



Bachelor Thesis Organization and Strategy

How can a combination of the LMX-theory and the TMX-theory contribute to the productivity of the workgroup?

Supervisor: Dr. A.J.A.M. Naus
Student: Ronald Feijen
ANR: 78.63.85
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Management Summary

Both the leader-member exchange theory and the team-member exchange theory are theories that can account for the performance of the team. The leader-member exchange theory focuses on the relationship between a leader and a member of the team, the team-member exchange theory focuses on the relationship between a member and the team as a whole. High quality leader-member exchange (LMX) relationships have positive influences on job satisfaction and on organizational commitment. High quality team-member exchange (TMX) relationships also have a positive influence on job satisfaction. Both the LMX-theory and the TMX-theory are derived from the social exchange theory.

The leader-member exchange theory will be connected to transactional and transformational leaders. A transactional leader is a leader who is more distant from his/her team and chooses to reward (or punish) employees when certain organizational goals are (not) achieved. A transformational leader is a leader who is very close to his/her team and is seen as a charismatic leader. The team-member exchange theory will be connected to independent and interdependent teams. Independent teams are characterized by low levels of social interaction and the members of the team can (and will) act independently of each other. Interdependent teams are characterized by high levels of social interaction and trust and a focus on the entire team.

The leader-member exchange relationship can be classified as an 'in-group' or an 'out-group' relationship. The team-member exchange relationship can be classified as 'a high team-member exchange' or 'a low team-member exchange' relationship. In this way, four different types of members can be found. These different types of members will have different preferences concerning the type of leader and the type of team.

These two different exchange processes can be combined to raise the performance of a team to higher levels. For example, a team is mainly composed of out-group members with a low team-member exchange. Transactional leaders and independent teams were found to be the 'best environment' for this type of team. However, different types of members need different types of leaders and different types of teams to create optimal environments to raise the productivity of the team to higher levels. The most prominent problem, that should be addressed in future research in this area, is what type of leader and what type of team will be the preferred choice, if the members of the team are all placed in different groups.

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Chapter 1: Introduction

1.1. Problem Indication

Analysts state that 2008 was a poor year for the world economy. Consequences are already detected throughout the world, but according to most analysts and Prime Ministers the subprime mortgage crisis is not coming to an end in 2009. The consequences for organizations and individual employees are enormous, which is demonstrated by large numbers of bankruptcies and mass firings.

Recently, many articles in newspapers state that people get more paranoid in these times of crisis. People do not want to lose their jobs and, at least some of them, are willing to do anything to keep their job. This includes praising their own achievements and sharply criticise the achievements of their colleagues. The relationship between leaders and members of the team is reshaped, but is this considered to be a 'good' change? The leader-member exchange theory (LMX) can give us some insights into this problem. This theory describes the relationship between a leader and members of the team and shows there are mainly two different types of relationships.

Because members of the team get more focused on their own work, it is very well possible that the tension between colleagues of the team is elevated to higher levels. This gives a new dimension to the relationship between colleagues (of the same team) as well. The team-member exchange theory (TMX) describes how it is possible to cope with this problem. This theory describes the relationship between a member of the team and the team as a whole.

Can organizations or governments find a solution for the longer term to cope with these large numbers of bankruptcies and mass firings? A possible longer term solution, with the objective of lowering the relative labour costs, can be to improve the productivity of the employees. More specifically, a long-term solution can be to improve the productivity of the team.

1.2. Problem Statement

Concluding from the above, the following main question emerges:

Can a reorientation of exchange relationships, more specifically leader-member exchange and team-member exchange relationships, in the workplace enhance the productivity of the team?

Two important theories used in this paper will be defined.

The leader-member exchange (LMX) theory states that a leader will develop close and strong relationships with relatively few members of the team. The relationships with the other members are (mostly) very superficial. The team-member exchange (TMX) theory is focused on the relationship between one member of the team with the entire team. Different members of the team will have different perceptions about their team-member exchange relationship. Both the LMX-theory and the TMX-theory are derived from the social exchange theory. The key word in this theory is 'reciprocation'. The particular focus of this paper will be to what extent the productivity of a team can be influenced through a combination of insights from the LMX-theory and the TMX-theory.

1.3. Research Questions

The following research questions will be addressed:

- What are the underlying assumptions of the Social Exchange theory, Leader-member Exchange theory and Team-member Exchange theory?
- What types of leaders can have a positive influence on the productivity of the team?
- What types of teams can have a positive influence on the productivity of the team?
- How can the Leader-member exchange theory (LMX) and the Team-member exchange theory (TMX) be combined to account for the productivity of a team in a positive way?

This paper will start with explaining three exchange relationship theories, namely the social exchange theory, leader-member exchange theory and the team-member exchange theory. The second research question will discuss the characteristics of different types of leaders that are considered to be 'good' leaders. The third research question follows the same reasoning and will describe the characteristics of different types of teams that are considered to be 'good' teams. Research question four will be used to link the LMX-theory and the TMX-theory to the different types of leaders and the different types of teams.

1.4. Structure of the thesis

Chapter 2 will discuss the social exchange theory, the leader-member exchange theory and the team-member exchange theory. Chapter 3 will introduce the characteristics of different types of leaders that influence the productivity of the team. Chapter 4 also focuses on influencing the productivity of the team, by stating the characteristics of different types of teams. Chapter 5 will be used to link the different theories defined in chapter 2. After linking these theories, the focus will shift to combining these theories to jointly account for the productivity of the team. The conclusions and recommendations of this literature review will be given in Chapter 6.

Chapter 2: The Social Exchange theory, the LMX-theory and the TMX-theory

2.1. The Social Exchange theory

Before introducing the theories of leader-member exchange and team-member exchange, the focus will be on the social exchange theory (SET). The LMX-theory and the TMX-theory are both derived from the SET and will be discussed later in this chapter.

2.1.1. Assumptions of the Social Exchange theory

The social exchange between two or more different people (of a team) is composed of a set of interdependent transactions (Molm, 2003). The social exchange theory describes processes in organizations and workgroups as well as in 'normal' life. The theory states that every relationship that is formed between two (or more) humans is based on a subjective cost-benefit analysis. Assuming that a member of the team perceives a relationship with a member from a different team as beneficial to him/her, the prediction of the theory is that the relationship will not change. This benefit can be an intrinsic benefit or an extrinsic benefit (Blau, 1964). If, for example, the same relationship is considered to be costly to the member of the team (or to the other person), the theory predicts that this relationship will change or come to an end in the near future. In this relationship between cost-benefit analysis and (not) changing the relationship between two or more people, 'the social exchange relationship is a mediator or intervening variable' (Cropanzano & Mitchell, 2005, p.882).

A 'strong' social exchange in a team leads to more recurrent interactions, better perceptions of the team and a higher emotional commitment towards the team (Lawler, Thye, & Yoon, 2008). The key term in the Social Exchange theory is 'reciprocation'. If a person of the team provides a benefit to another person of that team, the Social Exchange theory predicts that the second person will react by supplying a benefit to the first person (Gergen, 1969; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001; Bishop, Scott, & Burroughs, 2000). There are actually two ways in which these mutual benefits can arise. The first possibility is already mentioned above, reciprocation. The second possibility is negotiation between two or more people (Cook, Emerson, Gillmore, & Yamagishi, 1983). Because reciprocity is generally considered to be a voluntary relationship, and negotiation is

considered to be a forced relationship, reciprocity allows for more trust and commitment between the different members of the team (Molm, Takahashi, & Peterson, 2000).

2.2. The LMX-theory and the TMX-theory

The social exchange theory has been the basic assumption for many other theories. Social exchange relationships can arise between team members and leaders (Liden, Sparrowe, & Wayne, 1997), between team members and the whole team (Deckop, Cirka, & Andersson, 2003; Flynn, 2003), with suppliers (Perrone, Zaheer, & McEvily, 2003), with customers (Sheth, 1996) and with the organization where the team is employed (Moorman, Blakely, & Niehoff, 1998). Two of these exchange relationships are of interest for this paper, the leader-member exchange relationship and the team-member exchange relationship. Both relationships and their theories will be elaborated in this section.

2.2.1. The leader-member exchange theory (LMX-theory)

The leader-member exchange concept can be defined as ‘a social exchange relationship that happens between the manager and members of a business organization’ (Yu & Liang, 2004, p.4). The conceptualization of the LMX-theory has been changed dramatically over the years (Graen & Cashman, 1975; Graen, Novak, & Sommerkamp, 1982; Graen & Scandura, 1987). The LMX-theory, however, still needs to be improved in multiple areas (Schriesheim, Castro, & Cogliser, 1999). The quality of LMX relationships can be measured using a three-dimensional scale. The most recent scale, which was developed in 1992, is the LMX-6 scale (Schriesheim, Scandura, Eisenbach, & Neider, 1992). This scale was developed by using the three dimensions of LMX relationships: loyalty, affection and the perceived contribution to the relationship (Dienesch & Liden, 1986).

The LMX-theory is focused on two different relationships of leaders with the members of their team. In practice, leaders often have a special relationship with a relatively small amount of members of the team. At the same time, there is a large amount of members that don't have that special relationship with the leader. The first group of people is referred to as the ‘in-group’, the second group is known as the ‘out-group’. A line can be created, which separates the in-group from the out-group (Yu & Liang, 2004).

‘Good’ leaders should manage both relationships in a positive way. The in-group displays loyalty and commitment and expects something in return for their hard work

(Gouldner, 1960). The leader often decides to give the in-group a higher degree of decision influence and responsibility as opposed to the out-group. The out-group doesn't have this special relationship with the leader. The (good) relationship with the in-group is maintained as long as both the leader and the in-group members perceive the relationship as fair (Graen & Scandura, 1987; Hollander, 1978). The out-group will have low levels of influence and choice. Out-group members can be stimulated by low levels of interaction, rewards and support; these members want to have more independency (Dienesch & Liden, 1986). The leader has the power to change the relationship with an out-group member, but the leader will not change this relationship without a convincing reason. For example, two members of the in-group leave the organization, because they can get a higher income at another organization. The leader will have to fill this 'gap' with other employees and it is possible that the leader will change the relationship with an out-group member, to make this out-group member an in-group member.

2.2.2. The team-member exchange theory (TMX-theory)

The TMX-theory is more focused on the quality of the relationships between the different team members. The team-member exchange can be defined as an 'individual's perception of his or her exchange relationship with the peer group as a whole' (Seers, 1989, p.119). The TMX-theory is also a theory that is derived from the social exchange theory (Blau, 1964). The definition from Seers (1989) states that the TMX-process is different for every individual, because an individual's perception determines the outcomes of this process. Concluding from the above, for different members of the same team, the perception of the team-member exchange relationships will also deviate. If the team-member exchange relationship is characterized by high team-member exchange, the performance of this team will improve (Love & Forret, 2008).

The TMX-theory posits that relationships between individual team members and the entire team can differ in content. If a particular member has a perception of a low team-member exchange relationship, that member will produce less effort to accomplish the goals of the team. A team member with a perception of a high team-member exchange will produce more effort and will display commitment and loyalty to the team (Liden, Wayne, & Sparrowe, 2000). The quality of the team-member exchange will be higher in autonomous teams as compared to traditional teams (Seers, Petty, & Cashman, 1995). Also, under the assumption

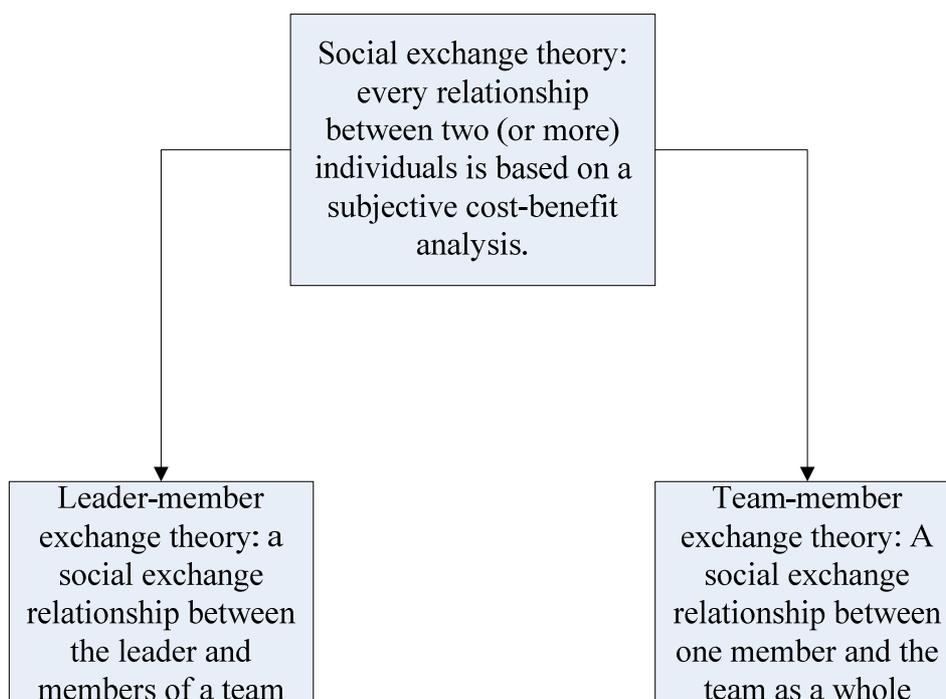
of high levels of team-member exchange, there will be a 'better' decision-making in teams that are characterized by high task interdependence (Alge, Wiethoff, & Klein, 2003).

The level of team-member exchange will be dependent on the autonomy of the workgroup and on the job attitudes of the workgroup (Seers, 1989). Teams that have higher levels of autonomy will also have higher levels of team-member exchange. Changes in the job attitudes (job satisfaction) of the members of the team will be a prediction for changes in the team-member exchange relationships. Furthermore, the 'team-member exchange quality varies systematically between groups in relation to the autonomy given teams by management and within groups in relation to job attitudes' (Seers, 1989, p.118). Different levels of autonomy will lead to different levels of team-member exchange between different teams and different levels of job satisfaction will lead to different levels of team-member exchange within the same team.

2.3. Summary

The theories discussed above, the social exchange theory, the LMX-theory and the TMX-theory, are placed into a graphical perspective and summarized in figure 1.

Figure 1: The social exchange theory, LMX-theory and TMX theory.



Chapter 3: Characteristics of leaders

First, the focus will lie on the different types of leaders that are present at modern organizations. Three different types of leaders are identified, and two of these types of leaders, transformational leaders and transactional leaders, will be further evaluated. In the next sections, the prevailing characteristics, the advantages and the disadvantages of these types of leaders will be examined.

3.1. Different types of leaders

In 1978, James MacGregor Burns was the first researcher, who differentiated between different types of leaders. He identified three different types: transactional leaders, transformational leaders and laissez-faire leaders (Burns, 1978). Laissez-faire leaders are leaders that will not or hardly intervene with the team and they will let the team take their own direction. This third type of leadership is generally considered to be (very) inefficient and will not be further discussed.

The transactional leader is mostly common in organizations, although this type of leadership is not indisputable the 'best' type of leadership. Transactional leaders 'mostly consider how to marginally improve and maintain the quantity and quality of performance, how to substitute one goal for another, how to reduce resistance to particular actions, and how to implement decisions' (Bass, 1985, p. 27). This type of leader is focused on his/her own interest and will only assist employees when they (the leaders) also have benefits from this relationship. Transactional leaders choose to reward employees when certain organizational goals are achieved in a reasonable amount of time or punish employees when organizational goals are not accomplished within the pre-determined time.

Some organizations and shareholders would like to have transformational leaders managing their daily business. Transformational leaders 'attempt and succeed in raising colleagues, subordinates, followers, clients, or constituencies to a greater awareness about the issues of consequence. This heightening of awareness requires a leader with vision, self confidence, and inner strength to argue successfully for what he sees is right or good, not for what is popular or is acceptable according to established wisdom of the time' (Bass, 1985, p. 17). Followers of this type of leaders tend to be highly motivated towards the organization and towards colleague members of the workgroup. Leaders who display transformational leadership behavior are often at the centre of an organization. These transformational leaders

can exert influence on the decisions made in the organization and often hold important (central) positions (Bono & Anderson, 2005). Other researchers have also confirmed the importance of transformational leaders, which is emphasized by this quote: 'Transformational leadership should be encouraged, for it can make a big difference in the firm's performance at all levels' (Bass, 1990, p.25)

There are opposite views of researchers, who claim that the transformational leadership style is not always the 'best' leadership style. Leaders should adapt their leadership styles dependent on the personality traits of the members of their workgroup (Moss & Ngu, 2006). Also, the line between the transformational leadership style and the transactional leadership style is vague. The leader-member exchange theory is both transactional and transformational: at the beginning the social exchange is transactional, but at the end the social exchange is transformational (Graen & Uhl-Bien, 1995). A sharp line between these two concepts cannot be delineated.

3.2. Characteristics of transformational and transactional leaders

The considerations above, lead to the conclusion that no type of leader can be considered to be superior to other types of leaders. What are the differences between the characteristics these transformational and transactional leaders display in the real world? Generally, four characteristics are considered to be vital for a transformational leader and four characteristics can be addressed to a transactional leader (Bass, 1990). These characteristics are depicted in table 1.

Table 1: Characteristics of transformational and transactional leaders (Bass, 1990, p.22)

CHARACTERISTICS OF TRANSFORMATIONAL AND TRANSACTIONAL LEADERS

TRANSFORMATIONAL LEADER

Charisma: Provides vision and sense of mission, instills pride, gains respect and trust.

Inspiration: Communicates high expectations, uses symbols to focus efforts, expresses important purposes in simple ways.

Intellectual Stimulation: Promotes intelligence, rationality, and careful problem solving.

Individualized Consideration: Gives personal attention, treats each employee individually, coaches, advises.

TRANSACTIONAL LEADER

Contingent Reward: Contracts exchange of rewards for effort, promises rewards for good performance, recognizes accomplishments.

Management by Exception (active): Watches and searches for deviations from rules and standards, takes corrective action.

Management by Exception (passive): Intervenes only if standards are not met.

Laissez-Faire: Abdicates responsibilities, avoids making decisions.

3.2.1. Transformational leaders

A transformational leader is a leader who is very close to his/her team. Because of this close relationship between the leader and his/her team, communication about the expectations of certain people in the team will not be a problem. By communicating these tasks and expectations in a way that instils pride in the team, the transformational leader will receive respect and trust from his/her team. Also, a transformational leader should provide the team with a clear direction. These characteristics substantiate the findings that transformational leaders have more effect on team performance than transactional leaders (Albritton, 1998). Because of the characteristics mentioned in the table, a transformational leader is seen as a charismatic leader. This charismatic leader is the basis for a different area of research (House, Spangler, & Woycke, 1991; Shamir, Zakay, Breinin, & Popper, 1998). Another (important) characteristic that every transformational leader should have is the ability to democratize the decisions that are taken in this team. Members of the team should participate in the decision making, to create an open and free discussion about the direction where the team is going. The last characteristic of transformational leaders doesn't focus on the team as a whole, but considers the members of the team as individual human beings. A 'good' transformational leader gives attention to every individual member of the team. The leader should also build personal relationships with the individual members, to create the opportunity to advise the

members to elevate them to higher levels of performance. Other researchers have defined similar characteristics for transformational leaders (Yukl, 1989).

3.2.2. Transactional leaders

A transactional leader is a leader who is more distant from his/her team. The transactional leader needs this 'space', to be able to adequately monitor and reward or punish the members of the team. Transactional leaders will reward members who display high levels of effort or members who finish their tasks within the deadline. Members of the team that display less effort or do not finish their tasks within the pre-determined time are punished. In this way, transactional leaders do recognize accomplishments and high levels of motivation. Transactional leaders can make a choice between three different types of managing the members of the team, namely: management by exception (active), management by exception (passive) and laissez-faire. Active management by exception gives a high workload to the transactional leader, because the leader has to search for deviations of the 'normal' work of the members. With passive management by exception, the transactional leader only has to act if standards are not met or if there is no compliance with the rules. Active management by exception wants to initiate actions to prevent problems and passive management by exception only initiates actions when problems already occurred (Howell & Avolio, 1993). A transactional laissez-faire leader does not make decisions and gives his/her followers complete freedom in completing their tasks. Consequently, this type of leadership should be separated from transformational and transactional leadership (Avolio, 1999).

The model named 'the full range of leadership' can be used to locate the transformational and transactional leadership styles at two different ends of the continuum. Leaders can be placed on every spot of the continuum, indicating the level of transformational or transactional characteristics (Bass & Avolio, 1994). However, some researchers have argued that the transformational leadership style is a supplement to the transactional leadership style (Howell & Avolio, 1993) or that 'good' leaders should both have transactional and transformational characteristics (Bass, 1999).

3.3. Advantages and disadvantages of transformational leaders

The first advantage worth mentioning is that transformational leaders improve the level of creativity in the members of the team and the level of innovation in the team as a whole (Shin & Zhou, 2003; Jung, 2001; Sosik, Kahai, & Avolio, 1998). Another advantage is that transformational leaders give members of the team a positive perception towards the leader and colleagues in the team. This leads to a higher satisfaction of the members of the team, both in terms of job satisfaction (Martin & Epitropaki, 2001) and in terms of leader satisfaction (Conger, Kanungo, & Menon, 2000). Another advantage of transformational leaders is intrinsically linked to the other advantages. Because members of a team with a transformational leader can display more creativity and innovation and are more satisfied with their position in the organization, they will display more loyalty and commitment towards the leader and the organization (Bycio, Hackett, & Allen, 1995).

The relationship between female (transformational) leaders and male subordinates appears to be less effective than the relationship between female (transformational) leaders and female subordinates or between male (transformational) leaders and male or female subordinates (Ayman, Korabik, & Morris, 2009). Another important finding was that male and female subordinates rated the effectiveness of the performance of male leaders as identical, regardless of the levels of transformational leadership they displayed (Ayman et al., 2009). If the members of the team value harmony and tradition, the transformational leadership style will not lead to higher levels of creativity (Shin & Zhou, 2003).

Concluding, the transformational leadership style is not always perceived as the 'best' leadership style. Leaders should take into account the personality traits of the members of the team to determine the 'best' leadership style (Moss & Ngu, 2006). The transactional leadership style will, sometimes, be preferred over the transformational leadership style.

3.4. Advantages and disadvantages of transactional leaders

Transactional leaders are a good combination with the members of the team who want to be restricted in the choices they have to make on a daily basis. These members will prefer rules, definite procedures and clear and concise tasks. These members of the team will not prefer the transformational leadership style over the transactional leadership style (Wofford, Whittington, & Goodwin, 2001). Also, the transactional leadership style leads to benefits/advantages for both the leader and the member of the team (Yukl, 1981). The social

exchange theory has labeled this phenomenon as 'reciprocation'. Transactional leaders can be (very) effective, as long as these transactional leaders have the ability and the intention of correctly responding to reactions and expectations of the members of the team. The leaders will also have to deal with changes in these reactions and expectations (Kellerman, 1984).

A disadvantage from transactional leaders is that these leaders are generally considered to create less creativity-inducing environments (Jung, 2001; Sosik, Kahai, & Avolio, 1998). The transactional leadership style can be divided into different levels, by means of high-quality exchange relationships and low-quality exchange relationships (Graen, Liden, & Hoel, 1982), less-obvious to obvious (Burns, 1978) and various transactions available to the transactional leader (Bass, 1985). Also, transactional leaders do not have a charismatic appearance, are not able to meet the emotional needs of the members of the team and are not able to intellectually challenge these members (Bass, 1990).

3.5. Conclusion

Both transformational leaders and transactional leaders are considered to be 'good' leaders and were discussed in this chapter.

Transformational leaders should have a close relationship with the members of the team, the leader should be good in communicating the goals and the expectations of the organization, provide the team with a clear mission and also focus on the individual human beings. Other characteristics a transformational leader should have are the ability to create an open and free discussion and to foster an environment of innovation and creativity.

Transactional leaders should have a more distant relationship with the members of the team; the leader should objectively monitor the performance of these members. Members that are displaying high levels of motivation and dedication receive rewards; members that display low levels of motivation and dedication receive punishment. A transactional leader can perform the monitoring of tasks in a number of different ways.

After these characteristics of the different leadership styles were clarified, advantages and disadvantages of these leadership styles were elaborated. Are transformational leaders or transactional leaders considered to be 'the best' leaders? A conclusive answer cannot be given, because the productivity of the workgroup will also depend on the type of team. This topic will be the subject under investigation in the next chapter.

Chapter 4: Characteristics of teams

This chapter will be used to elaborate on the concept of ‘teams’. First, a definition and characteristics of teams are given. After discussing the factors that influence the performance of every team, a brief explanation about the distinction between a ‘team’ and a ‘group’ is given. After that explanation, the focus will shift to the different types of teams. The emphasis will lie on independent, interdependent and virtual teams. Other types of teams are also briefly discussed.

4.1. Teams

A team can be identified as ‘a distinguishable set of two or more people who interact, dynamically, interdependently, and adaptively toward a common and valued goal/objective/mission, who have each been assigned specific roles or functions to perform, and who have a limited life-span of membership’ (Salas, Dickinson, Converse, & Tannenbaum, 1992, p.4). Technology in organizations is making the tasks that employees must complete, more difficult. Teams are considered to be the best solution of coping with these increasingly complex tasks, because team members can focus on their specializations and the individuals can divide the tasks in an efficient way (Mathieu, Heffner, Goodwin, Salas, & Cannon-Bowers, 2000).

There are a lot of different factors that influence the performance of the team (Gist, Locke, & Taylor, 1987). This performance is measured by time spent, errors, costs, general productivity and product quantity and quality (Tannenbaum, Beard, & Salas, 1992). The factor that received the most attention in research is the influence of the mental model on the performance of the team. Teams with individuals who think/feel the same about certain organizational topics are expected to produce a higher performance. Another factor that has an influence on the performance of the team is the factor ‘heterogeneity’. Some researchers have found a negative association between the heterogeneity of the team members and the performance of the whole team (Campion, Medsker, & Higgs, 1993); other researchers found that the performance of the whole team is positively associated with the heterogeneity of the team members (Magjuka & Baldwin, 1991; Jackson, Brett, Sessa, Coopers, Julin, & Peyronnin, 1991). Other factors that influence the performance of the team are the familiarity of the team, team goals, motivation of the team and leadership. These six influencing factors are shown in table 2, including the most important researchers on these topics.

Table 2: The six factors that influence the performance of the whole team.

Factors influencing the performance of the whole team	Most important researchers
Mental model(s) - Shared mental models will increase the productivity.	- Mathieu et al. (2000) - Kraiger & Wenzel (1997)
Heterogeneity among team members - This factor has positive and negative associations in relation to the performance of the team.	- Magjuka & Baldwin (1991) - Campion et al. (1993) - Jackson et al. (1991)
Familiarity of the team - Higher familiarity of the team increases the productivity.	- Goodman & Leyden (1991) - Katz (1982)
Team goals - The presence of (difficult) goals increases the performance.	- Weldon & Weingart (1993) - Fandt, Richardson & Conner (1990)
Motivation of the team - Higher levels of motivation will increase the productivity.	- Shamir (1990) - Guzzo, Yost, Campbell, & Shea (1993)
Leadership - Higher expectations of the leader will increase the productivity.	- Jacobs & Singell (1993) - Haleblian & Finkelstein (1993)

Is it possible to use the terms 'group' and 'team' interchangeably? Several researchers have used these two terms interchangeably (Cohen & Baily, 1997; Langfred, 1998), where other researchers have chosen to differentiate the two terms (Fisher, Hunter, & Keith Macrosson, 1997; Katzenbach & Smith, 1993). The two terms will not be used interchangeably here, because the term 'group' can be defined as a distinguishable set of two or more people. The term 'team' is characterized by a distinguishable set of two or more people, who interact (interdependently) toward a common goal and each person has a specific function to come to the achievement of this goal. The definition of a 'group' is broader than the definition of a 'team' given by Salas et al. (1992).

4.2. Different types of teams

There are a lot of different types of teams. The most important distinction for this research is the difference between independent teams and interdependent teams. At this moment, virtual teams are presumed to become more significant in the future (Carmel & Agarwal, 2001). This type of team is an example of an interdependent team and will also be discussed. Other types of teams are mentioned in the last section of this paragraph, but the clarification of these teams will be limited.

4.2.1. Independent and interdependent teams

The two most important types of teams are known as 'independent' and 'interdependent' teams. Independent teams are characterized by low levels of social interaction and high levels of job-related training. The members of this type of team are independent from each other. Interdependent teams, on the other hand, are focused on the entire team. Interdependent teams are characterized by high levels of social interaction and trust. These different types of teams will also have different levels of team effectiveness, dependent on the level of autonomy and the level of interdependence of the team (Campion et al., 1993; Cohen & Bailey, 1997). This interdependence between the different team members plays a role through the 'intrateam processes'. These processes are basically the conversations and interactions that take place between the different team members (Hackman, 1987).

The success of independent teams is mainly dependent on the performance of every individual. Every individual in the team performs the same tasks and the success of these tasks is dependent only on that individual. The interaction between the different team members is minimal and there are not much conflicts (Herold, 1978). Success of interdependent teams is dependent on the whole team, every individual in the team specializes in a certain area of his/her expertise and the accomplishment of these tasks is also dependent on the work of the other team members. The interaction between the different team members is maximal and this interaction is needed to obtain information and other inputs (Campion et al., 1993). Thus, interdependent teams are 'characterized by high task interdependence, high role differentiation, high task differentiation, and distributed expertise' (Neuman & Wright, 1999, p.377).

Independent and interdependent teams are also connected to the performance of the team. Highly independent and highly interdependent teams show a high performance, whereas moderately interdependent teams show a lower performance (Wageman, 1995; Saavedra,

Earley, & Van Dyne, 1993). Both types of teams can possibly be 'good' teams, depending on the circumstances (Gladstein, 1984). Table 3 summarizes the characteristics of independent teams and interdependent teams.

Table 3: The characteristics of independent and interdependent teams

Independent teams	Interdependent teams
Every individual performs the same tasks.	Every individual specializes in a certain area.
The success is dependent on the performance of the individual.	The success is dependent on the performance of the whole group.
Individuals are more focused on their own performance.	Individuals are more focused on the performance of the whole group.

4.2.2. Virtual teams

Virtual teams are supposed to become more important in the future (Carmel & Agarwal, 2001). A virtual team is an interdependent team, because the success of an individual is dependent on the performance of the whole team. Virtual teams are characterized by using technology to communicate with each other and these virtual teams usually include members from different nationalities and cultures (Kimble, Alexis, & Li, 2000). These cultural differences may lead to miscommunication and difficulty in making appointments, completing the tasks within the deadline and other coordination issues (Kayworth & Leidner, 2000; Robey, Khoo, & Powers, 2000). Virtual teams are often composed for (short-term) projects or other short-term needs and are, thus, short-lived. Team performance will be higher, if all team members are trained on the same technology skills (Kaiser, Tullar, & McKowen, 2000). Team performance is lower, when all team members are trained in different areas of technology.

4.2.3. Other types of teams

There are several other types of teams. Self-managed teams are teams without a dominant leader. There is a leader/manager who delegates the authority of the tasks to the team, giving teams a high degree of freedom and responsibility to work and accomplish these tasks. Another type of team is a project team, which is characterized by a defined lifespan (the life of the project) and clearly defined objectives. Project teams are often composed of members of different departments in the organization, because every member of the team will have his/her own specialization. Interdisciplinary teams are teams that are composed of professionals that are collectively working towards a certain objective or goal. For example, a decision about whether or not to take on a new project is collectively made and grounded by the team of professionals. Multidisciplinary teams are teams that are composed of individual professionals that are individually working towards a certain common objective. For example, the decision about whether or not to start a new project will be investigated by every professional individually.

These teams are not applicable to this research. Self-managed teams are teams, which have a laissez-faire leader. This type of leader was considered to be (very) inefficient. Project teams are characterized by a defined lifespan and this research focuses on long-term relationships between a leader and members of the team. A long-term relationship is possible within project teams, but in practice this will not always be the case. Interdisciplinary and multidisciplinary teams are composed of a group of professionals, who (collectively or individually) work towards a common objective. This research focuses on the relationship between a leader and members of his/her team, not on professionals with a common objective. For these reasons, these types of teams will not be further discussed.

4.3. Conclusion

This chapter started with an explanation of teams in general. After a definition and some characteristics of teams were given, the focus shifted towards the factors that influence the performance of a team. These (six) factors were identified as the congruence of mental models, heterogeneity between team members, familiarity of the team, team goals, motivation of the team and different types of leadership. The definition of a 'group' was found to be broader as the definition of a 'team'.

The most important teams for this research were discussed in some detail. Independent teams are focused on the individual and every individual from the team performs the same tasks. Interdependent teams are more focused on the team and every individual from the team specializes in a certain area. Virtual teams are a subgroup of interdependent teams. This type of team applies technology to communicate and is often composed for a short amount of time. Some of the characteristics of virtual teams and other types of teams were discussed.

Chapter 5: Exchange processes, leadership and teams

5.1. Linking the exchange theories to types of leaders and types of teams

Both the leader-member exchange theory and the team-member exchange theory can be divided into two main areas when focusing on the members of the team. The leader-member exchange theory places members of the team in the in-group or in the out-group. High quality leader-member exchange is correlated with higher job satisfaction, higher role clarity, lower role conflict, lower turnover and higher performance. Some members of the team will (always) remain in the out-group (Graen & Cashman, 1975; Vecchio & Gobdel, 1984). The team-member exchange theory differentiates members of the team with a high team-member exchange from the members with a low team-member exchange. The team-member exchange also has a significant influence on the job satisfaction of the members of the team (Seers, 1989) and on the team performance (Katzenbach & Smith, 1993). There are, however, multiple other factors that also influence the level of job attitudes and job satisfaction (Keup, Bruning, & Seers, 2004). In this way, four different types of members can be found, which are depicted in table 4. These different types of members will have different preferences concerning the type of leader and the type of team. These preferences will be given below.

Table 4: Combining the LMX-theory and the TMX-theory

		Leader-member exchange theory	
		In-group member	Out-group member
Team-member exchange theory	High TMX	In-group / high team-member exchange	Out-group / high team-member exchange
	Low TMX	In-group / low team-member exchange	Out-group / low team-member exchange

5.1.1. An in-group member with a high team-member exchange

As already mentioned before, the 'leader-member exchange (LMX) theory is both transactional and transformational' (Graen & Uhl-Bien, 1995, p.238). The social exchange starts as a transactional relationship, but towards the end the social exchange evolves into a transformational relationship (Graen & Uhl-Bien, 1995). This evolution can both result in a positive and a negative change in the leader-member relationship. Consequently, members who are relatively new prefer a transactional leader and members who are part of the in-group prefer a transformational leader. An in-group member has had a long relationship with the leader of the team; otherwise this member could not be an in-group member. This member would therefore prefer a transformational leadership style. The leader should be close to the team (members) and give the team a clear direction or goals.

Members with a high team-member exchange will prefer interdependent teams, because these members prefer to work together with other members of the team. Each member of the team should specialize in a certain area of expertise and the performance of every individual should be dependent on the performance of the whole team. These members are very amicable and they want 'the best' for the other team members. Virtual teams will not lead to an optimal environment here, because a team member with a high team-member exchange wants to be close to the whole team. Also, an in-group member wants to show the rest of the team his/her 'good' relationship with the leader of the team.

5.1.2. An out-group member with a high team-member exchange

Not all members of the team are in-group members, some of these members will belong to the out-group. The relationship between a leader and the in-group is characterized by high levels of trust and communication, while the relationship between a leader and the out-group is usually based on the employment contract (Graen & Cashman, 1975). An out-group member is (probably) a member of the team that is relatively new and this member did not have enough time to become an in-group member. Another possibility is that this out-group member does not have a good relationship with the leader of the team and that this member does not want this relationship to change. In both possibilities, an out-group member will prefer a transactional leader (Graen & Uhl-Bien, 1995). The leader should be more distant from the group and objectively monitor and reward or punish the performance of individual team members.

This member, with a high team-member exchange, will also prefer an interdependent team. The performance of every individual should be dependent on the performance of the whole team. In this case, a virtual team does imply a good solution. Although the team member with a high team-member exchange wants to be close to the other members of the team, this member does not want to show that he/she is part of the out-group. In virtual teams, this line between in-group members and out-group members becomes blurred.

5.1.3. An in-group member with a low team-member exchange

The same reasoning applies to in-group members (and out-group members) of the team with a low team-member exchange, when the focus lies on the preference of the type of leader. In-group members already have a long relationship with their leader and their relationship can be classified as a 'good' relationship. These members prefer leaders who are very close to the team; they prefer transformational leaders (Graen & Uhl-Bien, 1995).

Team members with a low team-member exchange are not very amicable and they do not have a good relationship with the other team members. These members will only focus on their own performance/goals and will not be helpful to assist in the goals of the whole team. These members (with a low team-member exchange) will therefore prefer an independent team. The focus should be on the performance of every member of the team individually and every member of the team performs the same tasks. It is noteworthy, that a member of the team can have different evaluations of the relationships with individual team members and the team as a whole (Cartwright, 1968). A virtual team is not optimal for these types of members. Virtual teams are always an interdependent team, which makes virtual teams impossible to apply in this particular case. Also, in-group members want to display their good relationship with the leader of the team to the other team members.

5.1.4. An out-group member with a low team-member exchange

Several researchers have confirmed that there is a possible differentiation between in-group members and out-group members (Vecchio, 1997). This differentiation between different members of a team is conflicting with the notions of fairness and equality (Kabanoff, 1991). As a consequence, out-group members of a team will have lower levels of team-member exchange, because they think the relationship between in-group members and the leader is unfair; their motivation to help other team members will decrease.

Out-group members will generally prefer a transactional leader (Graen & Uhl-Bien, 1995). The leader should be distant from the group and objectively monitor the performance of team members. The transactional leader has three possibilities in monitoring the performance: management by exception (active), management by exception (passive) and laissez-faire. Members with a low team-member exchange want distance from the other team members; an independent team would be the most satisfying solution. The performance of an individual team member will not depend on the performance of the whole team.

5.1.5. Summary

Table 5 gives a summary of the preferences displayed by different types of team members. The preferences were focused on different types of leaders and different types of teams.

Table 5: Preferences of different types of team members

	Leader-member exchange	
	In-group	Out-group
Team-member exchange High	<ul style="list-style-type: none"> - Transformational leaders - Interdependent teams 	<ul style="list-style-type: none"> - Transactional leaders - Interdependent teams - Virtual teams
Low	<ul style="list-style-type: none"> - Transformational leaders - Independent teams 	<ul style="list-style-type: none"> - Transactional leaders - Independent teams

5.2. Conclusion

Optimal conditions lead to high levels of productivity. But what are these optimal conditions? This section states that this optimal environment differs for different team members. To create such an environment, the organization first needs to know what type of team member a certain individual is. After all the team members are placed in a certain box, the optimal environment can be created.

Team members that belong to the in-group and have high team-member exchange relationships prefer transformational leaders and interdependent teams. In this case, virtual teams are not recommended, because members that belong to the in-group want to show the good relationship they have with the leader of the team to the other team members. Out-group team members with a high team-member exchange prefer transactional leaders, interdependent teams and virtual teams. Members of the team that belong to the in-group and have a low team-member exchange will choose transformational leaders and independent teams. In the case of independent teams, virtual teams are not possible. Out-group team members, which are characterized by low levels of team-member exchange relationships, will choose transactional leaders and independent teams.

Chapter 6: Conclusions and Recommendations

6.1. Conclusions

This paper started by introducing the theoretical considerations underlying this specific area. The social exchange theory, the leader-member exchange theory and the team-member exchange theory were all explained and summarized in figure 1. The social exchange theory states that all the relationships that are undertaken between two (or more) individuals, are based on a subjective cost-benefit analysis. The key word in this theory is 'reciprocation'. The LMX-theory and TMX-theory are both derived from this social exchange theory. The leader-member exchange relationship was defined as 'a social exchange relationship that happens between the manager and members of a business organization' (Yu & Liang, 2004, p.4). The team-member exchange concept was defined as 'an individual's perception of his or her exchange relationship with the peer group as a whole' (Seers, 1989, p.119). The focus shifted towards different types of leaders, transformational and transactional leaders, and towards different types of teams, independent and interdependent (and virtual) teams.

After the link between the LMX-theory and the TMX-theory was established, the focus shifted towards creating an optimal environment where the productivity of the team could raise to higher levels. Different team members preferred different types of leaders and different types of teams. Teams that exist mostly of in-group members combined with high team-member exchange relationships needed transformational leaders and interdependent teams to function optimally. Does the leader have a team, where most of the members belong to the out-group, but the team does have a high team-member exchange, the leader should have transactional characteristics and stimulate an interdependent and virtual environment. If the team is mainly composed of in-group members in combination with a low team-member exchange, the leader should be a transformational leader and the team should be allowed to act as independently as possible. The last team has mainly out-group members with low team-member exchange relationships. To raise the productivity of this team to higher levels, the leader should be transactional and the team should be allowed to act independently. In the latter two cases, virtual teams are not an option, because virtual teams are a subgroup of interdependent teams. Concluding, different types of members of teams need different types of leaders and different types of teams to create optimal environments to raise the productivity of the team to higher levels.

6.2. Recommendations

This research did not aim to give a unifying solution to questions like when and how to raise the productivity of the team. Several areas of this topic need to be further investigated, before any conclusive answers about this topic can be given. The most prominent problem is that the type of team members that are members of the same team will differ. For example, a team is composed of members of different departments to lead a new project of the organization. In this (new) team, twelve people take place and each of the possibilities discussed before (see table 3) is equally represented. Three people are becoming in-group members with high team-member exchange relationships, three people remain out-group members with high team-member exchange relationships, three people will become in-group members with low team-member exchange relationships and three people will remain out-group members with low team-member exchange relationships. Which type of leader and which type of team is optimal in this case? A conclusive answer cannot be given at this point in time. Also, the findings were not supported by empirical investigations. Future empirical research should be conducted in this area to give more validity to the findings discussed in this paper. Other researchers should also focus on the problem of the different levels of abstraction of the LMX-theory and the TMX-theory. The LMX-theory has two concrete possible outcomes; a member is part of the in-group or part of the out-group. The TMX-theory is very abstract, with a continuum of possibilities, ranging from very low team-member exchange relationships to very high team-member exchange relationships. Can these two theories be equalized to the same level of abstraction? If this is possible, how does this influence the findings discussed in this paper? These questions should be the focus of future research in this area.

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