). The degree and type of interdependence in this team may influence the research results, since interdependence is directly linked to interpersonal interactions (Van der Vegt & Janssen, 2003). Since the team members in this team mostly perform their tasks on an individual basis, and are interdependent mostly to achieve a high service standard, interdependence is relatively low. The results could differ when this study was conducted in a team where skills or backgrounds differ and interdependence would be higher. Therefore, the results of this study may be coloured by the type of team examined and may differ when other types of teams are studied Furthermore, this study does not provide insights into whether or not gender or age play a role in engaging in the processes of social TMX and task TMX. Thus, this study encourages future studies to research the processes of social TMX and task TMX in a number of teams, which may vary in terms of size, team member characteristics, type, and degree of interdependence, to create a deepened and more general understanding of the processes of social TMX and task TMX.

In all, the objective of this study was to further the understanding of TMX processes, by providing more insights into the processes of social TMX and task TMX and their contribution to the functioning of (new) teams. Given that no prior research has studied a classification of social TMX and task TMX, the results of this study are unique. These unique results provide more insights into both the TMX process as well as teams, hoping to provide both scientists and practitioners with valuable information on how to make teams function efficiently and effectively in today's evolving business world. It is through understanding these processes that one may truly understand the functioning of teams in organizations.

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# Tables

Researcher(s)	Construct	Sub-constructs	Definition
Barrick et al. (2007)	Interdependence		"The extent to which contextual features outside an individual and his or her behavior (i.e. tasks and outcomes) define a relationship between entities as collective, so that one entity should affect and be affected by the other" (p. 56)
		Structural interdependence Psychological	The difference in level of interdependence due to the nature of the task. Interdependence among team members due to a
		interdependence	team's social demands to cooperatively achieve the shared objective.
Dion (2000)	Cohesion		An affective state which comes from the emotional ties and interconnections between team members.
		Social cohesion	An affective state related to a team's task performance.
		Task cohesion	An affective state related to interpersonal and affective support between team members.
House (1981)	Support		The perception of amount, content, and availability of social connections to provide aid in times of need.
		Emotional support	One's availability to listen to and be concerned for another's problems with empathy, caring, and understanding.
		Appraisal support	The availability of individuals to provide affirmation and so contribute to the self-evaluation of others.
		Instrumental support	The perceived availability of individuals to provide functional aid in terms of aid-in-kind, labour, and time.
		Informational support	The availability of individuals to provide information, advice, and suggestions to solve problems.
Yu et al. (2013)	Capital		"The sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (p. 781)
		Structural capital	The impersonal formation of connections among a team.
		Cognitive capital	The shared interpretations and meaning among the members of a team.
		Relational capital	The affective nature of the connections in a team.

Table 1. Overview of Constructs and Sub-constructs as Discussed in This Study

1. Task (Capital)		
Structural capital		
Cognitive capital	Advice	The act of asking for or providing team members with advice or suggestions in order to be supported in or to support one's daily tasks.
2. Social (Support)		
Emotional support	Listening	The provision of support through the act of talking to each other, listening to team members and giving or receiving one's attention as a matter of interest or importance of this team member and her emotional difficulties
	Caring	The act of displaying support in the form of shared feelings or interpretations, concern for others and their emotional difficulties
Appraisal support	Encouragement	The action or process of encouraging team members with the objective to provide support and so contribute to the self-evaluation of others
Social talk	Sociability	The act of making small talk to provide team members with a sense of sociability at work
Relational capital	Friendship-related relational capital	The formation of affective connections between team members based on friendship.
3. Task & Social		
Social talk	Relaxation	The act of making small talk among team members to establish a balance between work pressure and relaxation at work
Instrumental support	Aid-in-kind	The act of helping team members by sharing work as an act of emotional aid in completing daily tasks
Relational capital	Work-related relational capital	The formation of affective connections based on work-related affection and team members' task- relevant knowledge.
4. Task facilitates Social	1	
Informational support	Sharing information	The act of providing or asking for facts about work-related topics with the objective to support a team member in her daily tasks.
5. Social facilitates Task		
Emotional support	Listening – To vent one's feelings	The provision of support through the act of listening to team members venting his or her feelings in order to provide emotional aid to this team member and her emotional difficulties.
Appraisal support	Affirmation	The action or process of affirming or finding affirmation for something with the objective to provide support and so contribute to the self- evaluation of others
Social talk	Empathy	The act of making small talk to remain updated on team members' well-being, both at and away from work, to be able to empathize with team members' current life situations
Instrumental support	Assistance	The act to make it easier or possible for team members to perform their daily tasks by offering them or receiving one's services or resources in order to provide aid when needed.

Table 2. Overview of the (sub-)Categories of Team Members' Actions as Found in the Results

Categories	Sub-categories	Stage 2: Confirmation	Stage 3: Culmination	Stage 4: Aftermath
Task TMX				
Structural capital				
Cognitive capital	Advice			
Social TMX				
Emotional support	Listening			
	Caring			
Appraisal support	Encouragement			
Social talk Sociability				
Task & Social				
Social talk	Relaxation			
Instrumental support				
	Aid-in-kind			
Relational capital				
	Friendship-related relational			
	capital			
	Work-related relational capital			
Task facilitates Social				
Informational	Sharing information			
support				
Social facilitates				
Task				
Emotional support	To vent one's feelings			
Appraisal support Affirmation				
Social talk Empathy				
Instrumental support	Assistance			

Table 3. The Role of the Found Categories during Three Stages of the Organizational ChangeProcess







*Figure 1*. Classification of the Constructs in Task TMX, Task & Social TMX, and Social TMX