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# Shared leadership in teams

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# Share leadership in teams

A theoretical and empirical investigation

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# Shared leadership in teams

A theoretical and empirical investigation

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#### **General introduction**

Great leaders have been puzzling us for centuries. What do they do to achieve extraordinary leadership performances? Walt Mossberg interviewed Steve Jobs in 2010 in yet another attempt to find out. "So you have the new iPhone we presume that is coming out very shortly (...). There is new Macs at various points of time. What's your personal role in that? (...) What do you do?"

Jobs: "One of the keys to Apple is (that) Apple is an incredibly collaborative company. (...) We have no committees. We are organized like a start up. One person is in charge of iPhone OS software. One person is in charge of Mac hardware. (...) Another person is in charge of world-wide marketing. (...) We all meet for three hours once a week and we talk about everything we are doing. The whole business. And there is tremendous teamwork at the top of the company, which filters down at tremendous teamwork throughout the company. (...) And so what I do all day is meet with teams of people. And work on ideas and solve problems to make new products, to make new marketing programs, whatever it is."

This is not the answer Mossberg expected. Instead of providing insight into his unusual personality and his extraordinary abilities, Jobs apparently relies on others and does not act solely in a kind of dictatorship. Or is he? Mossberg continues: "And are people willing to tell you that you are wrong?" Steve Jobs laughs. "Yeah! (...) We have wonderful arguments." Mossberg: "And do you win them all?" Jobs replies: "Oh no, I wish I did! Because you can't. If you want to hire great people and have them stay working for you, you have to let them make a lot of decisions and

you have to be run by ideas. Not hierarchy. The best ideas have to win. Otherwise good people don't stay." (www.youtube.com/watch?v=f60dheI4ARg&app=desktop)

This conversation between Mossberg and Jobs challenges traditional views of leadership. Indeed, for almost a century, researchers linked 'leadership' to 'position' and addressed how formally appointed leaders (i.e., vertical leaders; Barry, 1991) influence followers towards goal attainment (Yukl, 2010). Early research attempts focused on leadership traits that predict attaining a leadership position and being successful in that position. From the 1950's on, attention switched from traits to behavior in an attempt to find out what effective leaders do. The leadership framework most influential in the 1970's en 1980's switched the focus to situational aspects (such as the structure of the task, the nature of the organization, or follower characteristics) that interact with leader behaviors in determining effective leadership. In line with these research traditions, Mossberg tried to find out about Jobs' role at Apple, about what he is *doing*.

Steve Jobs in his reaction, saying that 'you have to be run by ideas, not hierarchy', breaks with these traditions. He disconnects 'leadership' from 'position' and instead links it to 'content', which at Apple are ideas. During team meetings, as he describes, anybody can act as a leader, provide ideas and convince others to follow these ideas. In the recent scientific literature, such a leadership approach is called 'shared leadership' (c.f., Nicolaides, LaPort, Chen, Tomassetti, Weis, Zaccaro, & Cortina, 2014; Wang, Waldman, & Zhang, 2014). Shared leadership refers to a dynamic influence process within teams where team members lead each other towards goal attainment (Houghton, Neck, & Manz, 2003; Pearce & Conger, 2003b; Wang, Waldman, & Zhang; 2014). This concept of shared leadership will be the focal point of this dissertation.

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# **Shared leadership**

# **Background**

The construct of shared leadership was developed throughout the 1990's (Avolio, Jung, Murry, & Sivasubramaniam, 1996; Barry, 1991; Perry, Pearce, & Sims, 1999; Seers, 1996; Yang & Shao, 1996) and has continued to intrigue researchers ever since (e.g., Carson, Tesluk, & Marrone, 2007; Mathieu, Kukenberger, D'Innocenzo, & Reilly, 2015). Its development, however, did not come unexpectedly. Although it lacked structural and systematic attention, there were several notions and ideas in the different leadership approaches throughout the 20<sup>th</sup> century, that paved the way for shared leadership. In the first half of the 20<sup>th</sup> century, several researchers noticed that leadership is not solely a top-down process in which formally appointed leaders influence followers. Already in 1924, for example, Follett stated that all relationships between people are characterized by the possibility of *mutual* influence. And since influence is at the core of leadership (Yukl, 2010), this implies that leadership can develop within any relationship and in both directions. Stogdill (1950) added situational demands to answer the basic question of who would provide leadership to whom. One team member may lead the team when facing challenges that relate to her specific knowledge and experiences, or the senior colleague may teach the novice and show him the ins and outs of the branch. Who takes the lead towards whom is not determined by position but by situational demands. French and Snyder (1959), finally, defined leadership in terms of social influence. Like Follett (1924), they emphasize that influence is available to anybody and therefore any team member can act as leader.

In line with these notions, McGrath (1962) developed what is considered the foundation of shared leadership: the concept of *functional leadership*. The focus of this leadership concept is on

team members' needs and on leadership activities that are necessary to fulfill these needs.

Leadership is no longer considered a matter of traits, but consists of several concrete behaviors that help the team to function effectively. Leaders for example monitor the progress of the team task and coach team members to ensure individual and team performance. According to the functional leadership approach, it is still leaders who perform the broad range of different leadership functions and behaviors. But this framework nicely fits within the context of shared leadership: the different leadership functions need to be performed not necessarily by one vertical leader, but by whatever team member is most capable. Considering the broad range of leadership functions, it is very likely that different team members would perform different leadership functions.

During the 1970s and 1980s, researchers developed different situational leadership concepts that focused on team members' contribution in shaping the leadership process. The concepts of *participative leadership* and *participative goal setting* deal with leadership activities of vertical leaders who consult with team members about setting goals, planning, and solving work-related problems instead of taking managerial decisions on their own (Heller & Yukl, 1969; Latham & Yukl, 1976; Yukl, 2010). Team members thus have an active share in leadership processes. Likewise, the approach of *leader-member-exchange* (LMX) recognizes team members not only as 'receivers' of leadership activities but as active participants in shaping leadership processes with the vertical leader (Dansereau, Graen, & Haga, 1975; Graen & Schiemann, 1978). Team members bring in individual characteristics that match or collide with those of the leader, members and leader may like each other or not, and they may develop trusting relationships or not. LMX deals with how these interactions between leader and follower result in work outcomes like satisfaction or performance. Furthermore, the concept of *self leadership*, developed by Manz (1986), addresses

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cognitive processes and adaptive behaviors team members engage in to achieve self-direction and self-motivation. And finally, according to the notion of *self-managing teams* that have no vertical leader, team members engage in a variety of managerial behaviors and activities that are traditionally vested within the position of the vertical leader (Manz & Sims, 1987).

These concepts are different from shared leadership in that shared leadership does not focus on leadership of the vertical leader (as in participative leadership and participative goal setting), but on leadership of team members, and not on team members' role in shaping vertical leadership (LMX), but on how team members provide leadership themselves. Shared leadership is not about how team members lead themselves (self leadership), but about how they lead one another and the whole team, and not about how team members provide leadership when the vertical leader is absent (self-managing teams), but about how leadership of the vertical leader and of team members can co-exist and complement one another. Still all the above concepts challenged the traditional division between leaders who lead and followers who follow. They acknowledge that team members actively shape leadership processes and that they can act as leaders in specific situations.

Two concrete considerations lead to the development of the new concept of shared leadership. First, in the 1990's researchers and scholars came to realize that organizational life had changed fundamentally. Globalization made organizational structures more complex, new communication technology changed the way employees interact at work (like in virtual teams whose members never actually meet), and through developments in the field of information technology information became widely accessible (e.g., Seers, Keller, & Wilkerson, 2003). Previously acting in small, clearly defined domains within which they possessed all necessary knowledge, leaders were faced with a growing span of control, complex partnerships, and with

team members who had a deeper understanding of specific issues than they had themselves.

Researchers and scholars started asking themselves whether one single individual leader would still be the most effective way to lead a team (e.g., Day, Gronn, & Salas, 2004; O'Toole, Galbraith, & Lawler, 2002).

Second, researchers started wondering whether they had overlooked important leadership processes by focusing on vertical leaders as the only source of leadership (Cox, Pearce, & Perry, 2003). A formal leadership position may be the most obvious source of influence in teams; it is not necessarily *the only* source of influence (Yukl & Falbe, 1991). A growing number of researchers started calling for an examination of leadership processes that take place within teams (e.g., Avolio, Jung, Murry, & Sivasubramaniam, 1996; Barry, 1991; Perry, Pearce, & Sims, 1999; Seers, 1996).

#### Conceptualization

Both considerations promoted the development of a leadership concept where several team members lead each other towards goal attainment, called shared leadership (Pearce & Conger, 2003b; Wang, Waldman, & Zhang, 2014). Shared leadership has two distinctive characteristics that differentiate it from traditional leadership concepts. First, shared leadership includes not one individual but relates to the leadership of several individuals (cf., Seers, Keller, & Wilkerson, 2003). These different individuals have to coordinate their leadership activities in a meaningful way if they are to achieve added value. Developing synergy to make sure that the whole team provides leadership in the same direction may be one possibility, or smoothly transferring leadership from one team member to another when the needs of the team change may be another.

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How leadership is shared by different participants is a question that is not addressed in traditional leadership research but that is crucial to answer within the field of shared leadership.

Second, shared leadership relates to leadership of ordinary team members who have no formal leadership position. Leadership is not part of their formal task description and therefore not self-evident. Researchers therefore have to deal with the question why team members engage in shared leadership and under what conditions shared leadership develops. Moreover, team members lack the authority that comes with a formal leadership position when they influence peers of the same hierarchical layer. Leadership styles that can effectively be used by vertical leaders influencing subordinates, might not necessarily work well for team members who provide shared leadership. Research in the field of shared leadership therefore is confronted with questions of legitimacy of leadership and needs to take into account how and with what leadership behaviors team members can effectively influence peers.

A last remark relates to the part of the definition of shared leadership saying that it is a 'dynamic' process. The fact that shared leadership disentangles 'leadership' from possessing a formal leadership position makes it a more dynamic leadership concept than traditional vertical leadership concepts (Pearce & Conger, 2003a). It is not defined a priori who the leader is. Some team member may decide to contribute to leadership at some times, but not others, which makes the leadership role subjective to change. Moreover, the content of leadership may change. Some situations may stimulate team members to demand more precise working or keeping up to the schedule, whereas in other situations team members may feel the urge to comfort peers and provide friendly encouragement. In still other situations no one may feel the urge to provide leadership. In

other words, shared leadership is a dynamic process that develops spontaneously, with different leaders and different leadership content at different points of time.

# **Major questions**

Interestingly, 25 years of research on shared leadership did not result in a mature research field. Researchers developed ideas of shared leadership without addressing other leadership conceptualizations, did not explicate how their conceptualization of shared leadership is different from these other leadership conceptualizations, and why their conceptualization would be superior. This conceptual diversity has also lead to great variety with regard to measurement instruments (operationalizations) of shared leadership. Different researchers made use of different measurement instruments, what makes it difficult to compare results. As a consequence, the literature on shared leadership is rather fragmented. For the purpose of this dissertation, I distilled three major questions out of all the different conceptualizations of shared leadership that form the corner stone of how the different researchers look at shared leadership.

First, how team members share in performing the leadership needed by the team is an issue of major disagreement among researchers. Some think of shared leadership as a collective process that involves all members of the team (e.g., Avolio, Sivasubramaniam, Murry, Jung, & Garger, 2003; Fausing, Joensson, Lewandowski, & Bligh, 2015). Team members would share leadership by developing joint actions and synergy (Brown & Gioia, 2002). Others define shared leadership in terms of team members' individual contribution (e.g., Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014; Seibert, Sparrowe, & Liden, 2003). Leadership is performed by the team member whose knowledge and experiences best match with situational demands and team members would share leadership by transferring it from one individual team member to another (Burke, Fioro, &

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Salas, 2003). These two approaches of how team members share leadership reflect fundamentally different ideas of shared leadership and lead to different research questions. With the collective approach, researchers attempt to answer questions like 'how is shared leadership related to team outcomes?' and 'how can team members achieve the synergy necessary to develop shared leadership?' (e.g., Bergman et al., 2012; Brown & Gioia, 2002). Researchers who define shared leadership in terms of individual contributions show more interest in the individual characteristics necessary for team members to engage in leadership (Li et al., 2007; Van Ameijde, Nelson, Bilserry, & Van Meurs, 2009) and in how leadership is transferred from one individual team member to another (Burke, Fiore, & Salas, 2003; Klein, Ziegert, Knight, & Xiao, 2006).

Second, it is unclear what team members actually share when they share leadership. In line with the traditional literature on leadership, shared leadership is usually defined in terms of influence, roles and functions, and behavior. Shared leadership influence relates to team members of the same hierarchical layer who influence each other (Locke, 2003; Mayo, Meindl, & Pastor, 2003). Within the leadership framework of roles and functions, shared leadership refers to a set of a priori defined roles and functions that are necessary for teams to function effectively and that are performed by different team members (Barry, 1991). And finally, the behavioral framework relates to specific leadership behaviors that team members use to influence peers (Bowers & Seashore, 1966). Team members can, for example, encourage peers to perform beyond expectations (transformational leadership), or they can instruct less experienced colleagues how to perform tasks (directive leadership). Again, the different definitions of shared leadership lead to different research questions. Defined in terms of collective shared influence, researchers try to determine the extent to which the influence process of leadership is collectively shared and relate this to team

outcomes (Ensley, Hmieleski, & Pearce, 2006; Hooker & Csikszentmihalyi, 2003). Defined as leadership roles and functions and leadership behaviors, on the contrary, evokes questions like 'how can team members without a formal leadership position perform leadership actions that were previously limited to formally appointed leaders?'

Third, questions remain about the role of the vertical leader when team members share leadership. Vertical leaders were long seen as the only source of leadership within teams and adding leadership of team members must have implications for their role. In self-managing teams (e.g., Seers, 1996), shared leadership develops because such teams have no vertical leader. This framework thus provides a clear answer to why shared leadership in teams develops, namely the absence of vertical leadership. But in other types of teams, the vertical leader may be the one to initiate shared leadership in teams (Seibert, Sparrowe, & Liden, 2003). Or vertical leaders may keep playing an enduring role within teams, what raises the question what parts of leadership are performed by team members and what parts by the vertical leader (e.g., Pearce, 2004). These different roles of the vertical leader have profound implications for defining the right research questions and models. Assuming that shared leadership develops in leaderless teams implies empirical investigations within that specific domain. If the role of the vertical leader is to initiate shared leadership, this suggests a research model with vertical leadership as antecedent of shared leadership. And if vertical and shared leadership coexist, examination of their relative influence would naturally follow.

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# The present dissertation

The remainder of this dissertation consists of one theoretical and two empirical chapters in which I shed light on conceptualizations of shared leadership and investigate outcomes of different shared leadership behaviors. Each chapter is written as an article and can be read independent of the rest of the dissertation. The chapters therefore contain some overlap.

The confusion about what shared leadership is and the lack of discussion of how the different conceptualizations relate to one another and what their values are make it necessary to start with a literature review. In chapter 2, I therefore provide a comprehensive, narrative review of studies about shared leadership that were published until 2011. I first provide an overview of the different conceptualizations of shared leadership, based on *how* team members share leadership, *what* they share when they share leadership, and what the role of the *vertical leader* is in shared leadership. I then present an overview of the different measurement instruments of shared leadership and address empirical findings with regard to antecedents and outcomes of shared leadership, and mediating and moderating variables. Based on these findings, I critically reflect on the conceptual inconsistencies and on the role of empirical research in solving them. I conclude with necessary next steps for future research.

In chapter 3, I empirically investigate outcomes of shared leadership. The goal of this study is threefold: first, to examine not only team performance but also affective outcomes of shared leadership (that together make team effectiveness; Hackman, 1987); second, by differentiating between two shared leadership behaviors, the study takes a closer look at how team members can effectively lead peers and how their leadership can also harm effective team functioning; and third, it sheds light on the relative impact of shared and vertical leadership and provides insights into the

role of the vertical leader when team members share leadership. I propose that whereas vertical leadership generally contributes to team effectiveness in a positive way, the effect of shared leadership depends on the concrete leadership behavior that team members use. I expect shared transformational leadership, that includes team members stimulating one another towards extraordinary performance levels, to improve team effectiveness, whereas shared directive leadership, that refers to team members monitoring and correcting task behaviors of peers, would undermine effective team functioning. I used questionnaires to test the hypotheses among 39 Dutch work teams from different industry sectors.

In chapter 4, I join those researchers who argue that shared leadership is not a pure team-level construct but that individual team members differ in their contributions towards leading the team and also in whom they address with their leadership behaviors. It follows that team members also differ in their perceptions of their peers' leadership behaviors, what I call peer leadership. In this study, I investigate how individual perceptions of peer leadership affect team members' individual effectiveness. Like in chapter 3, I look at transformational and directive leadership and its effect on both performance and affective outcomes. I add task complexity as a moderator in this relationship. I suggest that the positive effect of transformational peer leadership on individual effectiveness will be stronger for team members who perceive high levels of task complexity; whereas perceptions of high levels of directive peer leadership will always be detrimental for team members' individual effectiveness. I extended part of the data from chapter 3 with two more measurement moments to test the development of individual effectiveness over time, what resulted in a sample of 144 team members from 21 teams operating in the banking sector.

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Finally, in chapter 5, I will integrate the main findings from the literature review, the teamlevel study, and the individual-level study on shared leadership and discuss their theoretical and practical implications. I pay attention to the strengths and weaknesses of the studies and end with directions for future research.

# **Shared leadership – A literature review**

#### Introduction

Leadership is the process through which a leader of a team influences other team members toward the attainment of team goals (Yukl, 2010). Historically, such influence processes have been attributed to a single, formally appointed team leader (i.e., vertical leadership; Barry, 1991). However, because organizational environments are becoming increasingly complex, volatile, and ambiguous, both practitioners and researchers acknowledge that it is unlikely that a single leader will possess all the knowledge and skills that are necessary to successfully cope with emerging threats and opportunities (Day, Gronn, & Salas, 2004). For that reason, it is proposed that not only team leaders but also team members exhibit leadership behaviors to lead the team in adapting to environmental changes and accomplishing its goals. In other words, team leaders and team members may engage in what researchers have called 'shared leadership' (i.e., a dynamic influence process within teams where team members, in addition to the vertical leader, lead each other towards goal attainment; Houghton, Neck, & Manz, 2003; Pearce & Conger, 2003a).

With different team members providing leadership in situations where they have the most valuable knowledge and expertise, teams may take full advantage of team member strengths and thereby benefit from increased team performance (Burke, Fiore, & Salas, 2003). Consistent with this reasoning, research suggests that shared leadership is positively related to team performance (e.g., Carson, Tesluk, & Marrone, 2007; Hoch, Pearce, & Welzel, 2010; Mehra, Smith, Dixon, & Robertson, 2006; Sivasubramaniam, Murry, Avolio, & Jung, 2002), team effectiveness (Avolio,

Jung, Murry, & Sivasubramaniam, 1996; Pearce & Sims, 2002), and organizational effectiveness (Bowers & Seashore, 1966). Some researchers have even proposed that shared leadership is a better predictor of team performance than vertical leadership (Pearce & Sims, 2002). Given the claimed importance of shared leadership for positive team outcomes, researchers have recently started to identify antecedents of shared leadership, such as external support (Carson, Tesluk, & Marrone, 2007; Van Ameijde, Nelson, Billsberry, & Van Meurs, 2009), the complexity and dynamics of the team environment (Brown & Gioia, 2002), expertise of individual team members (Klein, Ziegert, Knight, & Xiao, 2006; Van Ameijde, Nelson, Billsberry, & Van Meurs, 2009), and shared goals (Carson, Tesluk, & Marrone, 2007; Van Ameijde, Nelson, Billsberry, & Van Meurs, 2009).

Though it seems to be a promising construct, the literature on shared leadership is currently in a state of disarray. First, researchers differ in how they label the construct of shared leadership – they refer to it as distributed leadership (e.g., Mehra, Smith, Dixon, & Robertson, 2006), team leadership (e.g., Sivasubramaniam, Murry, Avolio, & Jung, 2002), collective leadership (e.g., Friedrich et al., 2009), and peer leadership (e.g., Moran & Weiss, 2009). These different labels make it difficult to get an accurate overview of the relevant literature and result in researchers within the same field being unaware of one another's work. Second, there is no generally accepted definition of shared leadership. Some researchers refer to shared leadership as an emergent team property (Carson, Tesluk, & Marrone, 2007), or as a collective influence process (Avolio et al., 2003), whereas to others shared leadership is an aggregation of individual team members' leadership behaviors (Bowers & Seashore, 1966). This may lead to confusion about what researchers mean when they talk about shared leadership. Finally, different definitions of shared

leadership go together with different measurement instruments, leading to major problems with regard to both comparing the results of different studies and drawing conclusions about the antecedents and consequences of shared leadership.

Taken together, the overall impression of the literature on shared leadership is that of a fragmented research field that contains different conceptualizations of what shared leadership is, and that lacks discussion of how the different conceptualizations relate to one another and how valuable they are. To address these issues, this paper presents the results of a comprehensive, narrative literature review. It provides an overview of shared leadership studies and identifies differences in conceptualizations and operationalizations of the construct. We describe the different conceptualizations of shared leadership using three questions that we found best reflect the different definitions of the shared leadership construct: namely, how leadership is shared (by the team as a whole or individuals within teams), what is shared among team members (influence, leadership roles and functions, or behaviors), and what the role of the vertical leader is in shared leadership research (none, temporal, or enduring). We then provide an overview of empirical investigations of shared leadership, including its operationalizations (measurement instruments), antecedents, mediators, moderators, and outcomes. Finally, we critically reflect on the different conceptualizations of shared leadership and on the state of empirical research, and provide directions for future research. Before we start the literature review, we first describe the origins of the shared leadership construct and distinguish it from adjacent leadership constructs.

# Historical roots of shared leadership

The idea that leadership is not necessarily centralized in one individual leader but may be shared by several team members was developed throughout the last century (for extended reviews,

see Bolden, 2011; Fitzsimons, James, & Denyer, 2011). One of the first notions hinting at shared leadership was that a formal leadership position is not necessary to influence others (e.g., Follett, 1924; Stogdill, 1950; French & Snyder, 1959). Follett (1924) emphasized that any relationship between two people provides the possibility of these influencing each other, which makes it unlikely that leadership within teams stems from the vertical leader only. Stogdill (1950) added the situation as a determinant of whether and how leadership influence develops within relationships: One team member may follow team members A and B when discussing topic Y, but take the lead when working on topic Z with colleagues C and D. And French and Snyder (1959) defined leadership as potential social influence that is available to any team member. As a result, leadership is more likely to spread throughout the team than remain centralized in a single individual.

In the 1960s, McGrath (1962) developed the concept of functional leadership, which can be considered one of the cornerstones of shared leadership. Instead of focusing on the leader and his or her personality, functional leadership addresses the needs of the team and the different leadership functions that help to fulfill these needs. For the team to function effectively, it is important, for example, to monitor the progress being made in the team's task or to coach team members to ensure individual and team performance. Who performs which leadership function is not determined by formal appointment of 'leaders' or 'followers' (Benne & Sheats, 1948), but by individual differences and unique capabilities that make individuals suitable for certain leadership functions. Leadership is thus split into different functions that are performed by the most capable team members, and only rarely is one team member most suitable to fulfill *all* leadership functions.

Other lines of research were concerned with leadership forms that highlight the role of followers in the leadership process (for an extended review, see Pearce & Conger, 2003a).

Participative leadership and participative goal setting, for example, deal with increased participation of team members in aspects that were previously restricted to the vertical leader (Heller & Yukl, 1969; Latham & Yukl, 1976). These concepts indicate that vertical leaders do not take managerial decisions on their own, but consult with team members about setting goals, planning, and solving work-related problems (Yukl, 2010). Leader-member exchange (LMX) researchers emphasize that team members not only 'receive' leadership, but that they actively shape leadership processes (Dansereau, Graen, & Haga, 1975; Graen & Schiemann, 1978). They define leadership as a social exchange process between leaders and followers, and argue that team members have a large share in shaping this exchange and thus in shaping leadership. Manz (1986) goes a step further by arguing that ordinary team members exhibit leadership. He coined the term 'self-leadership' to describe the cognitive processes and adaptive behaviors that team members engage in to achieve self-direction and self-motivation (Manz, 1986). Finally, researchers developed the construct of self-managing teams (Manz & Sims, 1987). The responsibility and authority that is usually vested in the position of the formal leader is turned over to the team members, who set work schedules and communicate with external parties (Yukl, 2010).

The above concepts paved the way for the development of the concept of shared leadership (Burke, Fiore, & Salas, 2003; Houghton, Neck, & Manz, 2003). Shared leadership captures the idea that team members without a formal leadership position may engage in leadership, and it assumes that not one but several members exhibit leadership behavior when their specific knowledge and expertise are needed to lead the team towards goal attainment (Burke, Fiore, & Salas, 2003; Pearce, 2004). It differs from the above concepts in that shared leadership refers to leadership behaviors of team members (and not of the vertical leader, as with participative

leadership and goal setting) who lead one another and not themselves, as is the case with self-leadership. Moreover, shared leadership addresses the relationships among team members and not the relationships between leader and team members, as with LMX. Finally, shared leadership develops spontaneously and also in the presence of a formally appointed team leader (Gronn, 2002; Houghton, Neck, & Manz, 2003). The concept of self-managing teams, on the contrary, refers to a formal leadership structure in which teams have no vertical leader but take over formal leadership tasks.

#### **Related constructs**

Shared leadership is not the only leadership construct that deals with leadership performed by several individuals. *Co-leadership* refers to the appointment of mostly two leaders who together perform the tasks of the designated leader (O'Toole, Galbraith, & Lawler, 2002). These different leaders are appointed by the organization and hold formal leadership positions, contrary to shared leadership, which develops spontaneously among team members who lack such a leadership position.

Distributed leadership is most closely related to shared leadership. Its roots are not within the leadership literature, but within the cognition literature. During the '80s and '90s, researchers became intrigued by how collectives of people master complex situations, like navigating a ship or flying an airplane. Distributed cognition refers to the mental processes of people working together, like how knowledge and information are spread throughout the team and how this knowledge is communicated, adapted, and used in order to produce sequential meaningful action (Hutchins, 1995; Roger & Ellis, 1994). In a similar vein, distributed leadership deals with how people within an organizational network develop a mutual understanding of the task that enables them to work

together intuitively (Gronn, 2002). Leadership develops spontaneously among arbitrary organizational members while working together. In contrast to shared leadership, which concerns leadership in *teams*, distributed leadership focuses on leadership that is spread throughout the whole organizational network (Spillane, Diamond, & Jita, 2003). Because we were interested in leadership processes within teams, we excluded the distributed leadership literature from this literature review.

#### Literature review

#### Setting the stage: Defining the literature review domain

We have positioned shared leadership in the leadership literature; we now continue by reviewing the shared leadership literature. We conducted a computer-based literature search in EbscoHost for the terms 'shared leadership', 'distributed leadership' (with a focus on leadership within teams), 'team leadership', 'collective leadership', and 'peer leadership', and scanned the results for further relevant references. We checked the content of the articles we found and only included those that defined shared leadership in a team context and in terms of leadership influence of several team members who lacked a formal leadership position. This procedure resulted in a total of 43 conceptual and empirical articles on shared leadership (up to December 2011) and a book on shared leadership by Pearce and Conger (2003b). We summarized these papers in three tables. Table 2.1 presents the different definitions of shared leadership used in the articles. Table 2.2 summarizes how the papers differ in their conceptualizations of shared leadership regarding how leadership is shared (by the team as a whole or individuals within teams), what is shared among team members (leadership influence, roles and functions, or behaviors), and what the role

of the *vertical leader* is in shared leadership (none, temporal, or enduring). Finally, Table 2.3 provides an overview of the empirical literature on shared leadership. This overview provides information on the measurement instruments and research models used in the different studies, including antecedents, mediators and moderators, and outcomes of shared leadership.

# How is leadership shared?

One source of disagreement among researchers defining shared leadership is related to the question of how leadership is shared in teams (see Tables 2.1 and 2.2). Of the forty definitions provided in Table 2.1, six include the term 'collective' or make otherwise explicit that shared leadership includes 'all team members' (e.g., Avolio et al., 2003; Acar, 2010). Indeed, forty percent of the studies we found on shared leadership proposed that shared leadership involves the whole team (see Table 2.2); these researchers have conceptualized shared leadership as a collective team process in which all members of the team lead one another towards goal attainment (Pearce & Sims, 2002; see Table 2.2). Shared leadership is assumed to be embedded in the social interactions within the team and to be developed when team members achieve joint action and synergy (Brown & Gioia, 2002; Gronn, 2002). Since all team members participate in shaping these interactions, leadership is considered to be evenly distributed among all members of the team (Acar, 2010; Pearce, 2004).

But there are also definitions of shared leadership that explicitly focus on the individual team member (e.g., Barry, 1991; Seers, Keller, & Wilkerson, 2003; see Table 2.1). In fact, sixty percent of the studies focused on the individual contributions of team members that are likely to differ from one another (Balthazard, Waldman, Howell, & Atwater, 2004; Carte, Chidambaram, & Becker, 2006; see Table 2.2). Situational demands and individual qualities, such as a general

propensity to lead and unique knowledge and experiences, are assumed to determine who engages in what part of the leadership function (Seibert, Sparrowe, & Liden, 2003). Leadership is shared in such a way that team members contribute to leadership when they have relevant knowledge and abilities that are needed in a certain situation -- this may apply to some, several, or all team members. Shared leadership thus stands for transference of the leadership function among different team members (Burke, Fiore, & Salas, 2003).

These two conceptualizations reflect quite different understandings of shared leadership.

According to the collective conceptualization, shared leadership is a team process that establishes the leadership standards for the whole team. New team members either fit into the existing leadership standards or they manage to change it, which has implications for the leadership behaviors of each team member. With the individual conceptualization, shared leadership refers to the sum and dynamics of different leadership contributions of different team members. New team members complement the team with their unique knowledge and experiences that allow them to provide leadership when no other member is able to do so.

#### What is shared in shared leadership?

A closer look at the literature on shared leadership summarized in Tables 2.1 and 2.2 reveals that researchers also have different understandings of *what* it is that team members share when they share leadership. Shared leadership is defined in terms of leadership influence, leadership roles and functions, and leadership behaviors.

As influencing others is the core of leadership (Yukl, 2010), most of the shared leadership studies (seven out of ten) explicitly conceptualized shared leadership in terms of a lateral *influence* process (see Table 2.2). Contrary to vertical leadership, which is seen as one-way, top-down

influence from the vertical leaders to the team members, shared leadership refers to 'lateral' (Locke, 2003) and 'mutual' (Mayo, Meindl, & Pastor 2003) influence processes. This means that team members at the same hierarchical layer influence one another. They cannot use their hierarchical position as a source of influence, as vertical leaders do, but instead bring their 'knowledge, skills, attitudes, perspectives, contacts, and time available' (Burke, Fiore, & Salas, 2003, p.105) as possible sources for influencing peers. The influence process of shared leadership may include several (e.g., Seibert, Sparrowe, & Liden, 2003) or all team members (e.g., Gronn, 2002), with the first reflecting low levels and the latter high levels of shared leadership in teams (Mayo, Meindl, & Pastor, 2003).

Leaders can exercise influence over others by fulfilling specific leadership roles and functions. In twenty-five percent of the shared leadership studies covered in this review, shared leadership is defined in terms of *roles and functions*. This definition is rooted in the functional approach to leadership (McGrath, 1962) that describes leadership as a set of functions and roles for which a broad variety of influence tactics and specific actions are required (Quinn, 1984). The emphasis is not on how one single leader can manage to fulfill these leadership functions, but on how all facets of leadership can be optimally performed, no matter by whom. According to Quinn's (1984) framework, which is most frequently used in the shared leadership literature, leaders need to find a balance between structure and clarity ('control'), on the one hand, and the freedom and initiative of others ('flexibility'), on the other hand. In addition, they have to focus on internal processes that include the well-being and development of team members, but they also need to keep an eye on external processes and ensure the well-being and development of the whole organization. Quinn defined different leadership roles and functions that satisfy these distinct

leadership functions: for example, the innovator who identifies external trends and stimulates the team towards adaptation and change, and the monitor who keeps track of the activities of the team and makes sure that team members follow the rules and procedures (Yang & Shao, 1996). Team members who share leadership thus share a priori defined leadership roles and functions that are necessary to realize or maintain team effectiveness.

The behavioral approach to leadership focuses on examining specific leadership behaviors that leaders use to exercise influence (Yukl, 2010). Following this approach, another twenty-five percent of the studies that we identified in Table 2.2 defined shared leadership in terms of *leadership behaviors*. With few exceptions (e.g., Houghton, Neck, & Manz, 2003; Pearce & Sims, 2002), these studies addressed leadership behaviors of individual team members instead of collective leadership behaviors of the whole team. As such, shared leadership is the aggregation of actions started by one team member and directed towards one or several other team members (Bowers & Seashore, 1966). These 'actions' may contain different leadership behaviors, depending on the framework used. The dominant framework within the behavioral approach is that of Pearce and colleagues, who focused on the inspiring and motivating aspects of transformational leadership, on the exchange of resources that make up transactional leadership, and on empowering and directive leadership (e.g., Pearce & Sims, 2002).

Again, the implications of the different conceptualizations of shared leadership are substantial. Leadership influence refers to the capacity to change the actions or thoughts of others in some intended fashion. Defining shared leadership in terms of influence evokes questions like, 'how is leadership distributed among team members?' and 'how do team members gain influence in teams?' Leadership influence is derived from leadership roles and functions and finds its

manifestation in leadership behaviors. Based on what roles and functions within a team do influential team members engage in shared leadership, and what leadership behaviors do influential team members use to change the actions or thoughts of others? Research questions that arise refer to the basis of shared leadership and the effective use of different leadership behaviors and tactics. Team members, after all, have no formal leadership position that may limit the number of leadership roles, functions, and behaviors they can use in an effective way.

# What is the role of the vertical leader?

The last aspect that differentiates approaches to shared leadership is the role of the vertical leader. Team members who share leadership engage in behaviors, roles, and functions that were formerly restricted to the vertical leader. What does the occurrence of shared leadership mean for the role of the vertical leader? Do vertical leaders become superfluous when team members share leadership, or do they still play a role? And if they do play a role, what role would that be?

Only one researcher (Pearce, 2004) included the vertical leader in a definition of shared leadership (see Table 2.1), and in one third of the articles on shared leadership the vertical leader is not mentioned at all. In the remaining articles, the role of the vertical leader is defined quite differently (see Table 2.2). In nine of the 38 studies, researchers argued that shared leadership is most likely to develop in the absence of vertical leadership, like in self-managing teams (e.g., Seers, 1996). The lack of a formal leadership structure makes it necessary for team members to take over those leadership functions that were traditionally ascribed to the vertical leader (Barry, 1991). The reason why several team members share leadership may be the distribution of knowledge and experiences across several team members: one member alone may not possess all

the necessary skills and abilities to lead the team; several members are likely to engage in and contribute to leading the team (Barry, 1991).

The remaining scholars argue that the vertical leader plays a vital role in shared leadership, but differ in their views on that role. First, in four studies, researchers argued that the role of vertical leaders is temporal in that they are important mostly for initiating shared leadership in teams (Seibert, Sparrowe, & Liden, 2003). Leaders may, for example, actively encourage team members to share leadership by helping them to develop their leadership abilities (Houghton, Neck, & Manz, 2003) or modeling the desired shared leadership behaviors so that team members can copy them (Bowers & Seashore, 1966). Once the team has succeeded in establishing a shared leadership pattern, it becomes self-managing and vertical leaders lose their role within the team. The role of the vertical leader thus is, paradoxically, to 'get disappeared' (Fletcher & Käufer, 2003, p. 25).

Second, in more than fifty percent of the published articles on shared leadership, researchers ascribed an enduring role to the vertical leader in teams that share leadership (see Table 2.2). The specific tasks they are proposed to perform are diverse. Several scholars, for example, proposed that the structuring of the team is one of the main tasks of vertical leaders (Pearce, 2004; Perry, Pearce, & Sims, 1999; Seibert, Sparrowe, & Liden, 2003). Even when team members share leadership, vertical leaders are necessary to hire and fire team members in order to enable effective team functioning. Also, vertical leaders may be responsible for team-external affairs, like facilitating good relationships with external parties and getting necessary information (Pearce, 2004; Perry, Pearce, & Sims, 1999). And it is important for the organization to have a vertical leader who can be held accountable for team performance (Friedrich et al., 2009). In addition,

teams that share leadership may still need a vertical leader to manage team-internal affairs. Their formal position may be necessary to make team members do what they are expected to do and to prevent conflicts between them (Hauschildt & Kirchmann, 2001), and to ensure that not only extraverted team members participate in leadership but also more reserved members (Vandewaerde, Voordeckers, Lambrechts, & Bammens, 2011). Moreover, the vertical leader should keep an eye on shared leadership within the team and step in when certain leadership functions are not fully met by the team (Perry, Pearce, & Sims, 1999). Finally, several researchers emphasize the enduring impact vertical leaders can have on shared leadership. Vertical leaders who have a strong need to help develop the team and organization are argued to support the development of shared leadership in teams (Pearce & Manz, 2011), and also inadequate leadership of the vertical leader is suggested to facilitate the development of shared leadership in teams (Kramer, 2006).

Taken together, scholars and researchers agree that shared leadership influences and changes the role of vertical leaders in teams, but they have different ideas about how that role may look. Interestingly, a great deal of these differences comes from different understandings of why shared leadership develops in teams. On the one hand, it may be the lack of vertical leadership that provides the space for team members to take the lead; on the other hand, specific vertical leadership may be necessary for team members to develop shared leadership. Each approach has different implications for whether vertical leaders are assigned a role and how that role may look when team members share leadership.

# Empirical research on shared leadership

The different conceptualizations of shared leadership suggest that empirical research lacks a sense of conformity. Indeed, the first column in Table 2.3 shows a number of different operationalizations of shared leadership. Below, we discuss the different measurement instruments used to operationalize shared leadership and how they relate to antecedents and outcomes. We also address mediators and moderators that have been examined in shared leadership research.

# Operationalizations of shared leadership

To start, the different conceptualizations of shared leadership are reflected in the differing measurement instruments used to gauge it. Table 2.3 shows that in forty percent of the empirical studies included in the current review shared leadership was examined by asking questions about the leadership activities of the whole team, using a team referent (e.g., Pearce & Sims, 2002); others assessed the leadership activities of individual team members, using an individual referent (e.g., Balthazard, Waldman, Howell, & Atwater, 2004; Carson, Tesluk, & Marrone, 2007). This distinction is also found in qualitative studies, in which some researchers discovered collective leadership behaviors, like information sharing (Brown & Gioia, 2002) and sharing and tapping into one another's interests and abilities (Hooker & Csikszentmihalyi, 2003), whereas others identified individual contributions to leadership, like argument development (Li et al., 2007), seeking input (Gressick & Derry, 2010), involving others (Van Ameijde, Nelson, Billsberry, & Van Meurs, 2009), and providing direction (Kramer, 2006).

The diversity of operationalizations is even bigger when it comes to the *content* of shared leadership (see Table 2.3). Researchers have used different leadership *roles and functions* and different *behavioral* leadership frameworks to assess shared leadership (to our knowledge, there

are no studies in which shared leadership was measured in terms of an influence process). With regard to leadership roles and functions, two frameworks stand out since they were used in several studies. The first is the framework of Ouinn (1984), who defined eight leadership roles: the mentor, the facilitator, the monitor, the co-ordinator, the director, the producer, the broker, and the innovator. Within a shared leadership context, these leadership roles were examined at the team level of analysis by assessing to what extent the whole team performs these roles (Hiller, Day, & Vance, 2006), and at the individual level using measures to assess the leadership roles of each individual team member (Carte, Chidambaram, & Becker, 2006; Yang & Shao, 1996). The second framework was developed by Li and colleagues (2007), who came up with topic control, planning and organizing, argument development, and acknowledgement. This framework was also used by Gressick and Derry (2010), who coded the leadership roles of students taking an online course. In addition, other operationalizations of shared leadership in terms of roles and functions were used in single studies. Hiller and colleagues (2006), for example, used a scale developed by Yukl and Lepsinger (1990) to measure planning and organizing, problem solving, support and consideration, and development and mentoring. Finally, Hauschild and Kirchmann (2001) examined different roles that are crucial for new product innovations. They found that teams not only needed a hierarchical power promotor and a technology promotor with technical know-how, but also a process promotor who manages the process among team members and between the team and the organization.

Table 2.3 shows that the *behavioral* measures of shared leadership are dominated by the transformational – transactional leadership framework. Avolio and colleagues (1996) were the first to use these leadership dimensions in a shared leadership context (together with laissez-faire

leadership), followed by Pearce and Sims (2002), who added empowering and directive leadership. Both scales were used to examine shared leadership behaviors of the team as a whole (e.g., Ensley, Hmmieleski, & Pearce, 2006; Sivasubramaniam, Murry, Avolio, & Jung, 2002). Other researchers examined support, interaction facilitation, goal emphasis, work facilitation (Bowers & Seashore, 1966), and content-oriented leadership and structuring leadership behaviors (Künzle et al., 2010) of individual team members to assess shared leadership in teams.

#### Antecedents of shared leadership

We provide an overview of the antecedents and outcomes of shared leadership that were empirically investigated in Table 2.3. To start with antecedents, shared leadership was examined and found in complex situations where team members had to deal with product innovations (Hauschild & Kirchmann, 2001) and the emerging internet economy in 2000 (Brown & Gioia, 2002). Both studies suggest a link between task and situational complexity, on the one hand, and the development of shared leadership, on the other hand. Also, situational ambiguity (Brown & Gioia, 2002) and the extent to which actions that need to be taken are based on routines (Klein, Ziegert, Knight, & Xiao, 2006) were related to the participation of team members in leadership. Another situational aspect that plays a role in the development of shared leadership is time. Researchers found that vertical leaders needed to perceive no time constraints if they were to share leadership with team members (Klein, Ziegert, Knight, & Xiao, 2006; Li et al., 2007). And as time passed and the team developed, teams were found to develop more shared leadership (Small & Rentsch, 2010).

Several team characteristics have also been shown to affect the development of shared leadership in teams. Team members who interacted face-to-face developed more shared

transformational leadership than those who interacted virtually (Balthazard, Waldman, Howell, & Atwater, 2004), and members of teams with a collective as opposed to an individualistic culture were more engaged in leadership roles like planning and organizing, problem solving, and support and consideration (Hiller, Day, & Vance, 2006). Moreover, research findings suggest that teams need some autonomy (Scribner, Sawyer, Watson, & Myers, 2007; Van Ameijde, Nelson, Billsberry, & Van Meurs, 2009) and social support to develop shared leadership (Carson, Tesluk, & Marrone, 2007), and that it is important for team members to have a shared understanding of the team goals (Carson, Tesluk, & Marrone, 2007; Van Ameijde, Nelson, Billsberry, & Van Meurs, 2009) and to trust one another (Small & Rentsch, 2010).

Besides situational and team characteristics, researchers also investigated individual characteristics of team members and vertical leadership as antecedents of shared leadership. Li and colleagues (2007), for example, examined shared leadership in 4<sup>th</sup> grade children and found that more competent children and girls were more likely to exhibit leadership roles like argument development and acknowledgement. And research in extreme action teams in an emergency trauma center showed that vertical leaders delegated leadership when they had confidence in their own abilities to fix whatever might go wrong, and in the abilities of the person they assigned leadership to (Klein, Ziegert, Knight, & Xiao, 2006). A total lack of vertical leadership, or specific parts of it, like providing direction and coordination, was also found to increase shared leadership (Kramer, 2006).

#### Outcomes of shared leadership

With regard to outcomes, the literature review shows that empirical research is mainly concerned with demonstrating the effects of shared leadership on team performance and team

effectiveness (see Table 2.3; e.g., Pearce & Sims, 2002, Carson, Tesluk, & Marrone, 2007). Carte and colleagues (2006), for example, concluded that teams benefited most in terms of performance when the role of the monitor was widely spread among team members. And Hiller and colleagues (2006) found that team members' planning and organizing, support and consideration, and development and mentoring were positively related to team performance, whereas shared problem solving was not. The study by Gressick and Derry (2010) showed different results: these authors found no relationship between the extent to which leadership roles like seeking input and knowledge contributions were spread throughout the team and team performance.

For the more frequently investigated shared leadership behaviors, the results are also mixed. Shared transformational leadership, shared transactional leadership, and shared empowering leadership were mostly found to be positively related to team performance and team effectiveness (Avlio, Jung, Murry, & Sivasubramaniam, 1996; Ensley, Hmieleski, & Pearce, 2006; Pearce, Yoo, & Alavi, 2003; Sivasubramaniam, Murry, Avolio, & Jung, 2002), but some researchers found no relationships at all (Balthazard, Waldman, Howell, & Atwater, 2004; Pearce & Sims, 2002). With regard to shared directive leadership, the results were even contradictory: in top management teams, shared directive leadership had a positive effect on organizational performance (Ensley, Hmieleski, & Pearce, 2006), whereas in change management teams (Pearce & Sims, 2002) and in student teams (Boies, Lvina, & Martens, 2010), shared directive leadership lowered team effectiveness and team performance. Shared directive leadership in virtual teams was unrelated to performance (Pearce, Yoo, & Alavi, 2003). The only consistent effect was found for laissez-faire leadership, which damaged effective team functioning when exhibited by team members (Avolio,

Jung, Murry, & Sivasubramaniam, 1996; Pearce & Sims, 2002; Sivasubramaniam, Murry, Avolio, & Jung, 2002).

A handful of researchers paid attention to outcomes other than team performance and effectiveness. Hauschild and Kirchmann (2001) found that teams which not only had a vertical leader, but also had team members acting as technical and process leaders, came up with more successful innovations. In a case study, sharing leadership roles and responsibilities among scientists was related to 'flow', 'a state of consciousness in which people feel completely involved in an activity to the point that they lose track of time and lose awareness of self, place, and all other details irrelevant to the immediate task at hand' (Hooker & Csikszentmihalyi, 2003, p. 220). And shared leadership in terms of power sharing was found to increase organizational citizenship behaviors in Jordanian university staff (Khasawneh, 2011). Moreover, shared transformational and transactional leadership (at least the 'contingent reward' dimension) were related to satisfaction, cohesion, and potency (Avolio, Jung, Murry, & Sivasubramaniam, 1996; Balthazard, Waldmann, Howell, & Atwater, 2004). Boies and colleagues (2010) showed that shared transformational leadership was positively related to trust and potency, whereas shared passive avoidant leadership, indicating that team members avoid responsibilities, was negatively related to these variables. Finally, Pearce, Yoo, and Alavi (2003) found the sum of shared transformational, transactional, empowering, and directive leadership to predict potency and social integration in teams.

#### Mediator and moderator variables

The above shows that quite a number of empirical investigations of antecedents and outcomes of shared leadership have been conducted. But most of these studies did not go further than examining direct relationships between shared leadership and other constructs, and overlooked

the possible role of mediator and moderator variables. The underlying processes that make shared leadership more effective than vertical leadership were only addressed in one study by Sivasubramaniam and colleagues (2002). Their findings suggested that shared transformational leadership increased feelings of potency, and that potency in turn made teams perform better. Slightly more researchers examined the conditions under which shared leadership increases team effectiveness (see Table 2.3): Mehra and colleagues (2006), for example, showed that perceiving several team members as leaders was only positively related to team performance to the extent that team members who engage in leadership accept each other as leaders. The findings of two other studies showed that shared leadership can compensate for high diversity (Acar, 2010; Hoch, Pearce, & Welzel, 2010) and low coordination (Hoch, Pearce, & Welzel, 2010), both of which threaten team performance. And Carson and colleagues (2007) suggested that the nomination of several peers as leaders is most likely with either a supportive team environment or high levels of coaching of the vertical leader, or both. Finally, Acar (2010) examined the interaction effect of diversity and shared leadership on emotional conflict. In none of these studies were both mediator and moderator variables included in the analyses.

#### **Conclusions and discussion**

Above, we have provided an overview of the conceptual and empirical literature on shared leadership; below, we critically discuss the different approaches, propose solutions for some of the conceptual and methodological problems in the literature, and provide directions for future research.

#### How leadership is shared

Our review revealed that there are two approaches to the sharing of leadership: a collective and an individual approach. The collective approach conceptualizes shared leadership as a collective team process in which all members are involved, thereby suggesting that team members evenly contribute towards leading the team. This suggestion seems unrealistic for several reasons. To start, individual traits play an important role in whether or not team members act as leaders (Judge, Piccolo, & Kosalka, 2009). Extraversion and conscientiousness have consistently been found to at least partly determine the leadership behaviors of those who lack a formal leadership position (Judge, Bono, Ilies, & Gerhardt, 2002). Indeed, research on emergent leadership in leaderless teams has identified variation in team members' leadership activities. For example, team members have been found to differ in the extent to which they stimulate and inspire the team with their ideas (Côté, Lopes, Salovey, & Miners, 2010) and in the extent to which they influence team outcomes (Foti & Hauenstein, 2007). It seems reasonable, therefore, to assume that team members differ in the extent to which they influence peers through their attitudes and work actions.

Moreover, the literature on the influence strategies of leaders proposes that individuals use different strategies when they engage in leadership (Yukl, Falbe, & Youn, 1993). Some may try to enforce their will on others by using pressure, whereas others might use rational persuasion.

Likewise, team members have been found to differ in their supportive and task-related leadership behaviors towards peers (Gressick & Derry, 2010; Künzle et al., 2010). It seems unlikely that team members would share leadership by performing the same amount of the same leadership activities, as the collective approach to shared leadership seems to suggest. It is more realistic to assume that individual team members provide unique contributions based on their personality and expertise.

There is another reason why shared leadership is ideally conceptualized as being shared by individual team members. Such an approach may foster examination of more fine-grained research questions that can extend knowledge about the individual mechanisms and dynamics underlying shared leadership. Who is likely to engage in leadership, for example, and why? And are team members who engage in leadership high performers, or do their leadership behaviors result in neglect of other tasks? Another area as yet unexplored is how team members react to the leadership behaviors of individual peers. Peers who provide leadership in an area they are experts in may be widely accepted as leaders, whereas the leadership behaviors of peers with less expertise may be annoying and unsuccessful. Finally, determining the individual contributions of team members to shared leadership makes salient the question of the distribution of leadership within the team. In some teams, only a few members may take part; in others, leadership may involve most members. Which distribution is most effective and when? Researchers suggest that situational characteristics may play an important role of influence (cf., Seibert, Sparrowe, & Liden, 2003). Leadership distributed among all members of the team may be most effective when those members have different kinds of expertise that is needed to accomplish highly complex tasks. When team members have the same kind of expertise or have fairly easy tasks, shared leadership may be most effective with only few team members involved. Taken together, defining shared leadership in terms of team members' individual contributions provides the possibility of gaining insight into individual-level factors that drive intra-team dynamics and the outcomes of shared leadership.

#### What is shared in shared leadership

Our review shows that researchers have mainly examined leadership influence, leadership functions and roles, and leadership behaviors as shared leadership. These particular aspects of

leadership are well established in the vertical leadership literature (cf., Yukl, 2010), with influence emphasizing the leadership process through which leaders 'change the actions of others in some intended fashion' (Anderson, Flynn, & Spataro, 2008), and leadership functions and behaviors capturing the visible tasks and acts leaders engage in to influence others (Yukl, 2008). This inclusion of diverse aspects of leadership in research on shared leadership is not problematic in itself. However, it is important to explain how team members come to engage in any form of leadership. What factors and boundary conditions cause and facilitate team members to gain influence in teams and to engage in shared leadership functions, roles, and behaviors, despite their lack of formal authority? Another important question is how the different aspects of leadership that apply to vertical leadership, and that are effective when performed by vertical leaders, fit within a shared leadership framework. Is leadership as effectively performed by team members without a formal leadership position as it is by vertical leaders? Unfortunately, the reasons why team members engage in leadership and the effectiveness of team members' leadership activities are rarely examined in the shared leadership literature. Below, we elaborate on theories that identify personal and contextual factors that might promote shared leadership, and discuss the effectiveness of distinct leadership functions and behaviors that team members may share.

Social exchange theory seems to be a promising theoretical framework that may explain how influence develops among team members who lack a formal leadership position. Through social interaction, team members exchange both quantifiable services and goods (economic exchange) and unspecified obligations (social exchange) (Seibert, Sparrowe, & Liden, 2003). The first may involve helping a peer on his project in exchange for help on one's own project; the second refers to helping a peer in need, trusting that the other would do the same. Team members

can use these trusting and supporting relationships to enact shared leadership and exert influence on one another.

The status literature addresses how evaluations of others' abilities and competences form our expectations of their behaviors, and how these expectations define their social position within the team (Berger, Cohen, & Zelditch, 1972). Research has shown, for example, that education (Moore, 1968), age (Forsyth, 2009), and attractiveness (Jackson, Hunter, & Hodge, 1995) increase perceptions of competence and thus of status. And the more status is assigned to team members, the more likely others are to defer to them (Oldmeadow, Platow, Foddy, & Anderson, 2003).

Social identity research suggests that team members' prototypicality may also explain how they gain influence in teams (Hogg & van Knippenberg, 2003). Prototypical leaders, who embody the team identity, are usually very influential within their team (van Knippenberg, 2011). The reason for this influence is that more prototypical leaders are perceived to be more similar and are liked more, which increases the willingness of others to comply with their suggestions and requests (Fielding & Hogg, 1997). The same prototypicality mechanisms may determine how influential individual team members are: team members who reflect the team identity and are perceived by many peers as similar may elicit more willingness in others to follow their lead (cf., van Knippenberg, 2011).

Finally, the literature on emergent leadership may provide insights into the role of personality characteristics in explaining shared leadership behaviors of team members (Seers, Keller, & Wilkerson, 2003). Emergent leadership refers to spontaneous and voluntary leadership behaviors of team members who lack a formal leadership position (Rowe, 2007), just like shared leadership. Unlike shared leadership, however, emergent leadership refers to the emergence of only

one informal leader within a team (cf., Ensari, Riggio, Christian, & Carslaw, 2011). Researchers found personality characteristics like extraversion (Balthazard, Waldman, & Warren, 2009; Ensari, Riggio, Chriatian, & Carslaw, 2011) and emotional stability (Balthazard, Waldman, & Warren, 2009) to predict leadership behaviors of team members who lack a formal leadership position, but also mental ability (Ensari, Riggio, Chriatian, & Carslaw, 2011; Kickul & Neuman, 2000) and more specific abilities like creativity were found to play a role (Ensari, Riggio, Chriatian, & Carslaw, 2011).

In sum, different frameworks provide a theoretical platform for how individual team members can gain influence in teams and for what may explain their leadership activities.

Empirical investigations of these subjects will fill an important gab in the current shared leadership literature and thereby provide more credibility to the research field. Moreover, shared leadership researchers will enlarge their contribution to the field in significant ways by not only examining the effectiveness of shared leadership, but also using these (and other) concepts to explain why it is that team members engage in leadership activities.

The next step is to determine how team members can *effectively* engage in leadership. Within the traditional leadership literature, researchers differentiate between different leadership functions, roles, and behaviors that benefit effective team functioning when performed by the vertical team leader (cf., Burke et al., 2006). How suitable are these leadership activities for team members who lack a formal leadership position? Within the *functions and roles* conceptualizations of shared leadership, empirical research allows for two interpretations. First, it shows that team members mostly perform leadership roles that relate to managing internal team processes (as opposed to managing the external environment of the team), like planning and organizing (e.g.,

Hiller, Day, & Vance, 2006; Li et al., 2007), and managing the team discussion (Gresssick & Derry, 2010; Li et al., 2007). Second, many of the effective leadership roles that team members have been found to engage in relate to managing the social interactions within the team (as opposed to task-related leadership roles), like being considerate, supportive, and inspiring with peers (Gresssick & Derry, 2010; Hiller, Day, & Vance, 2006; Li et al., 2007). These findings indicate that team members do not use the full range of leadership roles when addressing peers. They seem to restrict leadership to roles that directly relate to their daily working activities and benefit positive social interactions within the team.

With regard to leadership *behaviors*, shared leadership researchers have made grateful use of those leadership behaviors that have been found to be effectively used by vertical leaders (see Table 2.3). Unfortunately, explanations of how team members who lack a formal leadership position can effectively use the different leadership behaviors are missing. Are all leadership behaviors performed by team members as effective as when performed by vertical leaders? Empirical research shows that 'friendly' leadership behaviors that involve stimulating, supporting, rewarding, and empowering peers benefit effective team work when provided by team members (Avolio, Jung, Murry, & Sivasubramaniam, 1996; Balthazard, Waldmann, Howell, & Atwater, 2004; Ensley, Hmieleski, & Pearce, 2006; Pearce & Sims 2002; Pearce, Yoo, & Alavi, 2003; Sivasubramaniam, Murry, Avolio, & Jung, 2002). More demanding leadership behaviors, like directive leadership that involves giving instructions about how to perform tasks, are more likely to yield resistance when used to influence peers. This may explain why, in some studies, shared directive leadership behaviors were unrelated to team effectiveness (Pearce, Yoo, & Alavi, 2003) or even affected team effectiveness in a negative way (Pearce & Sims, 2002). These findings

suggest that team members can not necessarily use the same leadership behaviors as vertical leaders. A formal leadership position provides legitimacy for leadership behaviors (Yukl & Falbe, 1991), and although there may be other sources of legitimacy, such a position may be crucial for some leadership behaviors to be performed effectively. When dealing with shared leadership behaviors, we thus need to carefully examine how the lack of a formal leadership position affects their effective use.

We conclude that shared leadership researchers face two challenges with regard to what is shared in shared leadership. First, they need to explain how team members gain influence in teams and identify antecedents of their leadership roles and behaviors. All three conceptualizations of leadership seem to apply to a shared leadership context, but we need more knowledge of how and why team members can use the different aspects of leadership. Second, the differences between shared and vertical leadership are profound, with shared leadership referring to leadership among people of the same hierarchical layer and by team members with no formal leadership authority. This urges us to examine the effectiveness of the different leadership roles and behaviors again when they are used by team members. Simply assuming that team members can engage in the same leadership activities as vertical leaders is overly simplistic.

#### The role of the vertical leader in shared leadership

Although not many shared leadership researchers have taken the role of the vertical leader into account, several studies have been conducted in hierarchical teams in a variety of organizations, such as insurance companies (Bowers & Seashore, 1966; Mehra, Smith, Dixon, & Robertson, 2006), hospitals (e.g., Klein, Ziegert, Knight, & Xiao, 2006), plant construction and engineering organizations (Hauschildt & Kirchmann, 2001), automobile manufacturers (Pearce &

Sims, 2002), theatre companies (Kramer, 2006), and universities (Khasawneh, 2011). The teams in these studies all had a hierarchical team leader and still shared leadership. We can thus conclude that shared leadership develops not only in the rather specific context of leaderless teams, but also in a broad range of different situations and teams and in the presence of a vertical leader.

An important thing to determine, therefore, is how the two relate to each other. We found several reasons to argue against the idea that vertical leaders fulfill a temporal role when team members engage in shared leadership, and become superfluous once shared leadership is established properly. The most important reason is the spontaneous character of shared leadership. Leadership behaviors of team members may be triggered by, for example, problems during task fulfillment that require specific knowledge, inadequate vertical leadership, or absence of the vertical leader. But it seems unlikely that their spontaneous leadership behaviors will cover all relevant leadership behaviors, including staffing, team development, and maintaining good relations with external stakeholders. Even in self-managing teams that have formal autonomy and far-reaching decision-making authority, as opposed to shared leadership that is purely informal, vertical leaders still fulfill important tasks. For example, they manage the external team environment by making sure that team activities fit within the mission and vision of the larger organization (Druskat & Wheeler, 2003). Vertical leaders of self-managing teams usually also contribute to team-internal affairs. They reinforce team members' self-managing behaviors (Manz & Sims, 1987; Morgeson, 2005), warrant trusting relationships among team members, and signal problems (Druskat & Wheeler, 2003). Following these arguments, it seems likely that shared leadership will not *replace* but *add* to vertical leadership, and that vertical leaders maintain important roles when teams share leadership.

If we assume that vertical leaders play an enduring role in teams that share leadership, the question arises how leadership is shared between the vertical leader and the team members. Existing research provides a good picture of the leadership behaviors that are functional in teams, like transactional and transformational leadership, initiating structure, boundary spanning, consideration, and empowerment (Burke, Fiore, & Salas, 2003). How do vertical leaders and team members share in performing these behaviors? One possibility is that vertical leaders remain responsible for all aspects of leadership and that team members stand in when the vertical leader is absent or when they feel they can otherwise make an important contribution to the leadership. Another possibility is that vertical leaders and team members perform different leadership behaviors within teams. Vertical leaders may, for example, perform leadership behaviors that are not adequately addressed by the team members, or team members may perform leadership behaviors their vertical leader is less good in. And vertical leaders and team members may also fulfill different leadership behaviors in a more structural way. Vertical leaders may remain responsible for performance outcomes and, therefore, perform more task-related leadership behaviors, whereas team members may focus on maintaining good relationships within the team by performing person-focused leadership behaviors (cf., Burke, Fiore, & Salas, 2003).

In the current shared leadership research, the leadership of vertical leaders and of team members is rarely assessed simultaneously; where this does occur, their contributions to leadership are not compared (see Hiller, Day, & Vance, 2006, for an exception). An important next step, therefore, would be to include not only shared leadership, but also vertical leadership in empirical investigations to find out how vertical and shared leadership relate to one another.

#### The state of empirical research

Empirical research plays a crucial role in solving the problems related to the concept of shared leadership. But the contributions of contemporary research remain below their potential, and this is not only due to the somewhat small amount of empirical research in general. First, the diversity of measurement instruments used to examine shared leadership is large. There are hardly two investigations that have used the same measure, leading to a fragmented research field in which the outcomes of different investigations are incomparable and knowledge accumulation is limited. And there is another problem with the measurement instruments. The shared leadership literature uses leadership scales that are well-established in the traditional leadership literature. But an explanation of how team members who lack a formal leadership position can use the same leadership behaviors as formally appointed vertical leaders is often missing. To increase contributions to the field, the shared leadership literature badly needs a theory-driven measurement instrument that researchers in the field can agree on.

A second aspect that limits insights from empirical research on shared leadership is the focus on the effects of shared leadership on team performance and effectiveness. In fact, 14 out of the 21 empirical studies included in this review that examined outcomes of shared leadership addressed only team performance and team effectiveness as outcomes. But there are probably other outcomes of shared leadership. Team members who perceive that they have an influence on their work environment, for example, were found to be more innovative (Janssen, 2005), suggesting that innovative behaviors may also be a likely outcome of shared leadership. Moreover, shared leadership may influence affective outcomes. The 'sharing' aspect may affect feelings of team commitment, and the increased influence team members have on team-related affairs probably

affects how satisfied they are with their job and their environment. We thus encourage researchers to examine outcomes of shared leadership that are different from team performance and team effectiveness.

Third, current research seems biased towards positive outcomes of shared leadership (see Conger & Pearce, 2003; Locke, 2003, for exceptions). Team members' leadership behaviors are described as an 'important intangible resource' (Carson, Tesluk, & Marrone, 2007) that increases coordination and cooperation within teams (Ensley, Hmieleski, & Pearce, 2003), and individual team members are expected to be more satisfied and willing to do something 'extra' for the team when they are able to participate in leadership (Avolio, Jung, Murry, & Sivasubramaniam, 1996). But shared leadership may not only affect team functioning in a positive sense. In emergency teams in hospitals, for example, leadership is delegated to different leaders successively, but it is not shared by several leaders at the same time (Klein, Ziegert, Knight, & Xiao, 2006). One can easily imagine the potentially negative consequences when a patient's life is at risk and seconds count, and different doctors discuss and possibly disagree on the necessary treatment. In other words, shared leadership may have negative consequences in urgent situations that leave no time for reflection. And what about several leaders tearing the team apart into subunits? Research by Mehra and colleagues (2007) suggests that shared leadership can only be effective as long as the different leaders see each other as leaders and are able to synchronize their actions. Otherwise, it is not difficult to imagine conflict and improper coordination as likely outcomes of shared leadership. In sum, although shared leadership seems a promising concept, it is important to realize that it is no cure-all that benefits team functioning regardless of situational aspects. Future research should not only address possible dark sides of shared leadership, such as increased levels of conflict, but also

take into account moderators such as time constraints that can lower team effectiveness when teams share leadership.

The final reason why the contributions of empirical research towards conceptualizations of shared leadership are limited is that research provides limited knowledge about why shared leadership develops in teams. Researchers have made attempts to find determinants of shared leadership in teams, but the underlying processes often remain unclear. Complex and ambiguous environments, for example, have been found to be related to shared leadership within organizations (Brown & Gioia, 2002), but the 'how' question remains unanswered. Does complexity trigger non-leaders to step up and provide leadership within the area of their own expertise? Or do vertical leaders acknowledge their inability to perform all facets of leadership? And do they involve others to ensure success? Future research can provide valuable contributions to the shared leadership research field by taking into account the underlying processes that lead to the development of shared leadership in teams.

#### Conclusion

The idea that leadership does not necessarily come from the formally appointed team leader only but can be exhibited by several team members is an intriguing one, attracting growing numbers of researchers. However, this review of the literature on shared leadership provides a picture of an immature research field in which different researchers use different conceptualizations of the construct. In particular, how leadership is shared, what is shared in shared leadership, and what the role of the vertical leader may be are points of disagreement. Having described and discussed these issues, we wish to conclude with a short list of the most urgent

research questions that we feel have the greatest potential to unite researchers and increase the impact of the literature on shared leadership.

First, the development of a *theory-driven measurement instrument* for shared leadership is crucial. The significance of current research on shared leadership is limited since the relevance of the content of the measurement instruments is questionable and researchers use different instruments, which makes it difficult to compare outcomes. With a carefully developed measurement instrument, researchers can build on one another's work and knowledge accumulation becomes possible.

Second, the role of the *vertical leader* awaits investigation. When vertical leaders are no longer the only source of leadership, the question arises how leadership is distributed between the vertical leader and team members. Also, whether and how vertical leaders can both encourage and discourage leadership by team members needs to be investigated empirically.

Third, an area mostly lacking in the current literature on shared leadership refers to the *antecedents* of shared leadership. How and why does shared leadership develop in teams? Why do some teams share leadership more than others? And how do individual team members gain influence in teams? Why do some team members engage in shared leadership behaviors whereas others do not? Being able to explain where shared leadership comes from will provide more credibility to the research field.

Fourth, current research on shared leadership suggests that it positively affects team performance. But what about *other outcomes*? How does shared leadership affect satisfaction or innovative behaviors, for example? And how does engagement in leadership behaviors affect team

members' individual effectiveness? Linking shared leadership to other research fields will increase the contributions of the research field.

Fifth, the effects of shared leadership may not always be straightforward. Shared leadership may lead to positive outcomes under some conditions, whereas it may damage effective team or individual functioning in other situations. Also, it is time to investigate the underlying processes that are responsible for favorable or unfavorable outcomes of shared leadership. We thus encourage researchers to investigate more complex *moderation* and *mediation* models of shared leadership.

Table 2.1: Definitions of shared leadership

Definition	Authors
Shared leadership is	
influence	
collective influence of team members on each other toward the	Avolio et al., 2003
attainment of team goals	
a process of shared influence between and among individuals that	Hooker & Csikszentmihalyi, 2003
can emerge in the team context	
an <b>influence</b> process through which individual team members share in performing the behaviors and roles of a traditional, hierarchical team leader	Houghton, Neck, & Manz, 2003
a dynamic exchange of lateral influence among peers	Locke, 2003
mutual <b>influence</b> distributed within the team	Mayo, Meindl, & Pastor, 2003
a simultaneous, ongoing, mutual <b>influence</b> process within a team that is characterized by 'serial emergence' of official as well as unofficial leaders	Pearce, 2004; Ensley, Hmieleski, & Pearce, 2006
a dynamic, interactive <b>influence</b> process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both	Pearce & Conger, 2003a; Bligh, Pearce, & Kohles, 2006; Gockel & Werth, 2010; Künzle et al., 2010; Klein, Ziegert, Knight, & Xiao, 2006; Lindsay, Day, & Halpin, 2011; Manz, Manz, Adams, & Schipper, 2010b; Vandewaerde, Voordeckers, Lambrechts, & Bammens, 2011
influence that is spread throughout the work system the direction and coordination of employee effort via interpersonal influence	Pearce & Manz, 2011 Seers, 1996
<b>influence</b> by at least two individuals who exert influence within the same interdependent role system	Seers, Keller, & Wilkerson, 2003
influence that is distributed unevenly among team members	Seibert, Sparrowe, & Liden, 2003
a reciprocal <b>influence</b> process among several parties in a system context	Shamir & Lapidot, 2003
a mutual <b>influence</b> processes of the group on the individual an emergent process of <b>mutual influence</b> in which team members share in performing the leadership functions of the team	Sivasubramaniam, Murry, Avolio, & Jung, 2002 Small & Rentsch, 2010
a shared <b>influence</b> process to which several individuals contribute and that arises from interaction among individuals	Van Ameijde, Nelson, Billserry, & Van Meurs, 2009
roles and functions	
the sharing of leadership roles, responsibilities, and functions	Acar, 2010
among all team members	
leadership roles that are displayed by team members	Balthazard et al., 2004
a collection of <b>roles and behaviors</b> that can be shared by different	Barry, 1991; Carte, Chidambaram, & Becker,
individuals	2006; Yang & Shao, 1996
transference of leadership function among team members in order	Burke, Fiore, & Salas, 2003
to take advantage of member strengths	
division of the <b>leader role</b> in case of complex innovations	Hauschildt & Kirchmann, 2001
behavior	
aggregation of <b>behaviors</b> by any team member toward another member or members that advances some joint aim	Bowers & Seashore, 1966

Table 2.1: Definitions of shared leadership (continued)

Definition	Authors
Shared leadership is	
a process	
a collaborative, emergent process of team interaction in which	Cox, Pearce, & Perry, 2003
members engage in peer leadership while working together	
a <b>shared</b> , <b>distributed process</b> that creates a capacity for versatility	Day, Gronn, & Salas, 2004
and adaptability	
a dynamic leadership process in which a defined leader, or set of	Friedrich et al., 2009
leaders, selectively utilize skills and expertise within a network,	
effectively distributing elements of the leadership role as the	
situation or problem at hand requires	T
a reciprocal social process that involves complementary	Li et al., 2007
interactions among leaders and followers	N. d. 1 0 M 1 2010
a collective <b>team process</b> through which individual team members	Muethel & Hoegl, 2010
shared the behaviors and roles of the traditional leader	D D 0.C. 1000 E 1 D 0
a <b>team process</b> in which leadership is distributed among, and stems	Perry, Pearce, & Sims, 1999; Ensley, Pearson, &
from, team members	Pearce, 2003; Khasawneh, 2011; Pearce & Sims,
d.	2002; Pearce, Yoo, & Alavi, 2003
other	4 1' I M 0 C' 1 ' 1006
<b>responsibility</b> that is shared within and between organizational	Avolio, Jung, Murry, & Sivasubramaniam, 1996
levels	Daiga Lyina & Martana 2010
leadership that emanates from the team itself leadership that is distributed throughout the team and	Boies, Lvina, & Martens, 2010 Brown & Gioa, 2002
encompasses interrelationships among all members of the team	BIOWII & 010a, 2002
an <b>emergent team property</b> that results from the distribution of	Carson, Tesluk, & Marrone, 2007
leadership influence across multiple team members	Carson, Testuk, & Marrone, 2007
a dynamic, multidirectional, <b>collective activity</b>	Fletcher & Käufer, 2003
distributed activity tied to the core work of teams that is designed	Gressick & Derry, 2010
by team members to influence the motivation, knowledge, affect, or	Gressiek & Berry, 2010
practice of other members	
holistic and <b>concertive action</b> by several leaders	Gronn, 2002
<b>team member interaction</b> to lead the team by sharing in leadership	Hiller, Day, & Vance, 2006
responsibilities	· , · · · · · · · · · · · · · · · · · ·
various team members being <b>empowered to participate in leading</b>	Kramer, 2006
the team	
everyone connected to the organization <b>provides his or her ideas</b>	Manz, Manz, Adams, & Schipper, 2010a
and leadership potential when needed	
the perception of <b>several leaders</b> within a team	Mehra, Smith, Dixon, & Robertson, 2006
<b>shared effort</b> by several individuals	O'Toole, Galbraith, & Lawler II, 2003
an emergent activity that is partially constituted via social	Scribner et al., 2007
interactions and involves multidirectional flow of influence	
throughout the organization	

Table 2.2: Concepts of shared leadership

		Acar, 2010	Avolio, Jung, Murry, & Sivasubramaniam, 1996;	200	Balthazard et al., 2004	Barry, 1991	Bligh, Pearce, & Kohles, 2006	Boies, Lvina, & Martens, 2010	Bowers & Seashore, 1966	3	Burke, Fiore, & Salas, 2003	Carson, Tesluk, & Marrone, 2006	Carte, Chidambaram, & Becker, 2006	Day, Gronn, & Salas, 2004	Fletcher & Käufer, 2003	Friedrich et al., 2009	Gockel & Werth, 2010	Gressick & Derry, 2010	Gronn, 2002	Hauschildt & Kirchmann, 2001	Hiller, Day, & Vance, 2006	Hoch, Pearce, & Welzel, 2010	Houghton, Neck, & Manz, 2003	Khasawneh, 2011	٠,	Kramer, 2006	Künzle et al., 2010	Li et al., 2007	Lindsay, Day, & Halpin, 2011	Locke, 2003
How is leadership shared	whole team	X						Х		X				X	X		X		X		X		X							
•	individual				X	X	X		X		X	X	X			X	X	X		X		X		X	X	X	X	X	X	X
What is shared	roles and functions	X	X		X	X					X		X			X				X	X	X								
	behavior					X		X	X				X				X						X							
	influence		X				X				X	X			X		X	X	X			X	X	X			X	X	X	X
Role of vertical leader	not existing	X				X	X						X	X																
	temporal								X						X								X							
	enduring		X				X			X		X				X		X		X			X	X	X			X	X	X

Table 2.2: Concepts of shared leadership (continued)

		Manz. Adams, & Schipper, 2010a	. Adams, &	eindl, & Pastor, 2003	Mehra, Smith, Dixon, & Robertson 2006	Muethel & Hoegl, 2010	O'Toole, Galbraith, & Lawler II, 2003	Pearce & Conger, 2003a	& Manz, 2011	Perry, Pearce, & Sims, 1999; Pearce & Sims, 2002; Cox, Pearce, & Perry, 2003; Pearce, Yoo, & Alavi, 2003; Ensley, Pearson & Pearce, 2003; Hooker & Csikszentmihalyi, 2003; Pearce, 2004; Ensley, Hmieleski, & Pearce, 2006, Pearce, Manz, & Sims Jr., 2008	t al., 2007	Keller, & Wilkerson, 2003; Seers, 1996	rowe, & Liden, 2003	Murry, A	Small & Rentsch, 2010	Van Ameijde, Nelson, Billserry, & Van Meurs, 2009	erde, Voordeckers, Lambrechts, & Bammens,	hao, 1996
		Manz, M	Manz, M	Mayo, Meindl	Mehra, S	Muethel	O'Toole,	Pearce &	Pearce &	Perry, Pearce, Cox, Pearce, 2003; Ensley, Csikszentmih Hmieleski, & 2008	Scribner et al.	Seers, Ko	Seibert, S	Sivasubr	Small &	Van Am	Vandewaerde, 2011	Yang & Shao,
How is leadership shared	whole team									X				X				
	individual	Х	X	X	X	X		X	X		X	X	Х		X	X	X	
What is shared	roles and functions						X								X			X
	behavior					X				X								
	influence		X	X	X	X		X	X	X	X	X	X	X	X	X	X	
Role of vertical leader	not existing					X						X						X
	temporal												X					
	enduring		X			X		X	X	X	X					X	X	

Table 2.3: Empirical literature on shared leadership

Measurement	Leadership is shared by	Antecedents	Mediators/ moderators	Outcomes	Research context	Authors
Diversity-related shared leadership: 'My group discourages prejudiced comments'	whole team		Shared leadership as moderator on diversity- emotional conflict relationship		301 graduate students from 81 teams, longitudinal research design	Acar, 2010
Transformational, transactional, and passive leadership	whole team			Team effectiveness, satisfaction, extra effort, collective efficacy, potency, cohesion, trust	248 undergraduate students from the US	Avolio, Jung, Murry, & Sivasubramaniam, 1996
Inspiring leadership, intellectual stimulation, individualized consideration, active management by exception, passive/avoidant	whole team				Development and validation of team multifactor leadership questionnaire, exploratory study among 189 students in 37 teams, validating studies among 165 students in 42 teams, 118 students in 34 teams, and 309 U.S. Army soldiers	Avolio et al., 2003
Transformational (TFL) and passive avoidant leadership (PAL)	whole team			Team performance, team potency, trust	49 student teams (N=194) participating in a business simulation game during 12 weeks	Boies, Lvina, & Martens, 2010
Scanning environment, sharing information and interpretations about relevant events, engaging in mutually informed action	whole team	Complex, dynamic, ambiguous contexts			More than 25 interviews with the president and members of the top management team of the internet unit of a large Fortune 500 company, case study	Brown & GioiQa, 2002
Transformational, transactional, empowering, and directive leadership on team and individual level	whole team			Team performance	585 members of 220 top management teams of startups	Ensley, Hmieleski, & Pearce, 2006
4 leadership roles: problem solving, planning and organizing, support and consideration, development and mentoring	whole team	Individualism/ collectivism		Team performance	52 winter road teams (N=277)	Hiller, Day, & Vance, 2006

Table 2.3: Empirical literature on shared leadership (continued)

Measurement	Leadership is shared by	Antecedents	Mediators/ moderators	Outcomes	Research context	Authors
Transformational, transactional, empowering, directive, and aversive leadership	whole team		Mod: age diversity, coordination	Team performance	26 project teams (N=122) from a German consultant company	Hoch, Pearce, & Welzel, 2010
Sharing and tapping into one another's interests and abilities	whole team			Flow, creativity, team effectiveness	Four semi structured interviews with scientists working within the same unit of a university astrophysics lab	Hooker & Csikszentmihalyi, 2003
Transformational, transactional, empowering, directive and aversive leadership of team and vertical leader, example of transformational leadership: 'My team leader (members) expect(s) me to perform on a high level'	whole team			Team effectiveness	71 empowered change management teams of a large automobile manufacturing firm (N=236), two measurement moments with a delay of 6 month	Pearce & Sims, 2002
Transformational, transactional, empowering, and directive leadership on team level	whole team			Potency, social integration, problem-solving quality, perceived effectiveness	28 virtual teams of social workers who elected own leader (N=206)	Pearce, Yoo, & Alavi, 2003
Transformational leadership, management by exception, and laissez-faire on team level, example transformational leadership: 'Members of my team envision exciting new possibilities'	whole team		Med: group potency over time	Team performance	42 leaderless student teams of a large public university (N=182), two measurement moments with a delay of 10 weeks	Sivasubramaniam, Murry, Avolio, & Jung, 2002

Table 2.3: Empirical literature on shared leadership (continued)

Measurement	Leadership is shared by	Antecedents	Mediators/ moderators	Outcomes	Research context	Authors
Transformational leadership behaviors of each individual team member	individuals in teams	'Face-to-face' or virtual teams		Constructive and defensive interaction, cohesion, task performance	336 MBA and senior undergraduate students of 88 teams	Balthazard et al., 2004
Support, interaction facilitation, goal emphasis, work facilitation	individuals in teams			Organizational effectiveness	40 agencies of a leading life insurance company with a vertical leader (N=873)	Bowers & Seashore, 1966
'To what degree does your team rely on this individual for leadership?'	individuals in teams	Internal conditions (shared purpose, social support, voice), external team coaching	Mod: external team coaching (on internal team environment – shared leadership relationship)	Team performance	59 MBA student-consulting teams (self-managing) from a large eastern university (N=348)	Carson, Tesluk, & Marrone, 2006
8 leadership roles: innovator, broker, producer, director, coordinator, monitor, facilitation, and mentor	individuals in teams		• •	Team performance	22 virtual student teams (self-managing)	Carte, Chidambaram, & Becker, 2006
Acknowledgement/ affective argument development, seeking input, knowledge contribution, organizational moves, topic control	individuals in teams			Team performance	5 small math-science interdisciplinary teams (N=31), collaborating online for two months, qualitative and quantitative approach	Gressick & Derry, 2010
Three leadership roles: hierarchical leader, process leader, technology leader	individuals in teams	Innovation complexity		Innovation process	133 product innovations in 133 firms, interviews and questionnaires	Hauschildt & Kirchmann, 2001
Participative decision making ('I participate with my superiors in setting organizational direction'), communication ('Leaders in my university consult with faculty members when facing a problem'), and power ('We have a distributed power structure in our university')	individuals in teams			OCB	558 faculty members of three Jordanian public universities, questionnaires	Khasawneh, 2011

Table 2.3: Empirical literature on shared leadership (continued)

Measurement	Leadership is shared by	Antecedents	Mediators/ moderators	Outcomes	Research context	Authors
Provide strategic direction, monitor, provide hands-on treatment, teach other team members	individuals in teams	Urgency/novelty of situation, routines, leader characteristics: confidence in others and self, expertise, awareness of time and turnover			33 interviews with members from an American trauma resuscitation unit, observation of 175 patients being treated	Klein, Ziegert, Knight, & Xiao, 2006
Giving direction, providing comments and feedback, providing support, organizing operations of scene change, teaching others, making decisions	individuals in teams	Lack of leadership, direction, vision, and coordination of vertical leader			Analysis of interviews with 26 (out of 30) members of a theatre company, of team communication (like e-mails), and observation of rehearsals	Kramer, 2006
Content-oriented leadership, structuring leadership	individuals in teams		Mod: task load (not significant)	Team performance	13 video recordings of anesthesia duos, performing on a resuscitation mannequin	Künzle et al., 2010
Turn management, argument development, planning and organizing, topic control, acknowledgement	individuals in teams	Time for shared leadership, gender and task competence for individual leadership			4 teachers and 76 students (4 classrooms) from 3 public schools, each classroom divided into 3 subgroups, observations over 5 weeks	Li et al., 2007
Employees 'delve into areas that might seem completely outside their area', like communication, building structures, or agriculture handling	individuals in teams	•	Mod: shared values	Sustainable organizational performance	Case study at a furniture company; analysis of documents, observations, team and individual interviews	Manz, Manz. Adams, & Schipper, 2010b
'Indicate whom of your colleagues you perceive to be a leader'	individuals in teams		Mod: leadership network structure	Team performance	28 field-based insurance sales teams with a vertical leader of a large financial services (N=336)	Mehra, Smith, Dixon, & Robertson, 2006
Five types of speech: representative, expressive, directive, and commissive speech, and declaration	individuals in teams	Purpose, autonomy, active/passive discourse			Two teams in comprehensive school (N = 14), observations	Scribner et al., 2007

Table 2.3: Empirical literature on shared leadership (continued)

Measurement	Leadership is shared by	Antecedents	Mediators/ moderators	Outcomes	Research context	Authors
Change-oriented, task-oriented, and relations-oriented leadership, example of task-oriented leadership: 'Team member X acknowledged and considered suggestions from all team members'	individuals in teams	Time, trust		Team performance	60 student teams (N=280) performing a 16-weeks business simulation	Small & Rentsch, 2010
External processes (tailoring message to receiver, feedback of progress, involving key people), internal processes (inform. sharing, mutual performance monitoring, coordination, adaptive behaviors, inclusiveness)	individuals in teams	Autonomy, clear goals, commitment to team goals, clearly defined responsibilities, expertise, team size		Project success	Interviews with 25 staff members of project teams of UK university	Van Ameijde, Nelson, Billserry, & Van Meurs, 2009
8 leadership roles: innovator, broker, producer, director, coordinator, monitor, facilitation, and mentor	individuals in teams				30 team members from 2 self- managing teams of a large food retailer	Yang & Shao, 1996

#### Different effects of shared and vertical leadership behaviors on team effectiveness

#### Introduction

Shared leadership has been proposed as "the answer" to leadership questions of the 21st century (Pearce & Sims, 2002, p 172). In flatter organizational structures and with increasingly complex and ambiguous environments, the traditional, vertical leadership models that foresee a single, formally appointed leader at the top of the team seem outdated (Day, Gronn, & Salas, 2004; Pearce & Sims, 2002). Well-trained team members demand participation in leadership; also, a single leader is less likely to possess all relevant knowledge needed for decision making. Shared leadership does not restrict leadership to the vertical leader, but includes team members in the leadership process. It is defined as a dynamic influence process in which individual team members influence each other towards the attainment of team goals (Houghton, Neck, & Manz, 2003; Pearce & Conger, 2003a).

The rationale behind shared leadership is that it enhances a team's effectiveness (Pearce & Sims, 2002). Considering the broad range of leadership behaviors that constitute leadership, and the unlikeliness of these behaviors all being exhibited by a single individual, the participation of team members in leadership is assumed to increase the chances of a team getting what is needed for optimal functioning. Also, team members who engage in leadership release much more of their potential than those who don't, thereby benefiting team effectiveness (Pearce & Conger, 2003a). Indeed, the growing body of literature on shared leadership confirms a positive relationship between shared leadership and team effectiveness (e.g., Bowers & Seashore, 1966; Carson, Tesluk,

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& Marrone, 2007; Ensley, Hmieleski, & Pearce, 2006; Hiller, Day, & Vance, 2006; Pearce & Sims, 2002; Sivasubramaniam, Murry, Avolio, & Jung, 2002).

While this emerging body of research has established the meaningful role of shared leadership in team effectiveness, several important questions have been left unanswered. The first question that we focused on is how shared leadership is related to different indicators of team effectiveness. In previous research on shared leadership, team effectiveness was often treated as equivalent to team performance. However, the teamwork literature defines team effectiveness not only in terms of team performance, but also in terms of individual affective outcomes. Hackman (1987) explicitly includes team commitment and job satisfaction in his definition of team effectiveness, since they enable team members' future collaboration and thereby the subsistence of the team. Because previous researchers have documented primarily team performance outcomes of shared leadership, we additionally included individual affective outcomes of team commitment and job satisfaction to examine how shared leadership is related to a broader set of team effectiveness criteria.

The second question that we focused on is how different types of leadership behaviors affect team effectiveness. Even though there is a wide variety of different leadership behaviors that are usually categorized in person-focused and task-focused leadership (Burke et al., 2006), shared leadership researchers have not differentiated between different leadership styles (e.g., Carson, Tesluk, & Marrone, 2007) or combined them in one measure of shared leadership (e.g., Pearce & Sims, 2002). A deeper understanding of the relative effectiveness of distinct leadership behaviors exhibited by team members is, therefore, needed. Despite the implicit assumption that the different shared leadership behaviors are as effective as their vertical counterparts (Ensley, Hmieleski, &

Pearce, 2006), there are good reasons to believe that whereas some shared leadership behaviors may enhance team effectiveness, others may undermine effective team work. Specifically, leadership behaviors that require the following of orders and commands are likely to be rejected by peers because team members have no formal authority over peers. This may result in lowered team effectiveness. In the present study, using transformational leadership as an indicator of person-focused leadership and directive leadership as an indicator of task-focused leadership, we examined how these different types of leadership behaviors influence team effectiveness when exhibited by vertical leaders as compared to team members. That is, we developed and tested hypotheses predicting that both, vertical leadership behaviors and shared transformational leadership, would contribute to team effectiveness, and that shared directive leadership would be detrimental to the functioning of teams.

We begin by defining team effectiveness, and then describe the development of hypotheses about how transformational and directive leadership behaviors exhibited by vertical leaders as well as team members influence team effectiveness. We tested our hypotheses in 39 work teams; the results are discussed in terms of theoretical and practical implications, strengths and limitations, and directions for future research.

#### Theoretical framework

#### Team effectiveness

Team effectiveness is often described in terms of team performance. However, such an approach overlooks team members' affective reactions to team work which are fundamental to team effectiveness (Hackman, 1987). Negative affective reactions of team members can increase

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conflict and decrease team members' willingness to work together on subsequent team tasks, thereby threatening the survival of the team as a performing entity. Also, they can lead to divisive interactions, thereby keeping the team from effective team work. It is, therefore, important to include not only team performance, but also affective outcomes such as team commitment and job satisfaction as indicators of team effectiveness. Team commitment involves a feeling of emotional attachment (Allen & Meyer, 1990), and elicits loyalty and a sense of belonging (Walumba & Lawler, 2003). It decreases turnover, the intention to search for job alternatives, and the intention to leave (Mathieu & Zajac, 1990), which makes it a good indicator of team members' willingness to maintain team membership. Job satisfaction refers to a positive evaluation of work in the team context (Ilies & Judge, 2004). Satisfied team members engage less in counterproductive work behaviors and withdraw less from work than their unsatisfied colleagues (Crede et al., 2007).

#### Vertical leadership and team effectiveness

Vertical leadership is the process of leaders influencing team members towards the attainment of team goals (Yukl, 2010). Research has revealed a broad range of leadership behaviors that may benefit team effectiveness, which can be categorized in person-focused and task-focused leadership (Burke et al., 2006). Person-focused leadership refers to behaviors that promote positive interactions among team members and facilitate individual development; task-focused leadership relates to behaviors that "facilitate understanding task requirements, operating procedures, and acquiring task information" (Burke et al., 2006, p 291).

Transformational leadership has been typified as a person-focused leadership style that motivates team members to "transcend their own self-interest for a higher collective purpose, mission, or vision" (Howell & Avolio, 1993, p 891). Such motivational and inspiring leadership

develops team spirit and self-actualization among team members (Bass, 1985; Burke et al., 2006; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Podsakoff et al. (1990) describe six dimensions of transformational leadership. Transformational leaders identify and articulate a team vision, and they foster the acceptance of team goals. Also, they provide an appropriate role model and formulate high performance expectations. Finally, transformational leaders provide individualized support and attempt to intellectually stimulate team members. These dimensions were found to be highly correlated (Bycio, Hackett, & Allen, 1995) and to jointly reflect the concept of transformational leadership (Carless, 1998).

A vast amount of literature links vertical transformational leadership to the three criteria of team effectiveness distinguished. Two meta-analyses based on 40 samples and more than 6000 participants each confirm the positive relationship between vertical transformational leadership and team performance (Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996). The corrected correlations varied between .60 and .71 for the different dimensions of transformational leadership in the study by Judge and Piccolo, and was .26 for the whole construct in Lowe et al.'s study. Transformational leaders motivate team members intrinsically and provide them with a sense of purpose. In doing so, they increase their willingness to put extra effort in the team, which enhances team performance (Howell & Avolio, 1993).

Transformational leadership has also been related to positive affective outcomes. The supportive character of transformational leadership provides team members with confidence in their abilities to perform tasks and fosters strong emotional bonds within the team, increasing team member involvement in the work and team commitment (Avolio, Zhu, Koh, & Bhata, 2004; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Moreover, transformational leaders show

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concern and respect for the feelings and needs of team members, thereby increasing team member job satisfaction (Judge & Piccolo, 2004). Meta-analytic research among 18 samples and 5,279 participants demonstrated a corrected correlation of .58, which confirms the positive relationship between transformational leadership and team member job satisfaction (Judge & Piccolo, 2004). Accordingly, we formulated the following hypothesis:

Hypothesis 1: Vertical transformational leadership is positively related to team performance (H1a) and both team commitment and job satisfaction (H1b).

Directive leadership is an example of task-focused leadership since directive leaders address different aspects of task execution. They assign tasks and define how these should be accomplished, monitor team member activities during task execution, and provide feedback in order to guarantee optimal performance (Pearce, Sims, Cox, Ball, Schnell, Smith, & Trevino, 2003; Sagie, 1996). Directive leaders thus pay close attention to how team members perform and watch goal attainment, and intervene when necessary.

The effects of vertical directive leadership on the different aspects of team effectiveness are also well documented. As directive leaders assign team members with specific goals and propose ways to accomplish them (Pearce, Sims, Cox, Ball, Schnell, Smith, & Trevino, 2003), they provide clarity about the task at hand and prevent ambiguity and conflict, which increases team performance (Burke et al., 2006). Furthermore, directive leaders "create a clear link between effort and productivity" and thereby increase members' commitment to the team (Somech, 2005, p 783). This is supported by the results of a meta-analytic study across 14 samples (N = 3.019), in which a corrected correlation of .29 between directive leadership and team commitment was found (Mathieu & Zajac, 1990). Finally, directive leadership behaviors promote job satisfaction because

they help team members to cope with complex situations and to stay focused (Kahai, Sosik, & Avolio, 2004). Again, this proposition was confirmed in a meta-analysis among 72 samples and 10,317 participants, showing a corrected correlation of .22 between directive leadership and job satisfaction (Judge, Piccolo, & Ilies, 2004).

Hypothesis 2: Vertical directive leadership is positively related to team performance (H2a) and both team commitment and job satisfaction (H2b).

#### Shared leadership and team effectiveness

Shared leadership refers to leadership that is not centralized in a single, formally appointed leader, but is shared among team members (Pearce & Conger, 2003b). It is a team-level construct that describes the extent to which team members engage in leadership behaviors. Since team members have no formal leadership tasks, their leadership reflects voluntary behaviors that result from team members having voice in the team and feeling their input is valued (Carson, Tesluk, & Marrone, 2007). Team members engage in leadership behaviors by motivating peers to perform at high levels (shared transformational leadership) and assigning tasks to peers (shared directive leadership), just like vertical leaders (Avolio, Jung, Murry, & Sivasubramaniam, 1996; Ensley, Hmieleski, & Pearce, 2006; Pearce & Sims, 2002; Sivasubramaniam, Murry, Avolio, & Jung, 2002). While vertical leadership refers to a top-down influence process with the vertical leader influencing team members towards goal attainment, shared leadership refers to horizontal influence processes with team members influencing and advancing *each other* in the achievement of team goals (Fletcher & Käufer, 2003; Pearce & Sims, 2002).

Applying the framework of Podsakoff et al. (1990) to shared transformational leadership implies that team members may engage in six key behaviors in order to motivate each other

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towards exceptional achievements. They can actively engage in the creation of a team vision, promote team work and cooperation, provide role models and express high performance expectations, treat each other with respect and dignity, and challenge each other to come up with new and creative ideas. These behaviors indicate that team members communicate about the team's vision and tasks and about ways to accomplish the team goals. A byproduct of such communication is that team members exchange team-related information. This increases the pool of shared information within the team, leading to better decision effectiveness and thus to a higher team performance (Mesmer-Magnus & DeChurch, 2009). We therefore expected shared transformational leadership to be positively related to team performance.

Furthermore, transformational leadership refers to person-focused behaviors that may promote positive affective reactions. When team members engage in transformational leadership, their behaviors are indicative of positive and personal interactions within the team, since team members are concerned about others' well-being and promote self-actualization (Bass, 1999). These positive and personal interactions have been proposed to increase feelings of belonging to the team as well as team member satisfaction (Van der Vegt, Emans, & Van de Vliert, 2000), suggesting a positive relationship between shared transformational leadership and affective outcomes.

Hypothesis 3: Shared transformational leadership is positively related to team performance (H3a) and both team commitment and job satisfaction (H3b).

Shared directive leadership refers to team members providing task-related leadership, such as assigning tasks, monitoring activities, and providing task-related feedback (Pearce, Sims, Cox, Ball, Schnell, Smith, & Trevino, 2003; Sagie, 1996). When the team has difficulties meeting its

deadlines, team members may, for example, feel the need to monitor the activities of peers in order to facilitate goal attainment. Also, they may propose changing task allocation when they observe inefficiencies. Such directive behaviors assume authority to determine the task content and to control the task execution of team members (Ridgeway, Johnson, & Diekema, 1994). But team members have no formal leadership position, and, therefore, lack the formal authority to assign tasks to peers and to monitor and change their task execution (Yukl & Falbe, 1991). Owing to this lack of authority, shared directive leadership behaviors are likely to be perceived as inappropriate by peers, who may feel inclined to implicitly or explicitly sabotage the other team members (by provoking conflicts, engaging in counterproductive behavior, etc.), which decreases team performance. Consistent with this reasoning, research findings on social influence show that team members resist task assignments from peers by assigning low priority to those tasks and performing them with low effort (Yukl & Tracey, 1992). We thus propose shared directive leadership behaviors to be negatively related to team performance.

Shared directive leadership is also likely to result in negative affective reactions. Because team members have no formal authority, there is no obvious reason or legitimacy for monitoring the performance levels of peers. When team members nevertheless engage in directive leadership behaviors, this may be perceived as a violation of trust; team members may feel hurt and experience anger and fear (cf., Langfred, 2004). Consequently, shared directive leadership is likely to decrease team commitment and team members' job satisfaction (Dirks & Ferrin, 2001).

Hypothesis 4: Shared directive leadership is negatively related to team performance (H4a) and both team commitment and job satisfaction (H4b).

#### Methods

# Sample

This research was conducted among 39 Dutch work teams with a total of 290 employees, of whom 283 participated in this research (39 team leaders and 244 team members). Twenty-two teams were from a Dutch bank. The remaining teams were working in different occupations and organizations, such as insurance companies, consultancies, other banks, and the hotel and catering industry. Their tasks ranged from customer services in restaurants and bank shops to the selling of complex financial products and the execution of scientific research. The teams were located at different levels of the organizational hierarchy, from bank shops with mainly operational tasks to regional management teams with strategic say. All teams had a vertical leader, and team size ranged from 4 to 13 members. Fifty-two percent of the participants were male; the participants were between 17 and 58 years of age, with a mean age of 36 years (SD = 10.17).

#### Procedure

We collected the data using questionnaires. To make sure that participants answered confidential questions about their peers, we interviewed them separately. This provided us with the opportunity to explain how we would use the data and to guarantee confidentiality without running the risk of unpleasant group processes. During the interviews, we alternated interview questions (to generate a personal atmosphere with participants) with questionnaires (to assess leadership and outcomes).

#### Measures

We used 7-point Likert scales to measure all variables except team size. Because we assessed leadership using a Round Robin design, meaning that participants rated each colleague

(including the vertical leader) on leadership behaviors, we examined the average interrater agreement coefficient  $r_{wg(j)}$  to make sure team members agreed sufficiently to combine their ratings into one leadership score for each individual (James, Demaree, & Wolf, 1984). This measure indicates the level of agreement *across different items* and should exceed .70. We also used  $r_{wg(j)}$  to justify aggregation of individual perceptions of team commitment and job satisfaction to the team level. For the same reasons we established the intraclass correlation coefficients ICC(1) and ICC(2) for the leadership measures as well as the affective outcomes measures. ICC(1) is used to compare within-group variance with between-group variance, and ICC(2) reflects the reliability of the mean values within teams. With a team size of 7.46, ICC(1) should exceed .24 if the desirable level of .70 for ICC(2) is to be met (Klein & Kozlowski, 2000).

#### Vertical and shared leadership

*Transformational leadership* was assessed using the six-dimensional scale developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990). To reduce the burden on participants, (team members had to answer each question for 3 to 12 people, depending on the team size), we included one highest-loading item for each transformational leadership dimension. One of the items was "To what extent do the team members named below help develop your team attitude and team spirit?" (1 = "not at all", 7 = "to a very high degree"). Cronbach's alpha of the scale was .91. We constructed leadership scores for every team member (including the vertical leader) by computing the mean of the scores assigned by the other team members ( $r_{wg(j)}$  = .89). Vertical transformational leadership was computed as the average of how team members rated the vertical leader on the six items. Shared transformational leadership was computed as the average individual leadership scores within teams (ICC[1] = .41; ICC[2] = .74).

We measured *directive leadership* using three items, again using a Round Robin design. The items were based on Kahai, Sosik, and Avolio (2004), and referred to task assignment, monitoring, and providing feedback. The items were "To what extent do the team members named below tell you how to accomplish your tasks?", "To what extent do the team members named below check whether you do your work properly?", and "To what extent do the team members named below provide feedback on your work performance?" (1 = "not at all", 7 = "to a very high degree"). Cronbach's alpha of the scale was .90. We first assessed the mean of the dyadic ratings for each individual team member (including the vertical leader;  $r_{wg(j)}$  = .73). We next computed scores for vertical directive leadership following the method described above for vertical transformational leadership. For shared directive leadership, the individual scores for team members were aggregated to the team level (ICC[1] = .40; ICC[2] = .73).

#### Team performance

Team performance was rated by the vertical leader. Seven of the ten items were based on Gibson, Zellmer-Bruhn, and Schwab (2003), and were used to assess different aspects of performance, like quality and quantity of the delivered products and services, goal attainment, and timeliness. The remaining three items referred to the three dimensions of innovative performance (idea generation, idea promotion, and idea implementation), and were based on Janssen (2001). A list of all 10 items is provided in Appendix 3.1. The response format ranged from "very low" (1) to "very high" (7). Cronbach's alpha of the scale was .88.

### Team commitment

Team commitment was assessed using 4 items from Allen and Meyer's (1990) affective commitment scale. Participants indicated their agreement with four propositions: "I would like to

continue working with my team", "I feel like 'part of the family' in this team", "I like the other team members a lot", and "I am glad with my current team mates" (1 = "strongly disagree", 7 = "strongly agree"). Cronbach's alpha of the four items was .90. Since the aggregation statistics were satisfactory ( $r_{wg(j)}$  = .90; ICC[1] = .44; ICC[2]) = .77), we aggregated the individual scores to the team level.

# Job satisfaction

To assess job satisfaction we used five items from Judge, Scott, and Ilies (2006) (based on Brayfield & Rothe, 1951). Team members indicated whether they agreed with propositions like "At this very moment, I am enthusiastic about my work" (1 = "strongly disagree", 7 = "strongly agree"). Cronbach's alpha of the scale was .88. We aggregated the individual scores to the team level ( $r_{wg(j)}$  = .91; ICC[1] = .20; ICC[2] = .51). ICC[2] was lower than the obligatory .70, but since the results of the ANOVA indicated that there was more variance between than within teams (F = 2.05, p < .01), we nevertheless decided to aggregate the individual scores to the team level of analysis.

### Control variables

We controlled for team size because larger teams suffer more from coordination problems and, therefore, may perform worse than smaller teams (Gooding & Wagner III, 1985). Also, team size might be an alternative explanation for effects on satisfaction since team members in larger teams tend to be less satisfied than members of smaller teams (Pearce & Sims, 2002).

#### **Results**

# **Descriptive statistics**

Table 3.1 provides the means, standard deviations, and correlations. Vertical transformational leadership was, as expected, positively related to team performance and to team commitment (r = .44, p < .01 and r = .39, p < .05, respectively), but was unrelated to job satisfaction (r = .16, n.s.). Vertical directive leadership was unrelated to all three criteria of team effectiveness (team performance r = .02, n.s.; team commitment r = .09, n.s.; job satisfaction r = .14, n.s.). Shared transformational leadership was positively related to team performance and team commitment (r = .30, p = .06 and r = .66, p < .001, respectively), but was unrelated to job satisfaction (r = .14, n.s.). Finally, shared directive leadership was unrelated to team performance and team commitment (r = -.02, n.s. and r = .02, n.s., respectively), but correlated negatively with job satisfaction (r = -.39, p < .05).

Table 3.1: Means, standard deviations, and correlations

Variable	Mean	SD	1	2	3	4	5	6	7
1. Team size	7.46	.27							
2. Vertical transform. ls	5.06	.77	.15						
3. Vertical directive ls	4.92	.80	.22	.50**					
4. Shared transform. ls	4.18	.49	32	.42**	.09				
5. Shared directive ls	3.05	.54	12	.28	.28	.52**			
6. Team performance	4.84	.71	.10	.44**	.02	.30	20		
7. Team commitment	5.39	.83	.09	.39*	.09	.66**	.02	.40*	
8. Job satisfaction	5.53	.52	.20	.16	14	.14	39*	.34*	.42**

N = 39; transform. = transformational, ls = leadership

<sup>\*</sup> p < .05; \*\* p < .01

# **Hypothesis testing**

To determine the effects of the different leadership behaviors on the three criteria of team effectiveness, we used hierarchical regression analysis. In the first step of the analysis we controlled for team size. We then conducted the second step of the analysis twice, first with the two vertical leadership behaviors (2a) and then with the two shared leadership behaviors (2b) to examine their separate contributions in explaining the different criteria of team effectiveness. In the third step, we entered all four leadership behaviors together to assess their relative importance. The results are presented in Table 3.2.

Table 3.2: Unstandardized regression coefficients of hierarchical regression analysis for the three criteria of team effectiveness

Variables	Team performance					Team co	mmitmen	nt	Job satisfaction			
Step	1	2a	2b	3	1	2a	2b	3	1	2a	2b	3
Team size	.07	.06	.06	.02	.17	.14	.15	.12	.05	.06	03	05
Vert. trans. ls		.40**		.35*		.37*		.09		.16		.13
Vert. direct. ls		20		13		14		.04		17		05
Shar. trans. 1s			.30*	.17			.73**	.70**			.25**	.20*
Shar. direct. ls			15	16			-	-			-	-
							.32**	.35**			.34**	.34**
$\mathbb{R}^2$	.01	.25	.14	.29	.04	.19	.61	.62	.01	.10	.32	.35
$\Delta R^2$		.24**	.13	.04/		.15*	.56**	.43**		.09	.31**	.25**
				.15*a				$/.02^{a}$				$/.04^{a}$

N = 39; Vert. = Vertical, trans. = transformational, direct. = directive, Shar. = Shared, ls = leadership

With team size controlled for, the results of the regression analysis provide support for Hypothesis 1a, which stated that vertical transformational leadership would be positively related to team performance (b = .40, p < .01). This effect remained significant even when the two shared leadership variables were added to the regression equation in Step 3 (b = .35, p < .05). The results only partly supported Hypothesis 1b: vertical transformational leadership was positively related to

 $<sup>^{</sup>a}$  = first  $\Delta R^{2}$  values refer to step 2a, the second to step 2b.

<sup>\*</sup> p < .05; \*\* p < .01

team commitment (b = .37, p < .05), but not to job satisfaction (b = .16, p = .12). Table 3.2 indicates, however, that the effect of vertical transformational leadership on team commitment diminished when, in Step 3, the two shared leadership behaviors were added to the regression equation (b = .09, n.s.).

The regression results provided no support for relationships between vertical directive leadership and the three effectiveness criteria (Hypothesis 2): the regression coefficients were significant for neither team performance (b = -.20, p = .12) nor team commitment (b = -.14, n.s.) and job satisfaction (b = -.17, p = .10). Hypotheses 2a and 2b were not confirmed.

We then tested for the effects of shared leadership. Hypothesis 3a stated that shared transformational leadership would be positively related to team performance. This hypothesis was supported by the results of the regression analysis, as indicated in Table 3.2 (b = .30, p < .05). This significant effect for shared transformational leadership diminished, however, when vertical leadership was included in the analysis (b = .17, n.s.). Hypothesis 3b predicted a positive relationship between shared transformational leadership and the affective outcomes, which was supported for both team commitment (b = .73, p < .01) and job satisfaction (b = .25, p < .01). These effects remained significant when the vertical leadership behaviors were included in the analysis.

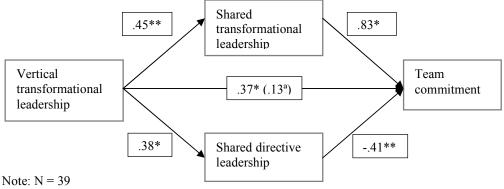
Finally, Hypothesis 4 stated that shared directive leadership would be negatively related to the three criteria of team effectiveness. We found no support for hypothesis 4a, stating that shared directive leadership would be negatively related to team performance (b = -.15, n.s.). But the results indicated that shared directive leadership was negatively related to team commitment (b = -.32, p < .01) and job satisfaction (b = -.34, p < .01), even when the vertical leadership dimensions were added to the regression equation. These results supported Hypothesis 4b.

# Supplementary analysis

The regression analysis revealed that the effect of vertical transformational leadership on team commitment diminished after the two shared leadership behaviors were controlled for. This may hint at vertical transformational leadership influencing the leadership behaviors of team members, which in turn affect team commitment. Such "falling dominoes" effects of vertical transformational leadership behaviors on the leadership behaviors of followers have been demonstrated in previous research (Bass, Waldman, Avolio, & Bebb, 1987), justifying mediation testing.

Since our mediation model contained two mediators, we used the bootstrapping method developed by Preacher and Hayes (2008) to test for multiple mediators. This method is used to assess the indirect effect of the independent variable on the dependent variable via the mediators. Bootstrapping analysis generates a confidence interval (CI) and point estimates for the indirect effects in different samples of the original data. To demonstrate mediation, zero may not be included in the CI.

Model 3.1: Unstandardized regression coefficients of multiple mediation bootstrapping analysis for direct and indirect effects of vertical transformational leadership on team commitment



\* p < .05; \*\* p < .01

<sup>&</sup>lt;sup>a</sup> value represents regression coefficient after inclusion of the two mediators

We tested the model using 5000 bootstrap samples, and controlled for team size. The mediation turned out to be significant (point estimate = .23; 95% bootstrap CI of .02 to .49), with significant indirect effects of both shared transformational leadership (point estimate = .37; 95% bootstrap CI of .20 to .64) and shared directive leadership (point estimate = -.14; 95% bootstrap CI of -.31 to -.03). Model 3.1 graphically represents the relationships. It shows positive paths between vertical transformational leadership and both shared transformational and shared directive leadership, and between shared transformational leadership and team commitment. Consistent with the findings of the regression analysis, the path between shared directive leadership and team commitment is negative. The initially significant path between vertical transformational leadership and team commitment (c = .37, p < .05) became non-significant after shared leadership was included (c = .13, n.s.), providing support for the mediation model. <sup>1</sup>

We also tested for possible interaction effects between vertical and shared leadership. It has been suggested that the effect of shared leadership on outcomes depends on the strength of vertical leadership: shared leadership would be more effective with a vertical leader showing only few leadership behaviors (Pearce & Conger, 2003a). We tested the interactions between vertical and shared transformational leadership and between vertical and shared directive leadership on the three criteria of team effectiveness, but none of the 6 interactions came close to significance.

<sup>&</sup>lt;sup>1</sup> The regression analysis also revealed a diminishing effect of shared transformational leadership on team performance after vertical transformational leadership was controlled for. Although theoretically less likely, we tested whether vertical transformational leadership mediated the relationship between shared transformational leadership and team performance after team size was controlled for. The findings of the Bootstrapping analysis with 5000 bootstrap samples revealed that the mediation was not significant (point estimate = .16; 95% bootstrap CI of -.02 to .48).we tested whether vertical transformational leadership mediated the relationship between shared transformational leadership and team performance after team size was controlled for. The findings of the Bootstrapping analysis with 5000 bootstrap samples revealed that the mediation was not significant (point estimate = .16; 95% bootstrap CI of -.02 to .48).

#### Discussion

In this study we examined the different influences of two types of shared leadership on three team effectiveness criteria, and compared these influences with the effects of the same leadership behaviors exhibited by the vertical leader. We aimed to extend current knowledge about the effects of shared leadership in two important ways: by examining the effects of shared leadership on both team performance and the affective outcomes of team commitment and job satisfaction, and by examining the effects of two different types of shared leadership behavior, namely, transformational and directive leadership behavior. As expected, we found opposite effects of shared transformational and shared directive leadership on team members' affective reactions. Team members felt more emotionally attached to the team and more satisfied with their job when peers engaged in transformational leadership behaviors, and less attached and less satisfied when peers exhibited directive leadership behaviors towards them. Based on findings from prior research (e.g., Pearce & Sims, 2002), we expected to find the same pattern of opposite effects for team performance. However, neither shared transformational nor shared directive leadership accounted for variability in team performance after vertical leadership was controlled for. As such, the initial relationship found between shared transformational leadership and team performance could be attributed to the collinearity between shared and vertical leadership behaviors.

This study also revealed some unexpected yet interesting findings. First, the inclusion of different team effectiveness criteria demonstrated that vertical and shared leadership influence different dimensions of team effectiveness. We found transformational leadership of the vertical leader to be important for how the team performed, whereas shared leadership was the primary factor in explaining the affective outcomes of team commitment and job satisfaction. Second, we

found that shared leadership mediated the influence of vertical transformational leadership on team commitment. The results supported a multiple mediation model, with vertical transformational leadership predicting both shared transformational and shared directive leadership behaviors, which, in turn, predicted team commitment.

Furthermore, some of our results with regard to vertical leadership differed from previous findings. Whereas the findings of several meta-analytic studies confirm the existence of positive relationships between vertical directive leadership and the different criteria of team effectiveness (Judge, Piccolo, & Ilies, 2004; Mathieu & Zajac, 1990), none of the relationships turned out to be significant in our study. This may be due to the nature of our sample. The majority of the teams participating in the present research were from finance and law companies, or worked for governmental institutions. Such environments are characterized by rather formalized structures, where procedures are standardized and behaviors are guided by clear rules. Research findings suggest that directive leadership of the vertical leader is less important in highly structured environments than in less structured environments (Pierce, Dunham, & Cummings, 1984). The relationship between vertical directive leadership and team effectiveness may thus be more complex and depend on moderators such as formalization of structures (cf., Stoker, 2008).

The data also failed to confirm a significant relationship between vertical transformational leadership and team member job satisfaction, even though the zero-order correlation was in the expected positive direction. A partial explanation for the lack of statistical significance for this particular relationship may be lack of statistical power at the team level of analysis (our sample comprised 39 work teams). Indeed, most previous studies in which the relationship between leadership behavior and job satisfaction was examined were conducted at the individual level of

analysis, typically with several hundred participants (cf., Judge & Piccolo, 2004). Another explanation for our diverging findings may be that relationships do not necessarily hold across different levels of analysis (Ostroff, 1993). This remains an issue for future research.

# **Theoretical implications**

Our findings have several implications for the theory development regarding shared leadership. First, they provide insight into the relative importance of vertical and shared leadership for different criteria of team effectiveness. Consistent with assumptions from self-management theories (Manz & Sims, 1987), our findings indicate that team members' leadership behaviors have implications for the role of the vertical leader. Instead of being responsible for all aspects of effective team work, vertical leaders mainly affect team performance outcomes, whereas team members' leadership behaviors are important for affective outcomes. The dominant role of vertical transformational leadership in predicting team performance contradicts previous research findings that repeatedly showed shared leadership to be a more important predictor of different performance criteria than vertical leadership (Ensley, Hmieleski, & Pearce, 2006; Pearce & Sims, 2002; Pearce, Yoo, & Alavi, 2003). An explanation for these divergent findings may be that Pearce and colleagues examined vertical and shared leadership in highly autonomous work teams such as empowered teams (Pearce & Sims, 2002) and top management teams (Ensley, Hmieleski, & Pearce, 2006). With team members handling high degrees of authority and responsibility for team outcomes, their leadership behaviors may become more important for how the team performs. The teams in our study, however, were regular work teams supervised by a leader and embedded in a hierarchical structure, as is indicated by the leader exhibiting substantially more leadership behaviors than team members (see Table 3.1). When responsibility for outcomes is formally

centralized in the position of the vertical leader, his or her leadership behaviors may be more important in explaining team performance than the leadership behaviors of team members.

The finding that shared leadership is more important for team members' affective reactions than vertical leadership corresponds with earlier remarks that personal interactions within the team are important for team members' affective reactions toward the team and its tasks (Van der Vegt, Emans, & Van de Vliert, 2000). Shared transformational leadership behaviors symbolize team members' concern about the well-being of peers and their promotion of peers' self-actualization, leading peers to develop enhanced levels of commitment and satisfaction. In contrast, team members who engage in directive leadership behaviors question others' competencies and undermine the commitment and satisfaction of peers. Thus, shared leadership affects the team members' affective outcomes because it determines the quality of their interactions. The impact of vertical leaders on team members' team commitment and job satisfaction, on the contrary, is less strong and rather indirect. Although vertical transformational leaders develop close emotional bonds with team members as well (e.g., Dvir, Kass, & Shamir, 2004), their leadership behaviors determine only few of the possible interactions within the entire team and thus may be expected to be less influential than shared leadership behaviors. Also, vertical leaders are generally described as setting up the conditions for teams to be effective (Mathieu, Maynard, Rapp, & Gilson, 2008), hinting at an indirect rather than a direct effect on team member affective reactions.

Second, our findings shed light on the relative effectiveness of different shared leadership behaviors. As expected, when team members motivate and inspire each other towards high performance levels, such transformational leadership behaviors improve peers' positive feelings and reactions toward the team and its tasks: they feel more committed to the team and are more

satisfied with their jobs. The effect of shared leadership is reversed when team members engage in directive leadership behaviors. In teams where interactions among team members are characterized by assigning each other tasks and monitoring each others' work behaviors, team members feel less emotionally attached to the team and are less satisfied with their jobs. Similar negative effects have been reported when team members provide negative feedback to each other (DeNisi, Randolph, & Blencoe, 1983; Taggar & Brown, 2006). The findings from these studies suggest that, owing to the lack of formal authority over other team members' behaviors, negative feedback expressed by peers is likely to be perceived as "unwanted intrusion" (Kohli & Jaworski, 1994, p. 85) that threatens team members' professional competence and confidence (Taggar & Brown, 2006). The same mechanism might apply to shared directive leadership behaviors since they tend to address shortcomings in individual performance levels and demonstrate superiority over others (cf., Anderson et al., 2006). When such behaviors are exhibited by peers without formal authority, they are likely to be perceived as inappropriate and lead members to be less satisfied with their jobs and to withdraw from the team.

These findings imply that current descriptions of shared leadership as "increased capacity for getting things done" (Hiller, Day, & Vance, 2006, p. 388) and as an "additional resource for improving team process and performance" (Carson, Tesluk, & Marrone, 2007, p. 1223) may be overly positive. Owing to the lack of formal authority, leadership behaviors of team members have the potential to jeopardize relationships within teams. Shared leadership, thus, not only provides an additional source for effective leadership behaviors but may also harm effective team work, depending on the concrete leadership behaviors team members engage in.

Third, our results shed light on the largely unexamined relationship between vertical and shared leadership. They confirm previous notions that vertical leaders may be important for the development of leadership behaviors of team members (Cox, Pearce, & Perry, 2003; Houghton, Neck, & Manz, 2003). More specifically, our results indicate that vertical transformational leadership stimulates leadership behaviors of team members. This finding is in line with prior research findings emphasizing the activating effects of transformational leadership (e.g., Greene & Schriesheim, 1980). Transformational leaders focus on extraordinary achievements and make team members believe in their abilities to meet high performance expectations. In doing so, they increase arousal levels and team members' readiness to actively pursue goal attainment (Jacobsen & House, 2001). Interestingly, team members not only respond with effective transformational leadership behaviors that facilitate attainment of team goals and satisfaction of member needs, but they also feel stimulated to engage in directive leadership behaviors that harm affective reactions of peers. Vertical transformational leadership thus provides no guarantee of effective shared leadership processes within teams.

# **Practical implications**

The results of this study indicate that managers of hierarchically structured teams should be aware of leadership processes within teams. Team members exhibit leadership despite the lack of formal leadership positions, and these leadership behaviors affect team effectiveness. Our findings suggest that managers can actively stimulate shared leadership processes in their teams by exhibiting transformational leadership behaviors (see also Carson, Tesluk, & Marrone, 2007). However, managers must realize that such behaviors may encourage both effective transformational and ineffective directive leadership behaviors among team members. As such,

team members might be trained in when and how they can apply proper leadership behaviors in order to influence each other towards the attainment of team and individual goals. Finally, organizations should not expect shared leadership to make the vertical leader of regular work teams superfluous. Although effective, shared leadership does not compensate for leadership behaviors of the manager, who continues to play an important role in realizing satisfying performance levels.

# Strengths and limitations

Our measurement of shared leadership reflects a strong aspect of this research since it enabled us to examine different leadership behaviors of individual team members. Previously, shared leadership was assessed by asking team members about leadership behaviors of the whole team without tracing these back to behaviors exhibited by individual team members (e.g., Pearce & Sims, 2002), or by assessing individual contributions to leadership without specifying concrete and different leadership behaviors (e.g., Mehra, Smith, Dixon, & Robertson, 2006). Our approach provides insights into the content of leadership behaviors exhibited by individuals within a team and, therefore, paints a more realistic picture of shared leadership in work teams.

The cross-sectional design reflects one of the limitations of this study since it doesn't rule out the possibility of reversed causality. Indeed, team commitment and job satisfaction may be not only outcomes, but also antecedents of shared leadership. In line with this suggestion, the findings of a previous cross-sectional study have shown that shared leadership in teams increases as a result of strong social support among team members (Carson, Tesluk, & Marrone, 2007). We clearly need longitudinal research designs to determine whether supportive personal interactions among team members are required for the development of shared leadership in teams, or whether they develop as a result of shared leadership.

Another limitation is that the participating teams were all from companies operating in the Netherlands. Considering the distinctive characteristics of the Dutch culture (Hofstede, 1983), this may limit the generalizability of our findings to teams from different cultures. The low level of power distance that is typical of the Netherlands, for example, indicates that team members easily voice their opinions in front of the vertical leader and are likely to participate actively instead of simply following rules. This implies that the degree of shared leadership in our sample may be higher than in countries with a high power distance.

Finally, the sample size of 39 teams was rather small. This results in low power, meaning increased chances of missing existing effects (Cohen, 1988). The fact that we were unable to detect relationships that are well established in leadership research, like the relationship between vertical transformational leadership and team member satisfaction (cf., Judge & Piccolo, 2004), may be an indication of this problem. We suggest some caution with regard to the non-significant results of this study since they may be the result of the small sample size.

#### **Future research**

The findings of this study suggest several directions for future research. To obtain deeper insights into the effects of shared leadership at the grass-roots in teams, research should be focused on identifying antecedents and consequences of individual leadership behaviors of team members. Such an approach allows for a better understanding of the variability in leadership behaviors across individuals within teams, and consequently of how team members react to leadership behaviors of peers and why they react in certain ways. We proposed, for example, that team members experience directive leadership behaviors of peers as inappropriate, which clearly calls for research on the individual level examining how different leadership behaviors of peers are perceived by

individual team members. Moreover, investigation of individual leadership behaviors allows for examination of moderators that buffer the negative effects of shared directive leadership. Team members might, for example, be more willing to accept directive leadership behaviors of peers who have more expertise than they have, or whose task assignments are accompanied by transformational leadership behaviors.

Although the present findings confirm the findings of Carson and colleagues that vertical leadership is an important determinant of shared leadership in teams (Carson, Tesluk, & Marrone, 2007), our knowledge of how and when teams develop shared leadership remains limited. Future research should address this gap by examining possible antecedents such as empowerment, since this has been found to increase proactive behaviors of the team (Kirkman & Rosen, 1999). Also, stability of the team constellation may be a promising antecedent because shared leadership has been argued to require time to develop (Avolio, Jung, Murry, & Sivasubramaniam, 1996).

Although a lot of work remains to be done, the findings of this study clearly suggest that shared leadership in teams matters. Team members engage in different kinds of leadership behaviors, and their leadership behaviors affect different aspects of effective team work, particularly team member affective outcomes. However, the positive effects of shared transformational leadership behaviors cannot be generalized to other leadership behaviors: owing to team members' lack of authority over peers, shared directive leadership behaviors negatively influence team commitment and job satisfaction, and thus team effectiveness.

# **APPENDIX 3.1**

# Team performance items

Compared to other teams, how does your team score in...

- ... achieving its goals?
- ... the quality of work delivered?
- ... the quantity of work delivered?
- ... meeting its deadlines?
- ... the speed of work?
- ... the efficiency of people working together?
- ... general performance levels?
- ... generating original solutions to problems?
- ... developing new ideas for difficult issues?
- ... transforming innovative ideas into useful applications?

# The bright and dark sides of peer leadership for individual effectiveness in teams

#### Introduction

The idea that leadership researchers may overlook relevant influence processes by focusing on leadership of the vertical leader only has gained increased attention during the last decade (Pearce & Sims, 2002; Pearce & Conger, 2003b). Any relationship between two people provides opportunities for mutual influence (Follett, 1924), what implies that leadership influence may also take place between team members who lack a formal leadership position. Indeed, most people who work in teams have experienced that peers provide direction when it comes to decisions that lie within their field of expertise, that they appeal to the team spirit to stimulate maximal performance, or that they provide a 'listening ear' when colleagues are having a hard time. Such voluntary influence attempts can take place during a meeting, when working with few colleagues on a subtask, or during lunch between two colleagues in the canteen. Researchers refer to these behaviors as 'shared leadership' behavior, which they define as a dynamic influence process in teams where team members influence each other toward goal attainment (Houghton, Neck, & Manz, 2003; Pearce & Conger, 2003a).

Scholars propose that when different team members engage in leadership behaviors, teams can benefit more strongly from their different knowledge and expertise and thereby function more effectively (Perry, Pearce, & Sims, 1999). In fact, existing research has provided empirical evidence for a positive relationship between shared leadership and relevant outcome variables, including team performance (e.g., Ensley, Hmieleski, & Pearce, 2006; Pearce & Sims, 2002), team

potency (Pearce, Yoo, & Alavi, 2003), and team members' affective reactions (e.g., Avolio, Jung, Murry, & Sivasubramaniam, 1996; Manheim, Janssen, & Van der Vegt, 2014). Moreover, research has shown that shared leadership occurs in different types of teams, such as highly autonomous work teams (e.g., Pearce & Sims, 2002), virtual teams (Pearce, Yoo, & Alavi, 2003), and hierarchically structured teams that are headed by a vertical leader (e.g., Manheim, Janssen, & van der Vegt, 2014). However, despite the valuable insights provided by the shared leadership literature, this research also suffers from certain shortcomings.

One problem with the prior research is that it has one-sidedly focused on shared leadership as a team-level construct. Such a conceptualization of team members' leadership behaviors implicitly assumes that all team members collectively perform the same leadership behaviors. This assumption seems questionable in light of leadership theories such as the leader-member exchange (LMX) theory that emphasizes the dyadic nature of leadership in which each leader-member dyad is characterized by a unique leadership pattern (Graen & Uhl-Bien, 1995). This theory suggests that peers differ in the extent to which they provide leadership and also in whom they address with their leadership behaviors. If we follow this argumentation, the findings of positive effects of shared leadership on team outcomes may relate to very different realities for individual team members. Depending on team members' relationships with peers, the frequency at which they are the targets of their peers' leadership behaviors may differ substantially, and accordingly the extent to which team members benefit from their peers' leadership behaviors may differ as well. We thus argue that, in addition to the team level conceptualization of peers' leadership behaviors that is labeled shared leadership, it is important do pay attention to individual differences in perceptions of such leadership behaviors and to how these perceptions affect team members' individual effectiveness.

To make clear that the focus is not on the team but the individual team member, we call these leadership behaviors 'peer leadership'.

A second problem with the shared leadership literature is that it merely tends to emphasize the benefits of having several leaders who have unique insights that may be beneficial for team goal attainment (Day, Gronn, & Salas, 2004; Pearce & Sims, 2002). However, such a perspective overlooks the possibility that peers who get involved in team members' tasks by exerting particular leadership behaviors may also be annoying and interfering. Peers, after all, have no formal authority over team members' work roles and behaviors, what may influence team members' reactions toward peer leadership in a negative way (Manheim, Janssen, & Van der Vegt, 2014). We suggest that the effectiveness of peers' leadership behaviors depends on the concrete leadership behaviors that peers engage in. The friendly connotation of transformational leadership, where peers consider team members' development and their individual needs, makes these leadership behaviors suitable for peers who have no formal authority. In line with previous research, that found transformational leadership behaviors of peers the strongest predictor of team effectiveness (Pearce & Sims, 2002), we propose transformational peer leadership to increase individual effectiveness. However, leadership behaviors that address task accomplishment and include giving instructions, assessing performance levels, and providing critical feedback, such as directive leadership, may evoke resistance when used by peers rather than by vertical leaders (Yukl & Falbe, 1991). Our second contribution will be to not only address the positive effects of peer leadership on team member effectiveness but also to shed light on the possible dark side of peer leadership by examining the effects of both transformational and directive peer leadership.

A third problem with much of the shared leadership research to date is that it mainly focuses on main effects (see Manheim, Van der Vegt, & Janssen, 2011, for an overview of empirical articles on shared leadership). However, even when peers' leadership behavior favors team member effectiveness, individual team members' reactions toward their peers' leadership behavior may vary, depending on the characteristics of their task (Pearce & Sims, 2002; Perry et al., 1999). Peers who exhibit leadership behavior provide input for effective goal attainment. Team members who are targets of high levels of peer leadership can thus access a broad range of different perspectives that help them to cope with complex problems and situations. In the case of easy tasks that team members can handle without external input, the consideration of these different perspectives may be distractive and keep them from completing tasks. We therefore propose that task complexity moderates the relationship between transformational peer leadership and team members' effectiveness. We will test these hypotheses using a time-lagged study design and the 109 participants were employees of a Dutch bank.

### Theoretical framework

# Perceptions of peer leadership

Leadership refers to influence behaviors that aim at the attainment of team goals (Yukl, 2010). Traditionally, these behaviors are ascribed to leaders who hold a formal leadership position. More recently, however, researchers have acknowledged the possibility that team members can influence *one another* toward goal attainment without any form of formal appointment. When a team member gets stuck with a task, for example, one of the more experienced peers might be the first to notice and provide solutions. In response to the task problems experienced by the team

member, another peer might highlight how previous task failures have turned into successes, thereby raising the member's motivation. Peer leadership thus reflects peers' voluntary leadership behaviors that are directed toward members of the same hierarchical layer and that are not embedded within a formal leadership position.

The amount of received peer leadership may differ substantially across team members for several reasons. First, team members may differ in the extent to which they *elicit* leadership behaviors in peers. Showing acceptance and approval of peers' activities are important if peers are to express their ideas on how to attain goals and influence others toward those ideas (Carson, Tesluk, & Marrone, 2007; Howell & Shamir, 2005). In addition, possessing valuable information increases team members' attractiveness, and, as regulated by reciprocity norms (Gouldner, 1960), peers may address them with leadership more frequently to obtain access to that information in return (Goodwin, Bowler, & Whittington, 2009).

Second, individual characteristics and affective states may make team members more receptive to peer leadership. Team members who are extraverted, for example, are oriented toward their social environment and experience high levels of positive affect. Such extraverted members may seek more peer leadership than their introverted co-workers, who are more inwardly oriented and seek less personal interaction (Felfe & Schyns, 2006). Also, arousal facilitates responses, and, when exposed to the same level of leadership, an aroused team member perceives higher levels of peer leadership behavior than a team member in a more placid state (Pastor, Mayo, & Shamir, 2007).

Third, the amount of leadership that team members receive from peers may depend on the social and physical configurations of the work setting. Team members who work closely together

with peers are more likely to become the target of one another's leadership behaviors than members who work at a physical distance (Howell & Hall-Merenda, 1999). Moreover, team members' status, or the "prominence, respect, and influence" that they enjoy in the eyes of peers, determines the extent to which they can control team-related activities and the behavior of others (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006: 1095). Team members with low statuses are less likely to speak up within the team and to voice their opinions, what makes them more likely to be addressed by peer leadership behavior than to lead peers.

### **Outcomes of peer leadership**

Team members may not only differ in how much peer leadership they perceive, but they may also differ in how they respond to such perceptions. We argue that the manner in which the different perceptions of peer leadership affect team members' individual effectiveness depends, first of all, on the type of peer leadership behavior. For the purpose of this study, we distinguish between transformational and directive leadership behaviors. Transformational leadership is a visionary leadership style that makes team members enthusiastic about the future and provides them with the confidence to perform beyond formal standards (Bass, 1985; Dvir, Eden, Avolio, & Shamir, 2002). Following Podsakoff and colleagues (Podsakoff, MacKenzie, Moorman, & Fetter, 1990), transformational peer leadership can be conceived of as consisting of six key behaviors that are highly correlated (Bycio, Hackett, & Allen, 1995): peers articulate a vision, provide a role model, promote team goals, utter high performance expectations, provide individualized support, and intellectually stimulate team members. This focus on inspirational motivation, the consideration of team members' growth and development, and working together as a team makes

transformational leadership behaviors a pleasant experience and an effective leadership style to be used by peers.

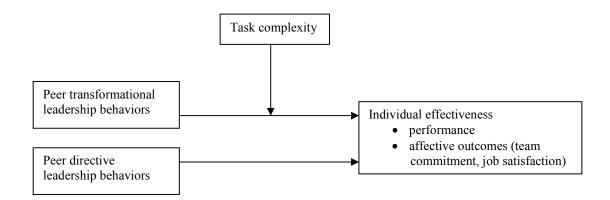
The outcome is different for directive leadership behaviors that provide direction on how to attain goals (Pearce, Sims, Cox, Ball, Schnell, Smith, & Trevino, 2003). Peers who exert directive leadership behaviors give team members instructions on how to perform tasks, control their execution, and provide feedback on task performance. Such behaviors suppose peers to be authorized to decide upon the allocation of tasks and to call team members to account for their task performance. However, because the relationship between peers is characterized by hierarchical equality, in which one peer has no positional authority over the behaviors of the other, it is likely that such behaviors will be seen and experienced as inappropriate (Yukl & Tracey, 1992). Directive leadership may thus elicit resistance toward peer leadership and make team members engage in disruptive behaviors, such as opposing directive peers and performing tasks with low effort, leading to a drop in their individual effectiveness.

Apart from the type of leadership behavior, there may also be contextual variables that affect the responses to peer leadership behaviors. More specifically, task complexity may be an important boundary condition for perceived peer leadership to be effective. Task complexity refers to team members' individual perceptions of their objective task characteristics (Campbell, 1988). Tasks are complex when they are multifaceted and contain several, often conflicting, elements (Campbell & Gingrich, 1986; Frese, Kring, Soose, & Zempel, 1996). These objective task characteristics are perceived differently by different individuals. With high levels of cognitive ability, for example, team members are able to handle larger amounts of information and are less likely to perceive tasks as complex, whereas others who have lower cognitive capacities may

experience the same tasks as highly complex (Maynard & Hakel, 1997). This perception of task complexity is indicative of the extent to which team members depend on the expertise and knowledge of others.

As tasks become more complex, it is more likely that team members lack particular knowledge that is required to perform them, which increases their dependence on information from external sources. In this situation, the different perspectives provided by peer leadership may be highly beneficial. However, peer leadership is likely to be superfluous or even distractive with easy tasks because team members may perform them without external input. Low levels of task complexity may thus diminish the benefits that peer leadership may provide, although peers' leadership behaviors generally benefit team member effectiveness. Below, we will elaborate on the differential effects of transformational and directive peer leadership on team members' effectiveness, starting with the positive effect of transformational peer leadership, which should be moderated by task complexity, and then turning to the negative effect of directive peer leadership (see Model 4.1 for our conceptual model).

Model 4.1: The relationships between peer leadership behaviors and team members' individual effectiveness and the moderating role of task complexity



Transformational peer leadership and individual effectiveness: the moderating role of task complexity

Individuals in teams are effective when they contribute to the attainment of team goals and ensure team viability (i.e., team members have to stay on the team to maintain high performance levels). According to Hackman (1987), effectiveness not only includes team members' performance in terms of their actual output and contribution to goal attainment but also the need to feel good about their work and work environment. So, in addition to job performance, affective outcomes such as commitment to the team and satisfaction with the job should be positive as well. Commitment to the team indicates that team members identify with their team, are involved in the team's activities, and enjoy being a member of their team (Allen & Meyer, 1990). Without such feelings of emotional attachment, team members tend to not perform to the standards that they are capable of and are absent from work more often (Mathieu & Zajac, 1990). Team commitment is thus an important indicator of individual effectiveness. The same circumstance holds for job satisfaction, which refers to a positive evaluation of the work context (Ilies & Judge, 2004). Satisfied team members are enthusiastic about their work and engage less in behaviors that could harm the organization or its members (Judge, Scott, & Ilies, 2006). Following this reasoning, we will define team members' individual effectiveness in terms of their individual performance and individual affective outcomes, subdivided into team commitment and job satisfaction.

# Individual performance

Transformational peer leadership may affect team members' performance in different ways.

Instinctively, one would expect peers' motivational appeals to exceed existing performance levels and their stimulation toward new ways of thinking to benefit team member performance

(Walumba, Avolio, & Zhu, 2008). However, transformational leadership by several peers can also distract team members from actually executing tasks, which may work against the positive effect described above. We propose that the crucial factor determining the effect of transformational peer leadership on team member performance may be task complexity.

The positive effect of transformational peer leadership may be the most significant for team members who perform complex tasks. Complex tasks require the integration of knowledge from different sources (Shalley, Gilson, & Blum, 2009). To perform them well, team members thus need to cooperate with peers (Qin, Johnson, & Johnson, 1995; Tjosvold, 1982). With high levels of perceived transformational peer leadership, team members feel more stimulated to cooperate. As a result, they may more easily access the knowledge of others that helps them deal with complex tasks. Moreover, peers who provide transformational leadership help members solve complex problems by asking them challenging questions that stimulate new and creative ways of thinking. This initiative may also result in team members performing better on complex tasks.

This relationship may be different for team members who perform easy tasks. In this situation, members have a clear picture of the goals of their work-related activities; there is a single, clearly-defined manner in which to achieve them (Campbell, 1988). Team members also feel fully capable, in terms of knowledge, experiences, and available tools, to achieve these goals. Here, peers' emphasis on cooperating as a team and on new and creative ways of thinking would not add much to team member performance because members already have access to everything they need. Additionally, although peers' motivational appeals may stimulate team members to strive for extraordinary performance levels, they also direct team members' attention toward issues that are not directly linked to the performance of easy tasks, such as a desirable team future or

change in general (Bass & Riggio, 2006). This distraction will lower the positive effect of transformational peer leadership on individual performance for team members with easy tasks. The above reasoning leads us to formulate the following hypothesis:

Hypothesis 1: Task complexity moderates the relationship between transformational peer leadership and team members' individual performance such that this relationship will be more positive when task complexity is higher.

# Affective outcomes

Following the findings from existing research on the positive effects of shared leadership (e.g., Carson et al., 2007; Pearce & Sims, 2002), one would expect transformational peer leadership to increase team members' positive affective outcomes. Peers' personal concern for team members' well-being is likely to increase individuals' job satisfaction (Schyns & Croon, 2006) as well as their commitment to the team. However, transformational peer leadership might also be perceived as unwanted interference in affairs that team members are perfectly able to deal with themselves. Again, we propose task complexity to determine the relationship between transformational peer leadership and affective outcomes.

Team members should respond positively to transformational peer leadership when they perform complex tasks. High levels of transformational peer leadership signal that peers are concerned about team members' individual feelings and needs in demanding situations. Feeling supported and understood is especially important when team members deal with the uncertainty of complex tasks (Mohr & Wolfram, 2010), and this will increase their positive affective outcomes. In a similar manner, peers' intellectual stimulation will increase team members' team commitment

and job satisfaction because such types of peer behaviors indicate that they care about team members' task accomplishment and that they are willing to actively contribute to it.

However, although team members are likely to appreciate the individualized support provided by peers, transformational peer leadership may result in less positive affective outcomes when team members perform easy tasks. With easy tasks, team members have clear ideas about how to attain their goals and have sufficient knowledge and experiences to actually do so (Campbell, 1988). When peers express expectations about team members' future performance and ask questions to stimulate 'out-of-the-box thinking', this is likely to be perceived as unnecessary interference (Jiambalvo & Pratt, 1982). Team members may feel that peers question their professional abilities to handle tasks independently and experience a drop in both team commitment and job satisfaction. This result may neutralize the positive effect of the supportive character of transformational peer leadership on team member affective outcomes when performing easy tasks. Taken together, we therefore argue the following:

Hypothesis 2: Task complexity moderates the relationship between transformational peer leadership and team members' team commitment and job satisfaction such that this relationship will be more positive when task complexity is higher.

#### Directive peer leadership and individual effectiveness

Compared to the effect of transformational peer leadership, the effect of directive peer leadership on team members' effectiveness is likely to be more straightforward and clearly negative. High levels of directive peer leadership imply that team members are frequently told by different peers what tasks to conduct and how to perform them (Pearce, Sims, Cox, Ball, Schnell, Smith, & Trevino, 2003). As a result, team members perceiving directive peer leadership behavior

are likely to see their peers as controlling their task performance. While vertical leaders have a formal leadership position that legitimizes such behaviors, peers lack the legitimacy for task assignment and control (Yukl & Falbe, 1991). Team members are thus likely to perceive directive leadership behaviors of peers as beyond the scope of these peers' authority and accordingly resist them (e.g., Anderson et al., 2006; Ridgeway & Berger, 1986; Yukl & Tracey, 1992). They may show resistance by ignoring task assignments, openly refusing to perform tasks, or performing tasks with low effort (Yukl & Tracey, 1992). Either way, team members' performance is likely to suffer as conflicts are likely to arise and hinder them from performing at their maximum level.

In a similar vein, directive peer leadership behaviors may decrease team members' team commitment and job satisfaction. By intruding on team members' task performance without formal authority to do so, peers express mistrust in team members' ability to perform at a satisfactory level (Langfred, 2004; Sitkin & Stickel, 1996). This will ruin team members' relationship with peers, which is likely to be detrimental to their feeling of emotional attachment to the team (Self, Holt, & Schaninger Jr, 2005). Additionally, directive peer leadership behaviors may harm team members' 'sense of professional autonomy' (Ferrin, Bligh, & Kohles, 2007: 481) and thereby lower their job satisfaction. Taken together, we therefore argue the following:

Hypothesis 3: Directive peer leadership will be negatively related to team members' individual performance, team commitment, and job satisfaction.

#### Methods

# Sample and procedures

We tested our hypotheses with a time-lagged research design with three measurement moments. We examined the independent variables at Time 1 (T1) and the dependent variables twice, at T2 and T3, to determine the stability of the findings over time. The research sample consisted of 109 team members from 19 teams from a Dutch bank. The teams all had vertical leaders. Ten teams were bank shops with local customers. Their tasks were to administer accounts, consider loans, and sell financial products. Six teams were specialized in certain topics, such as the funding of professional training for pilots and loans for residencies abroad, and had customers all over the country. Three teams were local (middle-) management teams with at least some strategic say. The team size ranged from two to thirteen team members, excluding the vertical leader.

We initially contacted 21 teams with 144 members (without the vertical leaders) for the first part of the data collection (T1). During the second phase of the data collection (T2), which was conducted eight months later, 29 employees had either moved to other teams or had left the organization. Their data, and those of the eleven new employees who joined the teams after T1, were excluded from further analysis. One team with three members did not exist anymore, and another team was excluded because only one of the three team members was still part of the team at T2. We ended up with data from 109 team members, among whom 103 took part in both parts of the data collection (94.5%). During the last phase (T3), five month later, there were another four teams who did not participate. One team with four members did not exist anymore, one team with seven members was too busy to participate, and in two teams with respectively three and four members, only one team member of the original team composition was left, so we excluded the

remaining team member from further analysis. Additionally, six people had left the organization or moved to other teams. Their data were also excluded from further analysis. In sum, 15 teams with 85 team members took part in all three parts of the research, out of whom 82 actually participated (96,5%). After the second and third phase of data collection, we asked the vertical leaders to rate the performance of each individual team member. Sixty-two percent of the participants of T2 and sixty percent at T3 were female, and their ages ranged from 22 to 59 years at T2 (24 to 59 at T3), with a mean age of 39 years at T2 (SD = 9.3) and 41 years at T3 (SD = 8.9).

We used questionnaires to assess team members' perceptions of their peers' transformational and directive leadership behaviors, task complexity, affective outcomes, and the control variables mentioned below at T1, T2, and T3. The time period between the first and second phases of data collection was approximately 8 months, between the second and the third phase five month passed. The leadership behaviors of team members were assessed using a round robin design, meaning that each team member rated every other team member on the two leadership behaviors. To assure that team members would be willing to disclose the personal information regarding one another's behavior, we combined the questionnaires with interview questions that enabled the creation of a trusting atmosphere. Each participant was interviewed separately by the first author. Following the administration of the questionnaires at T1, T2, and T3 and the interviews with individual team members, we also interviewed every team leader to gather additional information about each team and to obtain individual leader ratings of the performance scores for every team member. All variables at T1, T2, and T3 were measured using seven-point Likert scales.

#### Measures

Transformational peer leadership behaviors were assessed at T1. We used the scale developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990) that contains six dimensions of transformational leadership. Because we used a round robin design in which team members had to rate all peers individually in the different dimensions, we tried to reduce the burden on the participants by using only the highest loading item for each of the six leadership dimensions. Our measurement of transformational peer leadership contained the following questions: "To what extent do the team members named below inspire you with their plans for the future?", "To what extent do the team members named below lead you by example?", "To what extent do the team members named below develop a team attitude and spirit in you?", "To what extent do the team members named below insist on only the best performance?", "To what extent do the team members named below show respect for your personal feelings?", and "To what extent do the team members named below stimulate you to rethink the way you do things?" (1 = "not at all", 7 = "to a very high degree"). Cronbach's alpha of the scale was .87. We computed the mean of how each team member rated his or her peers on the six dimensions as an indicator of the amount of transformational peer leadership that individual team members perceived.

To test our implicit assumption that perceptions of peer leadership would not only differ between but also within teams, we assessed the intraclass correlation coefficient ICC(1) (Klein & Kozlowski, 2000). ICC(1) values indicate the percentage of total variance that is explained by team membership. An ICC(1) value of .21 indicated that 21 percent of the variance in perceptions of transformational peer leadership was explained by team membership and the remaining 79 percent

by dyadic or individual-level aspects. The corresponding ANOVA was significant (F (18,86) = 2.43, p < .01).

Directive peer leadership behaviors were also assessed at T1. We used three items based on Kahai, Sosik, and Avolio (2004), again using a round robin design. The items used were the following: "To what extent do the team members named below tell you how to accomplish your tasks?", "To what extent do the team members named below control whether you do your work properly?", and "To what extent do the team members named below provide feedback about your work performance?" (1 = "not at all", 7 = "to a very high degree"). Cronbach's alpha of the scale was .79. Team members rated all peers on these items, and for each team member we again computed the mean of how he/she rated his/her peers to obtain a measure for directive peer leadership. Finally, an ICC(1) value of .11 indicated that 11 percent of the variance in the perceptions of peers' directive leadership behaviors was explained by team membership and that the remaining 89 percent was due to variation at the dyadic or individual level of analysis. The ANOVA analysis was almost significant (F (18,86) = 1.71, p = .05).

We assessed *task complexity* using the scale established by Frese, Kring, Soos, and Zempel (1996). At T1, team members answered four questions such as the following: "To what extent are your tasks extraordinary and particularly difficult?" (1 = "not at all", 7 = "to a very high degree"). Cronbach's alpha of the scale was .79. To show that task complexity differs mainly between individuals and less so between teams, we assessed ICC(1). A value of .23 indicated that 77 per cent of the variation in perceptions of task complexity was due to dyadic or individual differences, and only 23 per cent of the variation was explained by team membership. The ANOVA analysis was significant (F (18,88) = 2.67, p < .01).

Individual performance was measured at T2 and T3 using the scale developed by Williams and Anderson (1991). Because every leader was asked to rate the performance of each member of his/her team (up to 12 team members), we used only the three highest loading items of the Williams and Anderson scale. Vertical leaders indicated to what extent they agreed with propositions such as: "Does team member X meet the formal performance requirements of the job?" (1 = "strongly disagree", 7 = "strongly agree"). Cronbach's alphas of the scale were .94 at T2 and .89 at T3.

We assessed *team commitment* at T2 and T3 with four items from the affective commitment scale developed by Allen and Meyer (1990). Participants indicated to what extent they agreed with statements like: "I am glad with my current team mates" (1 = "strongly disagree", 7 = "strongly agree"). Cronbach's alphas of the scale were .91 at T2 and .92 at T3.

*Job satisfaction* was measured at T2 and T3 with five items of the scale developed by Judge, Scott, and Ilies (2006), who based their scale on Brayfield and Rothe (1951). Team members indicated to what extent they agreed with propositions such as: "Right now, I feel rather satisfied with my present job" (1 = "strongly disagree", 7 = "strongly agree"). Cronbach's alphas of the scale were .88 and .86 at T2 and T3, respectively.

#### Control variables

As suggested by several authors (Locke, 2003; Morgeson, DeRue, & Karam, 2010), we controlled for transformational leadership and directive leadership behaviors performed by the vertical team leader at Time 1. Vertical leadership was assessed in the same way as peer leadership; team members rated not only their peers on the different leadership items, but also their vertical leader. We combined the six items for transformational leadership into one score for

vertical transformational leadership (Cronbach's alpha = .91) and the three items for directive leadership into one measure for vertical directive leadership (Cronbach's alpha = .71).

To make sure that we only examine the variance in team effectiveness at Time 2 and at Time 3 that is not accounted for by the initial value of team effectiveness at Time 1, we also included the dependent variable at T1 as an additional control variable (Bateman & Strasser, 1984). Cronbach's alphas at T1 were .92 for individual performance, .91 for team commitment, and .89 for job satisfaction.

#### **Analyses**

The nested structure of our data (individual team members were nested in teams) made it necessary to use multilevel analysis (Snijders & Bosker, 1999). Specifically, we used mixed-model analyses, a hierarchical linear modeling technique that produced effect coefficients comparable to unstandardized regression coefficients (see West, 2009, for more information on the analysis). This technique enabled us to test the interactive effect of transformational peer leadership and task complexity and the effect of directive peer leadership on the different criteria of individual effectiveness while taking into account possible team-level effects and statistical dependency in the data. The independent variables were standardized prior to the analyses (Aiken & West, 1991). We performed the analysis in three subsequent steps: we first entered the control variables, then the independent and moderator variables, and, in the last step, the interaction term.

### **Results**

### **Descriptive statistics and correlations**

Table 4.1 presents the means, standard deviations, and correlations among the variables studied. Transformational peer leadership was unrelated to individual performance (T2: r = .14, p = not significant [n.s.]; T3: r = .15, p = n.s.), but it was positively related to team commitment (T2: r = .35, p < .01; T3: r = .20, p = .06) and job satisfaction (T2: r = .20, p < .05; T3: r = .26, p < .05). Task complexity was weakly related to individual performance (T2: r = -.15, p = n.s.; T3: r = -.20, p = .06) and job satisfaction (T2: p = .19, p = .05; T3: p = .11, p = n.s.), but it was unrelated to team commitment (T2: p = .11, p = n.s.). Finally, directive peer leadership was unrelated to all three indicators of individual effectiveness (T2: p = .04, p = n.s.; T3: p = .08; p = n.s. for individual performance, T2: p = n.s.; T3: p = .08, p = n.s. for team commitment, and T2: p = n.s.; T3: p =

## Hypothesis test

Hypothesis 1 predicts an interaction effect of task complexity on the relationship between transformational peer leadership and team members' individual performance, whereby the relationship will be more positive at higher levels of task complexity. As shown in Table 4.2, the interaction effect was not significant at T2 (B = .11, p = n.s.) but marginally significant at Time 3 (B = .20, p = .09). Following the recommendation of Aiken and West (1991), we explored the interaction at T3 graphically in Figure 4.1. As expected, the slope for the relationship between transformational peer leadership and individual performance rises for high levels of task complexity. With low levels of task complexity, however, individual performance is relatively high when transformational peer leadership is low, and it slightly decreases when transformational peer

Table 4.1: Means, standard deviations, and correlations

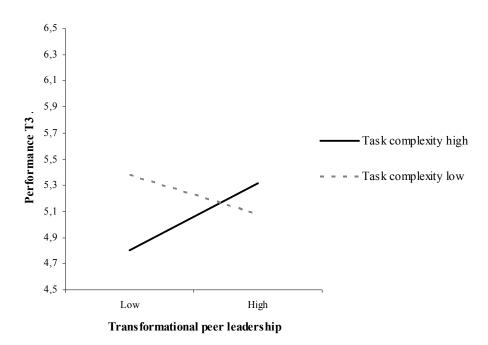
								r								
Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Team size†	9.63	2.74														
2. Vertical transformational ls	5.24	1.16	.21*													
3. Vertical directive ls	5.03	1.10	.15	.40**												
4.Performance T1	4.91	1.09	.01	.31**	.10											
5.Team commitment T1	5.69	1.11	.09	.50**	.09	.17										
6.Job satisfaction T1	5.72	.94	01	.35**	.02	.27**	.53**									
7. Transformational peer ls	4.23	.83	06	.58**	.30**	.22*	.34**	.19								
8.Directive peer ls	3.04	.95	14	.22*	.34**	.03	01	07	.59**							
9.Task complexity	4.70	.95	.11	.08	.02	07	.29**	.19	.01	.06						
10.Performance T2	5.36	.95	24*	.18	01	.50**	.06	.29**	.14	.04	15					
11.Team commitment T2	5.80	.97	.22*	.48**	.20*	.17	.58**	.26**	.35**	.01	.11	<.01				
12.Job satisfaction T2	5.63	.98	.10	.35**	.21*	.21*	.45**	.69**	.20*	10	.19	.22*	.46**			
13.Performance T3	5.10	1.16	11	.16	03	.37**	.04	.28*	.15	08	20	.71**	.07	.26*		
14.Team commitment T3	5.62	1.09	.18	.42**	.16	01	.59**	.20	.20	08	.09	10	.72**	.32**	>01	
15.Job satisfaction T3	5.43	1.00	.04	.37**	.07	.20	.43**	.53**	.26*	05	.11	.22*	.49**	.74**	.21	.32**

<sup>82 &</sup>lt; N < 107 due to missing values; ls = leadership

<sup>\*</sup> p < .05; \*\* p < .01† We included team size as a control variable in the correlation table, but since it was unrelated to the outcomes variables (except for performance and team commitment at Time 2), we did not include it in further analysis (cf., Becker, 2005).

leadership increases. These results confirm our hypothesis with regard to the distinctive effects of transformational peer leadership on individual performance at different levels of task complexity.<sup>2</sup>

Figure 4.1: Interaction effect of transformational peer leadership and task complexity at T1 on individual performance at T3



In Hypothesis 2, we predicted an interaction effect of task complexity on the relationship between transformational peer leadership and both team commitment and job satisfaction, whereby the relationships would be more positive at higher levels of task complexity. The results indicate that the interaction term for team commitment approached significance at T2 (B = .16, p = .07), but was not significant at T3 (B = -.11, p = n.s.). Again, we plotted the almost significant interaction at

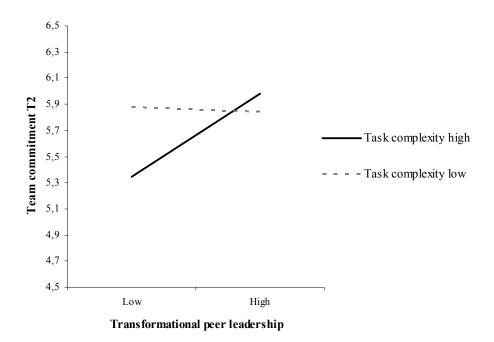
n.s.) or under the condition of low task complexity (simple slope test at +1 SD: B = -.15, SE = .20, p = n.s.).

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<sup>&</sup>lt;sup>2</sup> To gather additional information about the significance of the simple slopes in absolute rather than relative terms, we performed a simple slope test. This test shows that although the slopes clearly differ from each other and go in opposite directions at T3, there was no significant simple-main effect of transformational peer leadership on team members' individual performance under the condition of high task complexity (simple slope test at -1 SD: B = .26, SE = .20, p = .20, p

T2 to gain more insights into the relationships at hand. As expected, the interaction graph (see Figure 4.2) shows a rising slope for the relationship between transformational leadership and team commitment under the condition of high levels of task complexity. With low values of task complexity, commitment is relatively high at low levels of transformational peer leadership and tends to decrease when transformational peer leadership increases.<sup>3</sup>

Figure 4.2: Interaction effect of transformational peer leadership and task complexity at T1 on team commitment at T2

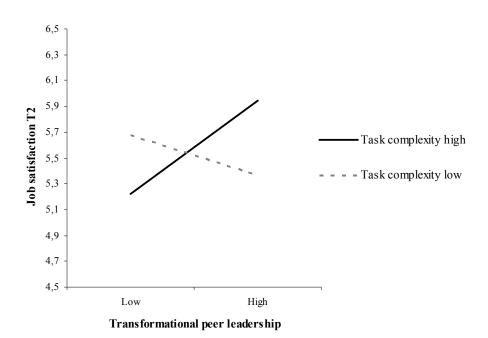


A similar pattern of results emerged for job satisfaction. The interaction between transformational peer leadership and task complexity was significant at Time 2 and T3 (B = .26, p

<sup>&</sup>lt;sup>3</sup> Again, we added a simple slope test to gain deeper insights into the strength of the slopes. This analysis showed that with high levels of task complexity, transformational peer leadership was positively related to team members' commitment to the team at T2 (B = .30, SE = .14, p < .05), whereas this effect was negative though not significant for low levels of task complexity (B = .03, SE = .16, p = n.s.).

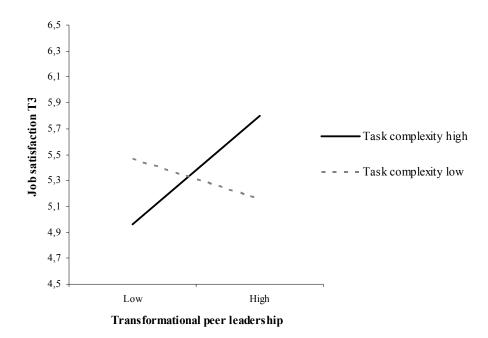
= .001 at T2 and B = .29, p < .01 at T3). The interactions, plotted in Figure 4.3 (T2) and Figure 4.4 (T3), show a rising slope for the relationship between transformational peer leadership and job satisfaction at high levels of task complexity. At low levels of task complexity, however, job satisfaction is relatively high at low levels of transformational peer leadership and decreases slightly as transformational peer leadership increases.<sup>4</sup> Taken together, the results are supportive of Hypothesis 2.

Figure 4.3: Interaction effect of transformational peer leadership and task complexity at T1 on job satisfaction at T2



<sup>&</sup>lt;sup>4</sup> The additional simple slope analysis showed that the relationship between transformational peer leadership and job satisfaction is positive with high levels of task complexity (T2: B = .36, SE = .12, p < .01; T3: B = .42, SE = .16, p < .05) but negative and not significant for low levels of task complexity (T2: B = -.15, SE = .13, p = n.s.; T3: B = -.15, SE = .18, p = n.s.).

Figure 4.4: Interaction effect of transformational peer leadership and task complexity at T1 on job satisfaction at T3



Finally, Hypothesis 3 predicted negative effects of directive peer leadership on team members' individual performance, their team commitment, and job satisfaction. We examined the relationships at T2 and T3. The second step in Table 4.2 shows that directive peer leadership was unrelated to individual performance at both T2 and T3 (B = .06, p = n.s. and B = .-13, p = n.s. at respectively T2 and T3). With regard to the affective outcomes of team commitment and job satisfaction, the results show that directive peer leadership had some predictive value at T2 (team commitment: B = -.17, p = .11; job satisfaction: B = -.23, p < .05), but no effect on T3 (team commitment: B = -.15, D = n.s.; job satisfaction D = -.14, D = n.s.). These results only partly confirm Hypothesis 3.

Table 4.2: Mixed-model analysis for the main and interaction effects of peer leadership and task complexity on the different aspects of individual effectiveness

Variables	Performa	ance T2	Team cor	nmitment T2	Job satisfaction T2		
	В	SE	В	SE	В	SE	
Step 1: control variables							
Vertical transformational ls	.09	.10	.22*	.10	.05	.09	
Vertical directive ls	09	.09	.08	.09	.17*	.08	
Performance T1	.42**	.09					
Team commitment T1			.46**	.10			
Job satisfaction T1					.72**	.09	
R <sup>2</sup>	.26**		.39**		.52**		
Step 2: main effects							
Vertical transformational ls	.12	.12	.14	.12	02	.10	
Vertical directive ls	10	.10	.12	.09	.24**	.08	
Performance T1	.42**	.09					
Team commitment T1			.45**	.10			
Job satisfaction T1					.68**	.08	
Transformational peer ls	06	.12	.17	.12	.16	.11	
Directive peer ls	.06	.11	17	.11	23*	.09	
Task complexity	09	.09	06	.09	.07	.07	
$R^2$	.27		.41		.55		
$\Delta R^2$	.01		.02		.03		
Step 3: interaction effect							
Vertical transformational ls	.12	.12	.14	.12	<.01	.10	
Vertical directive ls	09	.10	.13	.10	.24**	.08	
Performance T1	.42**	.09					
Team commitment T1			.47**	.10			
Job satisfaction T1					.71**	.09	
Transformational peer ls	06	.12	.15	.12	.11	.10	
Directive peer ls	.04	.11	19	.11	22*	.09	
Task complexity	11	.09	10	.09	.01	.08	
Transformational peer ls x	.11	.09	.17*	.09	.26**	.08	
task complexity <sup>56</sup>							
$R^2$	.29		.43		.59		
$\Delta R^2$	.02		.02		.04**		

N = 100 to 104 individuals nested in 19 teams due to missing values; ls = leadership

<sup>\*</sup> p < .05; \*\* p < .01

<sup>&</sup>lt;sup>5</sup> Since we formulated directional expectations for both high and low levels of task complexity, we tested the interaction one-sided. <sup>6</sup> We also tested the interaction effect of directive peer leadership and task complexity on the different aspects of individual effectiveness at Time 2. As expected, none of the three interaction terms was significant (B = -.07, p = .50 for performance; B = .14, p = .16 for team commitment; and B = .04, p = .68 for job satisfaction).

Table 4.2 (continued): Mixed-model analysis for the main and interaction effects of peer leadership and task complexity on the different aspects of individual effectiveness

Variables	Performa	ance T3	Team cor	nmitment T3	Job satisfaction T3		
	В	SE	В	SE	В	SE	
Step 1: control variables							
Vertical transformational ls	.05	.13	.05	.13	.20	.10	
Vertical directive ls	15	.12	.13	.12	.01	.11	
Performance T1	.43**	.11					
Team commitment T1			.61**	.12			
Job satisfaction T1					.49**	.11	
R <sup>2</sup>	.15**		.39**		.34**		
Step 2: main effects							
Vertical transformational ls	.06	.16	.11	.14	.13	.13	
Vertical directive ls	10	.13	.19	.12	.03	.12	
Performance T1	.41**	.12					
Team commitment T1			.61**	.13			
Job satisfaction T1					.46**	.11	
Transformational peer ls	.03	.16	05	.15	.16	.15	
Directive peer ls	13	.15	15	.14	14	.14	
Task complexity	06	.12	13	.11	01	.10	
$R^2$	.19		.41		.35		
$\Delta R^2$	.04		.02		.01		
Step 3: interaction effect							
Vertical transformational ls	.06	.15	.11	.14	.12	.12	
Vertical directive ls	08	.13	.18	.12	.05	.11	
Performance T1	.41**	.12					
Team commitment T1			.61**	.13			
Job satisfaction T1					.46**	.11	
Transformational peer ls	.05	.16	06	.15	.13	.14	
Directive peer ls	19	.15	11	.14	20	.13	
Task complexity	08	.12	11	.11	03	.09	
Transformational peer ls x	.20*	.12	12	.11	.29**	.10	
task complexity <sup>78</sup>							
$\mathbb{R}^2$	.28		.42		.42		
$\Delta R^2$	.09**		.01		.07**		

N = 82 individuals nested in 15 teams; ls = leadership

<sup>\*</sup> p < .05; \*\* p < .01

<sup>&</sup>lt;sup>7</sup> Since we formulated directional expectations for both high and low levels of task complexity, we tested the interaction one-sided.
<sup>8</sup> We also tested the interaction effect of directive peer leadership and task complexity on the different aspects of individual

effectiveness at Time 3. As expected, none of the three interaction terms was significant (B = -.02, p = .86 for performance; B = -.12, p = .31 for team commitment; and B = .14, p = .26 for job satisfaction).

#### Discussion

In this study, we predicted that individual team members would differ in the extent to which they perceived leadership by their peers. The results indeed show that only 10 to 20 percent of the variance in individual perceptions of peer leadership can be attributed to team-level variability, whereas the remaining amount of variance is embedded in individual factors and dyadic relationships. We further argued that these individual perceptions of peer leadership would influence team members' individual effectiveness, with transformational peer leadership being positively and directive peer leadership being negatively related to team members' individual effectiveness. However, the effect of transformational peer leadership, we argued, would be most positive for team members performing complex tasks. With easy tasks, such leadership behaviors exerted by peers were predicted to be less positive for team member effectiveness. To establish the stability of our findings over time, we assessed the dependent variables eight months and again five month after the independent variables.

The results mainly supported our expectation that peers' transformational leadership behaviors play an important role in determining team member effectiveness. Four out of the six predicted interactions were significant, showing that the effect of transformational peer leadership on the three different criteria of team member effectiveness varies depending on the degree of task complexity. When tasks are easy, team members function rather effectively within teams with low levels of transformational peer leadership, while high levels of transformational peer leadership do not lead to a change in effectiveness, and, in fact, even slightly decrease it. However, team members who perform complex tasks clearly benefit from transformational peer leadership

behaviors. Their effectiveness is rather low with low levels of transformational leadership, and it increases with growing degrees of transformational peer leadership.

Interestingly, these findings were stable over time for job satisfaction but not for individual performance (no effect at Time 2) and team commitment (no effect at Time 3). We conclude that although all three indicators of individual effectiveness in teams are promising outcomes of transformational peer leadership, job satisfaction seems the most relevant in this context. How, then, can we explain the unstable findings for individual performance and team commitment? There are different lines of reasoning. First, the way we tested the relationships over time was rather conservative. By controlling for the outcome variable at Time 1, we already explained up to 50 per cent of the variance in the outcome variable at Time 2 and Time 3 (together with the two vertical leadership styles; see Table 4.2). This decrease in variance that is left to be explained leads to smaller effect sizes and to lower statistical power, meaning that the probability to detect actual effects decreases (Ployhart & Ward, 2011). The choices we made for testing relationship over time thus may be responsible for the unstable findings.

Second, it is also possible that the effect of peer leadership and task complexity on performance takes more time to develop compared to the effect on affective outcomes. The results show clear effects on affective outcomes at Time 2, but the effect on individual performance does not develop until Time 3. Research indeed shows that vertical leaders, as representatives of the organization, have a direct impact on team members' affective reactions such as team commitment (e.g., Sanders, Geurts, & van Riemsdijk, 2011). The reasoning behind this direct effect is that socio-emotional leadership styles like transformational leadership (that includes concern for the other one's feelings) trigger socio-emotional reactions like satisfaction and commitment. This same

mechanism may apply to leadership of peers. Their socio-emotional leadership behaviors are likely to trigger socio-emotional responses and thereby explain the direct effect of transformational peer leadership on team members' affective outcomes.

With regard to the effect of leadership on performance, however, researchers for a long period have discussed, and recently started to uncover, the mediating processes that take place between leadership behaviors on the one hand and concrete action of the followers on the other hand (e.g., Aryee, Walumbwa, Zhou, & Hartnell, 2012; Lorinkova, Pearsall, & Sims, 2013). Leadership behaviors trigger psychological, motivational, and cognitive states that in turn elicit specific behavior that lead to performance, indicating that more time is needed before leadership leads to actual performance. It thus might be the case that instead of being a statistical artifact, the late development of the interaction effect on performance hints toward a time lag effect of transformational peer leadership (and complexity) on peers' performance. The exact time path of the findings, with no effect on performance after eight month (T2) but a clear effect after thirteen month (T3), however, remains unclear.

Third, there may be another explanation for the diminishing effect of transformational peer leadership and task complexity on team commitment. From Time 2 to Time 3, we lost almost twenty per cent of the participants due to changes in team composition, lay-offs, or team members being too busy to participate. This decrease in team size may have caused a decrease in statistical power in the analysis and thus an increase of the probability that existing relationships are not detected (Scherbaum & Ferreter, 2009). We thus may have failed to detect the relationship due to statistical inadequacies. But caution is warranted with regard to the generalizability of this argumentation since the effect on job satisfaction remained and the effect on individual

performance even developed from Time 2 to Time 3. Taken together, there are different explanations for the unstable pattern that we found for individual performance and team commitment but it is difficult to say what exactly caused this pattern. Besides more empirical research in the area of shared and peer leadership in general, we specifically call for more research on the effect peer leadership has on team members and for longitudinal research to shed light on this issue

With regard to the expected negative effect of directive peer leadership, the results were rather weak. High levels of directive peer leadership decreased team members' satisfaction with their job, but we found no evidence that directive leadership behaviors by peers would hurt team members' individual performance and their sense of commitment to the team. A possible explanation for this lack of significant results is that we may have overestimated the annoyance factor of directive peer leadership. Instead of leading to resistance, that would affect team members' performance in a negative way, and perceptions of mistrust that would threaten the relationships with peers, team members may simply ignore the instructions of peers when they perceive such behaviors as inappropriate. Instead, they may do what they feel is best and since peers lack the authority to impose behaviors on team members, ignoring directive peer leadership may have no consequences (Yukl & Tracey, 1992). But it may also be the case that the effect of directive peer leadership on individual performance and team commitment is more complex than we initially thought. Directive leadership by peers may for example not by definition be inappropriate. Direction by an older and more experienced peer may help a new team member to accomplish tasks and thereby increase performance (Kahai, Sosik, & Avolio, 2004). Also, the new team member may perceive directive leadership as supportive and pleasant (Vandenberghe,

Bentein, & Stinglhamber, 2004). Peers after all show concern for the new member and make sure that he or she keeps up with the team, what increases team members' sense of belonging to the team. In sum, seniority and expertise of the peer may have influenced the effect of directive peer leadership behaviors on team members' performance and team commitment in a way that under some conditions the relationship may be positive, whereas under other conditions the relationship would be negative. In the next sections, we will discuss the theoretical and practical implications of this study's findings, its strengths and limitations, and directions for future research.

## **Theoretical implications**

The results of our study have several implications for the theory development regarding team members' leadership behaviors. First, they call for an extension of the team-level conceptualizations of team members' leadership behaviors, such as shared leadership. Shared leadership describes team members' leadership behaviors as a team process and as an activity that is shared by the team as a whole (Avolio, Sivasubramaniam, Murry, Jung, & Garger, 2003; Day et al., 2004). Our research shows, however, that peer leadership is not shared evenly among team members. Instead, team members differ in the extent to which they engage in or are the targets of peer leadership behaviors. Such an individual-level conceptualization of team members' leadership behavior provides a valuable addition to existing team-level research because it provides insights into differential leadership processes that occur between individual team members (c.f., Mayo, Meindl, & Pastor, 2003; Seibert, Sparrowe, & Liden, 2003).

Second, our findings suggest that current views of peer and/or shared leadership are overly optimistic. Leadership behaviors that can be effectively used by one vertical leader are not necessarily effective when they are performed by several peers. Where directive leadership by the

leader provides direction and reduces role ambiguity (c.f., Lorinkova, Pearsall, & Sims, 2013), being told how to perform tasks and having one's task performance checked by several peers may restrict team members' sense of being in control of their own working activities. And lack of control is one of the most important threats to job satisfaction (Keller & Semmer, 2013). Our findings that directive peer leadership decreases team members' job satisfaction support this suggestion. It seems that not all leadership behaviors are suitable for widespread use among peers and that some of them seriously threaten team members' enthusiasm about their work context.

Third, questions arise with regard to the generalizability of the positive effects of peer leadership. Team members who perform complex tasks cannot function effectively through their own efforts but depend on external inputs to perform tasks. In this case, peer leadership provides a vital source of input and thus helps team members execute tasks. However, when performing easy tasks, team members already have the knowledge and experiences that are required to function effectively. They are effective in performing tasks even with low levels of transformational peer leadership. When peers still provide input and direction toward goal attainment, such behaviors do not contribute to team members' effectiveness and can even distract them from performing tasks. Intuitively, there are many more situations where it would *not* be desirable for peers to lead each other. One can imagine the disastrous consequences of peer leadership when peers have low expertise (Conger & Pearce, 2003). Instead of improving effectiveness, peer leadership would cause it to decline. The same risk may exist when different peers pursue different goals or when peers pursue goals different from those of the vertical leader (Conger & Pearce, 2003). Finally, urgent situations that leave no time for interaction but call for immediate decisions, as well as situations that *require* no interactions with peers because team members can perform tasks

independently, would not be suitable for peer leadership (Pearce & Manz, 2005). To summarize, our findings call for a more nuanced approach toward peer leadership that takes into account its possible downsides and pays attention to the specific situational characteristics that make peer leadership appropriate and acceptable.

Fourth, the findings of this study oppose current trends in peer and shared leadership research that address performance as the most important outcome of such leadership behaviors (c.f., Manheim, Van der Vegt, & Janssen, 2011). Although examination of the peer and shared leadership – performance relationship is a necessary first step in empirical research since it provides legitimacy to the construct as such, the nature of peer and shared leadership suggests stronger effects on team members' affective reactions, and especially on job satisfaction.

Transformational leadership includes paying attention to how other team members feel and taking care of their well-being (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Such behaviors, when provided by peers, give team members a feeling of being part of the social structure of the team and to an important extent determine the social relations among team members. And these 'social relations at work represent a major source of satisfaction and are an important reward and preoccupation for individuals in the workplace' (Baron & Pfeffer, 1994, p 192). In line with this argumentation, we indeed found peer leadership to be most strongly related to team members' job satisfaction.

Finally, our findings add to the growing number of articles that emphasize the unique influence that peers have on team member outcomes (Chiaburu & Harrison, 2008; Cole, Schaninger Jr, & Harris, 2002). Positive interactions with peers provide a source of support that enhances various individual outcomes, such as job satisfaction (Morgeson & Humphrey, 2006),

organizational citizenship behaviors (Li & Hung, 2009), job involvement, team commitment, and performance (Chiaburu & Harrison, 2008). Our study contributes to this stream of literature by showing that leadership involves a specific manner in which team members interact with each other and influence each other's effectiveness.

# **Practical implications**

This research also has several practical implications. First, managers need to be aware that team members not only receive leadership from them but also from peers and that such leadership behaviors can influence team members' effectiveness. This influence can be both beneficial as well as detrimental to team members' effectiveness, depending on the concrete leadership behaviors that peers engage in. To maximize the beneficial outcomes of peer leadership, managers should monitor peer leadership and encourage motivating and stimulating leadership behaviors, but, at the same time, they should prevent peers from controlling team members and telling them how to perform their tasks. Moreover, some caution is necessary with regard to the benefits of peer leadership. Peer leadership is not a remedy that benefits individual effectiveness regardless of the situation; it helps team members whose tasks are complex to function more effectively, but it provides no benefits for team members who perform easy tasks. Before encouraging peer leadership, it is thus important to have a clear picture of the current situation and of how peer leadership can contribute to increased effectiveness.

#### Strength and limitations

As with any study, this study has its strengths and limitations. One of the strengths is its time-lagged research design. Because we examined the development of peer leadership and its outcomes over time, we are more confident that the outcomes correspond to reality. Another

strength is the individual-level conceptualization of team members' leadership behaviors. This provides a more fine-grained picture of leadership within the team because it not only examines the total amount of leadership provided by peers, but it also reveals individual differences in terms of who is addressed by such leadership behaviors.

One limitation is the specific setting in which this study took place because it may restrict the generalizability of our findings. Both the banking sector, with its bonus culture and focus on individual performance, and the Dutch culture in general (Hofstede, 1983) are known for their individualistic character. Their focus on self-expression and individual achievement may strengthen the relationships between peer leadership and individual outcomes. In branches or national cultures with a more collectivistic emphasis whose focus is more on cooperation and working together as a team, this relationship may be much weaker, and peer leadership may mainly relate to team outcomes instead of individual outcomes.

Another limitation of this study is the inconsistency of the results. For example, we do find significant relationships between transformational peer leadership and individual performance at Time 3 but not at Time 2, and between transformational peer leadership and team commitment at Time 2 but not at Time 3. Although we suggested what may have caused this inconsistent pattern of results, more research is clearly needed to shed light on how different leadership behaviors of peers relate to the different criteria of individual effectiveness over time.

Finally, although our time-lagged research design provides insights into the development of shared leadership over time, it does not provide causal relationships. It thus may be the case that it is not leadership behaviors of peers that make team members perform better and feel more committed and satisfied, but that team members who perform well, are committed to the team, and

feel satisfied, are more frequently the target of peers' leadership behaviors. Again, more empirical research is needed to explore the relationships in more detail and prove causation.

#### **Future research**

Finally, this study reveals several implications for future research. First, our focus on the effects of *receiving* leadership from peers raises questions about what it means for peers to *provide* leadership. On the one hand, we might argue that peers who engage in leadership have more say in team decision making and function more autonomously, leading to an increase in job satisfaction (Lichtenstein, Alexander, McCarthy, & Wells, 2004). On the other hand, exhibiting leadership, without being formally instructed to do so, may increase sensitivity to rewards and may tempt peers to act in their own interest and not in the interest of the team (Keltner, Gruenfeld, & Anderson, 2003). This situation may lead to a drop in how effectively peers contribute to the functioning of the team. Future research is needed to reveal how providing leadership affects individual peers.

Second, knowing that peers differ in the extent to which they exhibit leadership behaviors toward team members, it would be interesting to see why some peers do so more than others. Research on leadership emergence provides some good starting points. Personality traits like dominance and extraversion (Judge, Bono, Ilies, & Gerhardt, 2002), as well as cognitive (Foti & Hauenstein, 2007) and emotional intelligence (Côté, Lopes, Salovey, & Miners, 2010), are consistently found to predict leadership emergence in leaderless teams. It would be interesting to see if they also predict peers' leadership behaviors in teams that have a vertical leader.

Finally, we only investigated the effects of two leadership behaviors provided by peers, but there are probably more leadership behaviors that peers use to influence one another and that affect

individual functioning. Transactional leadership, for example, relates to the exchange of valuable goods (Bass, 1985). Peers may provide recognition and rewards (in terms of compliments) when team members perform well (contingent reward) and thereby provide clarity of expected performance levels. The positive character of contingent reward suggests that such leadership behaviors would influence effectiveness in a positive way. But transactional leadership behaviors also consist of management by exception, a more corrective type of leadership (Bass et al., 2003). Peers would focus on mistakes and inefficiencies, and intervene to prevent further failures. This dimension of transactional leadership may lead to negative outcomes due to its negative impact on the relationships among team members. And there may be many other leadership behaviors that peers provide and where we have no clue how they affect team members' functioning. Research on how peers can engage in other leadership behaviors than addressed in this paper and how these leadership behaviors affect individual functioning thus is badly needed.

#### General discussion

When Steve Jobs said that 'you have to be run by ideas, not hierarchy', when he argued for disentangling leadership from possessing a formal leadership position, he once again made clear that shared leadership is a topic that is of practical importance in business life. Scientific researchers picked up on this topic in the 1990's (e.g., Avolio, Jung, Murry, & Sivasubramaniam, 1996; Perry, Pearce, & Sims, 1999), showing a good feeling for changes and challenges in organizational reality. Unfortunately, as I explained in chapter 1, two decennia of scientific research have not yet resulted in a clear and consistent conceptualization of what shared leadership is, in a generally accepted definition of the topic, and in a validated and generally accepted measurement instrument of shared leadership. Researchers mainly diverge on three issues, which are *how* team members share leadership, *what* they share when they share leadership, and what the role of the *vertical leader* is in shared leadership.

The goal of this dissertation was to provide an overview of both theoretical and empirical research on shared leadership and, based on that, to empirically address some identified questions and issues in this literature. In chapter 2, in a narrative literature review, I critically discussed the different conceptualizations of shared leadership and reflected on the state of empirical research on its antecedents and consequences. Based on these findings, I then empirically examined in chapter 3 how team members can effectively influence one another to bring about positive team-level outcomes, and what the relative influence of shared and vertical leadership is in these leadership processes at the team level of analysis. In chapter 4, I switched to the individual level of analysis to

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examine how leadership exercised by peers influences team members' individual functioning, and under what conditions peer leadership adds to their individual job outcomes. Below, I will describe the main findings of these three chapters and discuss their theoretical and practical implications, strengths and weaknesses of the present dissertation, and implications for future research.

## Summary of the main findings

## How team members share leadership

In chapter 2, I found that the empirical literature until 2011 was characterized by two opposite approaches, the collective approach where it is assumed that all team members evenly contribute towards leading the team, and the individual approach where contribution to shared leadership is assumed to be a matter of individual characteristics and expertise. I concluded that there are several theoretical reasons to believe that individual team members differ in the extent to which they contribute to shared leadership and that they make use of different leader behaviors when they influence peers. This conclusion is in line with the research literature on leadership, power, and influence. Research on emergent leadership, for example, shows variation in team members' leadership activities like stimulating and inspiring the team (e.g., Côté, Lopes, Salovey, & Miners, 2010). Likewise, research on influence strategies suggests that individual team members have different preferences for influence strategies like using pressure or rational persuasion (Yukl, Falbe, & Youn, 1993).

The empirical investigations in chapter 4 revealed that 80 to 90 percent of the variance in individual perceptions of peers' transformational and directive leadership behaviors results from individual factors and dyadic relationships, like team members' own characteristics, characteristics

of individual peers who provide leadership, and the quality of relationships team members develop with peers. I asked 144 banking employees how they perceived the leadership behaviors of each of their peers, and found that perceptions of peer leadership only to a small extent depend on team membership. The empirical findings of this dissertation thus clearly argue for an individual approach of how leadership is shared in teams.

## What team members share when they share leadership

The literature review in chapter 2 also revealed considerable differences in how scholars answer the question of what is shared in shared leadership. The different answers to the 'what-is-shared' question refer to influence, functions and roles, and leadership behaviors. These different conceptualizations of shared leadership correspond with leadership conceptualizations in traditional leadership research and are not problematic in itself since they all make sense in the context of shared leadership. However, I concluded in chapter 2 that when choosing for one of the three leadership conceptualizations, it is important to explain how team members can gain influence in teams, and why they would engage in certain leadership functions, roles, and behaviors. As team members lack a formal leadership position and formal leadership tasks, the fundamental questions are how they can influence peers within the same hierarchical layer, and what leadership functions, roles, and behaviors they can effectively use towards peers.

In this dissertation, I conceptualized shared leadership in terms of team members' behaviors towards peers, specifically transformational and directive leadership behaviors. Why would team members, who have no formal leadership tasks and are not expected to provide leadership, still engage in such leadership behaviors? Chapter 3 suggests that transformational leadership behaviors of the vertical leader encourage both transformational and directive leadership behaviors in team

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members. By stimulating team members to perform beyond expectations and strengthening team spirit, vertical leaders activate team members to do more than they are supposed to do to pursue goal attainment (Greene & Schriesheim, 1980; Jacobsen & House, 2001) and providing different leadership behaviors apparently is one way to do so.

The next question is how team members can make use of shared leadership behaviors in an effective way. Generally, the fact that transformational and directive leadership both contribute to team effectiveness when performed by the vertical leader (Judge & Piccolo, 2004), does not necessarily mean that team members without a formal leadership position can make use of these behaviors to effectively influence peers. Indeed, both chapter 3 and 4 suggest that the stimulating and motivating character of transformational leadership behaviors makes these leadership behaviors suitable for team members to influence peers and increase both team (chapter 3) and individual (chapter 4) effectiveness. But when team members provide directive leadership behaviors, which are based on providing direction and controlling peers' task accomplishment, this has a negative impact on peers' satisfaction (chapter 3 and 4) and on team commitment (chapter 3). The fact that the participants in chapter 3 were from a wide range of industry sectors makes these findings especially robust.

#### The role of the vertical leader when team members share leadership

The last question I detect that researchers disagree on is what the role of the vertical leader is in shared leadership. The primary idea that shared leadership is mainly important in leaderless teams and thus replaces vertical leadership (e.g., Seers, 1996) is disproved by a significant body of empirical research that found shared leadership in a broad range of hierarchical teams that had a vertical leader, like in Japanese R & D teams (Ishikawa, 2012), top management teams from the

software industry (Daspit, Ramachandran, & D'Souza, 2014), sports teams (Fransen et al., 2015), and Dutch teams operating in a broad range of industries, like the banking sector (chapter 3 and 4). But how, then, do vertical and shared leadership relate to one another?

First, the findings of chapter 3 add to the growing body of empirical evidence that particular vertical leadership can stimulate shared leadership (Carson, Tesluk, & Marrone, 2006; Fausing, Joensson, Lewandowski, & Bligh, 2015; Grille, Schulte, & Kauffeld, 2015; Hoch, 2013; Hoch & Morgeson, 2014). I found that team members engage in more transformational and directive leadership with a vertical leader who provides more transformational leadership behaviors. An important role of the vertical leader thus clearly is to encourage leadership behaviors of team members.

Second, chapter 3 suggests that the same type of leadership behavior exercised by vertical leaders and team members may relate differently to team effectiveness. Specifically, transformational leadership of the vertical leader was most important for enhancing team performance, whereas shared transformational leadership behaviors by team members were an important source for team commitment and job satisfaction. These findings suggest that shared leadership not simply means 'more' leadership and better team outcomes, but that vertical and shared leadership have both unique functions in teams.

## When shared leadership contributes to outcomes

A last finding of this dissertation relates to aspects of team members' tasks that determine the effect of peer leadership on team members' individual effectiveness. Chapter 4 shows that transformational peer leadership increases team members' effectiveness only when team members

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perform complex tasks and not when team members perceived their tasks as fairly easy. Shared leadership thus does not add to individual effectiveness regardless of task characteristics.

## Theoretical implications

The findings of this dissertation have several implications for research and theory development of shared leadership that I will discuss below.

## Shared leadership as multi-level construct

Although shared leadership clearly is a team-level construct that relates to the extent to which leadership is spread throughout the team instead of restricted to one single leader, the results of chapter 4 argue for a multi-level approach. Individual team members differ in their perceptions of leadership by peers (chapter 4) and very likely differ in the extent to which they contribute and in how they contribute to shared leadership (cf., Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014). Indeed, in the most current literature on shared leadership, researchers only rarely refer to leadership as being collectively shared by the whole team (for exceptions, see Fausing, Joensson, Lewandowski, & Bligh, 2015; Hoch, 2013). Rather, researchers make increasingly use of social network analysis, acknowledging that individual team members may perceive the leadership contributions of their different peers differently (Fransen, Van Puyenbroeck, Loughead, Vanbeselaere, De Cuyper, Vande Broek, & Boen, 2015; Lee, Lee, Seo, & Choi, & 2015; Mendez & Busenbark, 2015), and adopt multi-level perspectives of shared leadership (Grille, Schulte, & Kauffeld, 2015; Gu, Chen, Huang, Liu, & Huang, 2016).

Including the individual level of shared leadership in leadership research opens up a whole bunch of new research possibilities. Grille and colleagues (2015) examined antecedents of team

members' leadership and found that team members who perceive high levels of empowerment and feel fairly rewarded are more likely to engage in leadership than team members who perceive low levels of empowerment and feel that reward is unfairly distributed. Individual competence was also found to predict team members' participation in leadership (Li et al., 2007). Moreover, besides being more effective when performing complex tasks (chapter 4), researchers found that team members who perceive high levels of shared leadership are more creative (Gu et al., 2016). It would also be interesting to examine effects of shared leadership for the individual team members that provide leadership towards others in the team. Does engagement in shared leadership towards others interfere with the execution of one's own formal tasks, and are providers of shared leadership being more or less liked by their peers? I conclude that investigations at the individual level of analysis can provide valuable insights into the shared leadership process since they provide a more fine-grained picture of what is happening within the team. More attention for individual aspects of shared leadership is therefore highly recommended.

## Outcomes of shared leadership: more complex than initially thought

In the first publications of shared leadership, researchers were wildly enthusiastic about the potential benefits of this new leadership concept. Shared leadership was described as an 'important intangible resource' (Carson, Teslukl & Marrone, 2007) and claimed to be more effective than vertical leadership (Pearce & Sims, 2002). This dissertation calls for a more cautious view of the effects of shared leadership. First, it shows that specific leadership behaviors, like directive leadership, can harm team commitment and job satisfaction and contribute to team effectiveness in a negative way (chapter 3). Whereas the positive and stimulating character of transformational leadership behaviors enhances feelings of being committed to the team and being satisfied with

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one's job when provided by peers, directive leadership behaviors like keeping an eye on each others' task accomplishment and providing direction may hurt the social relationships within the team. The fact that different shared leadership behaviors can be differently related to outcomes is in line with a recent meta-analysis by Wang, Waldman, and Zhang (2014). They found that transformational leadership behaviors of team members are stronger related to team effectiveness than are more traditional forms of leadership, like initiating structure. Both findings emphasize the necessity to differentiate between different shared leadership behaviors and to examine how different behaviors can differentially influence team or individual outcomes, instead of assessing shared leadership only generally ('To what degree does your team rely on X for leadership?', e.g., Mathieu, Kukenberger, D'Innocenza, & Reilly, 2015) or combining the different leadership styles to one leadership measure (e.g., Grille, Schulte, & Kauffeld, 2015).

Second, chapter 3 suggests that leadership behaviors of team members do not enhance all aspects of team effectiveness. Shared transformational leadership behaviors were a source for team commitment and job satisfaction, whereas the same leadership behaviors of the vertical leader were most important for enhanced team performance. Consistently, Mathieu, Kukenberger, D'Innocenza, and Reilly (2015) found shared leadership to directly relate to team cohesion but not to team performance. And Fransen and colleagues (2015) found that team members were better motivational and social leaders in sports teams than vertical leaders, meaning that they played dominant roles in steering emotions in the field (motivational leadership) and promoting good relationships within the team (social leadership). It seems that leadership behaviors of team members to a great extent regulate interactions within the team that in turn foster commitment, satisfaction, and cohesion, whereas vertical leaders maintain responsible for directing the team

towards optimal performances. To further investigate these differential relationships, it is important to include both shared and vertical leadership in the analysis to identify their relative and different impact on team and individual outcomes. Such a dual leadership approach is, however, still exceptional in today's shared leadership research (for an exception, see e.g. Binci, Cerruti, & Braganza, 2016).

Finally, the outcomes of this dissertation show that shared leadership does not always contribute to positive team outcomes but that its positive effect depends on task characteristics (chapter 4). Although still scarce, there is some research addressing situational aspects and team process variables that determine the effectiveness of shared leadership, like demographic diversity (Hoch, 2014) and age diversity and coordination (Hoch, Pearce, & Welzel, 2010). All investigations show that shared leadership is useful and has positive effects in some situation, whereas under other circumstances it fails to contribute or may even hurt effective team functioning. Researchers thus have to be aware that shard leadership is no cure-all and that when investigating outcomes of shared leadership, it is necessary to explain how the specific character of shared leadership adds to the situation at hand.

## How do vertical leaders influence shared leadership?

The findings of chapter 3 that vertical leaders stimulate shared leadership are in line with other recent research (Carson, Tesluk, & Marrone, 2006; Fausing, Joensson, Lewandowski, & Bligh, 2015; Grille, Schulte, & Kauffeld, 2015; Hoch, 2013; Hoch & Morgeson, 2014). The underlying mechanisms of this relationship between vertical and shared leadership, however, remain subject of discussion. The findings in chapter 3 suggest that specific leadership behavior of the vertical leader, namely transformational leadership, can stimulate several types of leadership

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behaviors in team members. The same conclusion is drawn by other researchers who found that transformational and empowering leadership of the vertical leader are important for the development of different shared leadership behaviors in team members (Fausing, Joensson, Lewandowski, & Bligh, 2015; Hoch, 2013). By not restricting team members but inspire them towards extraordinary performance levels and to think and act 'out of the box' (transformational leadership), and encouraging team members to take responsibilities and collaborate with each other (empowering leadership), vertical leaders apparently stimulate team members to provide leadership themselves.

But there is another possibility of how vertical leaders stimulate shared leadership. Several researchers suppose that vertical leaders function as role models and that team members copy the leadership behaviors of the vertical leader (Grille, Schulte, & Kauffeld, 2015; Hoch & Morgeson, 2014). Social learning theory (Bandura, 1977) suggests that team members acquire new behaviors through observing, imitating, and modeling the behaviors of others, meaning that team members would provide the same leadership behaviors as their vertical leaders. Empirical research partly supports this suggestion. Hoch and Morgeson (2014) found that for 4 out of 6 leadership behaviors, namely transformational leadership, individual and team empowering leadership, and aversive leadership, leadership behaviors of the vertical leader were most strongly related to the same leadership behavior by team members. This was not true, however, for transactional leadership and participative goal setting of vertical leaders. The explanation of this exact pattern of findings is still unclear since this is work in progress. But although findings are preliminary, role modeling theory seems a promising theoretical framework in explaining how vertical leaders can influence the development of shared leadership in teams.

One possible explanation for the diverging findings with regard to underlying mechanisms of how vertical leaders influence shared leadership may be prototypicality of the vertical leader (Grille, Schulte, & Kauffeld, 2015). Prototypical leaders embody the social identity of the team and, in the eyes of team members, represent what the team values and considers important (cf., van Knippenberg, 2011). They are trusted by team members to act in the best interest of the team and are therefore considered more effective and influential. This may explain why Grille and colleagues (2015) found that vertical leaders are only copied in their leadership behaviors by team members to the extent that they are prototypical: vertical leaders who are perceived as less prototypical are not that influential in teams.

## **Practical implications**

The picture that leaders lead and team members follow is perseverant and difficult to change, as shown by the total surprise of Walt Mossberg when Steve Jobs describes his leadership as one of the many sources of leadership. The most important lesson from this dissertation for business life is that team members without any formal leadership tasks engage in leadership too and that these leadership influences affect team and individual functioning both positively and negatively. For managers, it is important to keep track of team members' concrete leadership behaviors since the positive and stimulating character of transformational leadership increases team and individual functioning, whereas controlling peers and telling them how to perform tasks has a negative impact on team effectiveness. Managers can influence the degree of shared leadership in teams by providing transformational leadership themselves, but need to be aware that such leadership behaviors may stimulate both effective transformational leadership as well as harmful

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directive leadership behaviors in team members. In order to restrict shared directive leadership in teams, managers may discuss its harmful effects and make directive team members aware of the negative consequences of such behaviors. Finally, it is important for managers to determine when shared leadership is desirable. Team members with complex tasks benefit from leadership from peers, but those who perform easy tasks even function slightly less effectively when peers provide leadership.

For team members it is important to realize that their leadership behaviors can make or break the team. Articulating a vision, acting as a role model for peers, promoting the team goals, uttering high performance expectations, supporting peers, and stimulating them intellectually are behaviors that benefit team and individual outcomes. But openly checking whether peers perform their tasks well and telling them how to perform them has a reversed effect and undermines team members' professional self esteem. Also, team members' leadership is most valuable to those who perform complex tasks and less so for peers who are in control of their tasks and perceive them as fairly easy. When providing leadership to peers with complex tasks, it is important that team members are aware of each others' knowledge and expertise so they can encourage whoever is most capable to take the lead. This implies that shared leadership is not only about team members' own contribution towards leading the team. Being sensitive to the expertise of peers and promoting their leadership participation enables the team to fully benefit from the abilities of all its members.

## Strengths and weaknesses

The investigations of this dissertation have several strengths and weaknesses. To start with the strong aspects, the measurement instrument of shared leadership is worth mentioning. By

examining each team members' perceptions of the leadership behaviors that are exercised by each of his or her peers, a more fine-grained picture develops of leadership processes in teams that better captures mutual relationships. Moreover, by investigating different leadership behaviors I was able to detect divergent effects of different shared leadership behaviors that would remain uncovered if I had combined the different leadership behaviors into one measure. Second, the participants in this research were all from real work teams, which provides confidence about the existence of shared leadership in real-world work teams. Third, the time-lagged research design in chapter 4 provides a realistic picture of how shared leadership is related to individual outcomes over time.

A first weakness of this research is that it does not explain why team members, who have no formal leadership tasks, engage in leadership behaviors. I identified vertical leadership as an antecedent of shared leadership behaviors, but this does not explain the intra-individual motivational processes that take place before team members actually provide leadership. Team members, for example, must have a feeling that they can make a valuable contribution to the team process. Research among children indeed shows that they are more likely to provide leadership towards peers when they feel competent with the task at hand (Li et al., 2007). Moreover, personality traits may explain whether team members actually engage in leadership behaviors. Research among leaderless teams shows that dominance and extraversion predict leadership emergence (Judge, Bono, Ilies, & Gerhardt, 2002) and those personality traits may also determine participation in shared leadership. Other researchers suggest an internal locus of control, meaning that team members have control over their work environment, and a proactive personality, described as an individual propensity to take action, to determine individual participation in shared leadership (Hoch & Dulebohn, 2013).

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Second, although I suggest that it is shared and peer leadership that affect team and individual outcomes, the analyses used in this dissertation do not prove causal relationships. To really prove causal effects, longitudinal research is needed that investigates vertical leadership, shared and peer leadership, and team and individual outcomes over long periods and at several points of time.

A third weakness of this research is that it was entirely conducted in the Netherlands. The Dutch culture is known for a low power distance (Hofstede, 1983), meaning that team members not simply follow orders but that they actively take part in work-related processes and feel free to question their leaders' decisions. The degree of shared leadership therefore may be higher in the Netherlands and findings may not correspond to realities in other countries.

#### **Future research**

The research field of shared leadership is still in its infancy and many fundamental questions remain subjects of discussion. Empirical research is badly needed to provide a deeper understanding of what shared leadership is and of its antecedents, outcomes, mediating processes and moderators. Research opportunities therefore are enormous. Here, I will outline the two aspects that in my eyes are most important in further developing the young research field of shared leadership.

A first important step in obtaining construct validity is explaining why team members, who lack formal leadership tasks, would engage in shared leadership. Agreement is about to develop in the literature on shared leadership that participation is not a matter of a collective team process but of individual contribution (cf., Drescher, Korsgaard, Welpe, Picot, & Wigand, 2014). It thus is time

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to explain the inner processes that activate team members to take leadership responsibilities. Researchers to date focus on external triggers like stimulation and empowerment of the vertical leader (e.g., Hoch, 2013), on contextual factors like situational complexity and ambiguity (e.g., Brown & Gioa, 2002) or task and goal interdependence (e.g., Fausing, Joensson, Lewandowski, & Bligh, 2015), and on individual perceptions of empowerment and being fairly rewarded (Grille, Schulte, & Kauffeld, 2015) as antecedents of shared leadership. But none of these fully explains why at some point, team members decide to provide leadership towards peers.

There are three valuable exceptions to the above literature. Kramer (2006) used interviews, analyzed e-mail communication, and observed rehearsals of a theatre company to find out what triggers individual team members to step forward and provide leadership to peers. Results show that lack of leadership, direction, vision, and coordination of the vertical leader were important activators of leadership in team members.

In addition, Li and colleagues (2007) observed interactions among children who were working together on a task to determine what triggers several team members to provide leadership. They found gender and feelings of task competence to activate children to engage in leadership behaviors. Both studies were performed in a rather specific context and questions with regard to the generalizability of the findings are appropriate, but these investigations form an important starting point for future research focused on examining why team members without formal leadership tasks provide leadership.

Finally, Hoch and Dulebohn (2013) proposed a theoretical framework with a focus on team members' individual characteristics as antecedents of participation in shared leadership. Theses researchers suggest self-leadership, where team members exert influence over themselves to

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achieve self-motivation and self-direction, an internal locus of control, meaning that team members have control over their work environment, and a proactive personality, described as an individual propensity to take action, as potential triggers that explain why some team members participate in leadership to a higher extent than others. A focus on individual characteristics also forms a valuable starting point for empirical investigations of why team members provide leadership to peers.

Second, the diversity and quality of the measurement instruments used to examine shared leadership are problematic. Chapter 2 shows that there are various measurement instruments of shared leadership, which results in a fragmented research field with outcomes that are difficult to compare. Moreover, the meta-analysis by Wang, Waldman, and Zhang (2014) shows that the different conceptualizations of shared leadership are differently related to outcomes. The choice for a measurement instrument therefore needs to be made carefully and should be grounded on theoretical reasons. Unfortunately, this is rarely the case in existing leadership research.

Researchers use measurement instruments that are validated in the literature on vertical leadership, without explaining why team members would engage in these specific leadership functions, roles, and behaviors. The quality of research in the field of shared leadership would greatly improve with a validated, theory-driven, and generally accepted measurement instrument of the concept.

### **Concluding remarks**

This dissertation started with an interview of Steve Jobs who believed in ideas and not hierarchy. Jobs was convinced that if you want to fully benefit from the expertise of your employees, you have to make sure that everybody can bring in ideas for products, processes, and

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services and that the best ideas eventually win, regardless of the title and position of its inventor. His conviction was sufficient to build Apple around this shared leadership principle. Now it is up to researchers to systematically unfold the processes that underlie and surround shared leadership. This dissertation is one of the first attempts to not only investigate the benefits of shared leadership, but also examine its dark side in more detail. Moreover, the multi-level approach is a valuable extension of the widely used team-level approach and helps to provide a more realistic and fine-grained picture of what shared leadership is and what it actually means for individual team members to be led by peers. Viewed from a more general perspective on the leadership literature, this dissertation shows that research on leadership was unnecessarily limited to leadership exercised by formally appointed leaders during the 20<sup>th</sup> century and supports new ways of thinking of leadership that involves both vertical team leaders as well as ordinary team members.

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Leiderschap gaat over dé leidinggevende. Deze opvatting was ook onder wetenschappers lang dominant. Van (erfelijke) kenmerken van leiders aan het begin van de vorige eeuw, naar gedrag van leiders in de jaren '50 en situationele invloeden op de effectiviteit van leiders vanaf de jaren '70, de focus van wetenschappelijk leiderschapsonderzoek lag bijna een eeuw lang volledig op de leidinggevende die in een hiërarchische relatie leiding geeft aan ondergeschikten. De kern van leiderschap is echter invloed. Leiderschap is anderen in hun motivatie, attitude en gedrag beïnvloeden met als doel gezamenlijke doelen te behalen (Yukl, 2010). Vanuit dit beïnvloedingsperspectief bezien, kan leiderschap ook worden gedeeld door leden in werkteams ('shared leadership'). Zo oefenen collega's in een team onderling leiderschap uit wanneer zij elkaar motiveren en corrigeren in hun functioneren en doelgericht gedrag, of wanneer zij een voortslepende en destructieve ruzie in het team adresseren en proberen op te lossen. Begrip tonen voor de collega die het thuis moeilijk heeft, is een vorm van relatiegericht ondersteunend leiderschap. En een collega erop wijzen dat zij niet werkt volgens de taakafspraken, is een vorm van taakgericht leiderschap. Vanaf de jaren '90 begonnen onderzoekers zich af te vragen of ze niet belangrijke horizontale leiderschapsprocessen tussen teamleden over het hoofd hadden gezien door alleen aandacht te besteden aan verticaal leiderschap van leiders in formele leiderschapsposities.

Daarnaast begon het door te dringen dat leiderschap in complexe en dynamische werkomgevingen niet door een enkele persoon kan worden verricht. Het bedrijfsleven was door globalisering, nieuwe communicatie- en informatietechnologieën fundamenteel veranderd. De inhoud van het werk en de werkomgeving werden complexer, de interactie tussen medewerkers

veranderde en informatie werd toegankelijk voor iedereen. Leiders hadden niet meer exclusieve kennis op een klein en duidelijk omlijnde gebied, maar werden geacht processen te overzien en mensen met diepgaande specialistische kennis samen te brengen en aan te sturen. In een dergelijke complexe werkcontext is het waarschijnlijk dat bij verschillende onderwerpen en kwesties verschillende teamleden op basis van hun specialistische kennis en kunde de leiding nemen in het team om ontwikkelingen de juiste kant op te sturen. Het concept van gedeeld leiderschap was geboren. Gedeeld leiderschap is een dynamisch leiderschapsconcept waarbij meerdere teamleden leiderschap tonen ook al hebben ze geen formele leiderschapspositie.

Hoofdstuk 1 is een inleidend hoofdstuk waarin ik de ontwikkelingen in de leiderschapsliteratuur heb beschreven die tot het construct gedeeld leiderschap hebben geleid. Helaas kenmerkt de literatuur over gedeeld leiderschap zich door diverse onderzoekslijnen die elk een eigen definitie hanteren zonder duidelijk te maken hoe deze zich tot elkaar verhouden. Naast gedeeld leiderschap worden er ook andere termen gebruikt, zoals distributief leiderschap en teamleiderschap, waardoor het moeilijk is een overzicht te verkrijgen van de relevante literatuur. En ook als het gaat om meetinstrumenten is de diversiteit groot, met als gevolg dat uitkomsten moeilijk te vergelijken zijn. Ik heb daarom in hoofdstuk 2 de bestaande literatuur samengevat in een overzicht teneinde het concept gedeeld leiderschap vervolgens beter te kunnen definiëren.

Het literatuuroverzicht laat zien dat de verschillen in hoe onderzoekers gedeeld leiderschap definiëren terug te brengen zijn tot 3 kernvragen. Ten eerste, hoe delen teamleden leiderschap? Aanvankelijk vatte onder onderzoekers het idee post dat alle leden van een team collectief betrokken zijn bij gedeeld leiderschap, in de zin dat iedereen in het team op dezelfde wijze bijdraagt aan onderling leiderschap. Meer voor de hand liggend is echter dat teamleden individueel

met hun kennis en ervaringen bijdragen aan leiderschap. Wie wanneer wat bijdraagt hangt af van de situatie en van individuele kennis en voorkeuren. Gedeeld leiderschap is dan de som van individuele leiderschapsbijdragen van teamleden.

Ten tweede, wat delen teamleden als ze leiderschap delen? Ze kunnen invloed delen, concrete rollen, of gedrag. Alle definities hebben hun bestaansrecht en het hangt af van de onderzoeksvraag voor welke definitie er wordt gekozen. Ik definieer leiderschap in termen van gedrag omdat ik ervan uitga dat niet alle soorten leiderschapsgedragingen die effectief zijn voor leiders, ook effectief door teamleden kunnen worden toegepast. Door leiderschap te definiëren in termen van gedrag kan ik kijken welke specifieke gedragingen effectief door teamleden kunnen worden gebruikt om collega's aan te sturen, en welke gedragingen een averechtse werking hebben.

Ten derde, als teamleden ook leiderschap tonen, wat is dan de rol van de formele leider? Er zijn onderzoekers die stellen dat gedeeld leiderschap alleen voorkomt in teams die geen formele leider hebben of dat het formeel leiderschap vervangt. Ik zie gedeeld leiderschap echter als aanvulling op formeel leiderschap. Gedeeld leiderschap ontstaat spontaan, omdat een formele leider niet altijd overal kan zijn, of omdat een formele leider niet altijd de meest relevante kennis en ervaring heeft. Maar de formele leider blijft een schakel tussen de organisatie en het team. Samengevat is gedeeld leiderschap dus een concept waarbij verschillende teamleden op verschillende momenten bijdragen aan leiderschap. Ik besteed in dit proefschrift aandacht aan concreet leiderschapsgedrag en doe onderzoek in 'normale' teams die een formele leider hebben.

In hoofdstuk 3 heb ik onderzocht wat het effect is van verschillende soorten gedeeld leiderschap op verschillende vormen van teameffectiviteit. Ik heb hiervoor vragenlijsten uitgezet onder 39 teams, waarvan de ene helft werkzaam was bij een grote bank en de andere helft in

uiteenlopende branches zoals horeca, verzekeringen en overheidsinstellingen in Nederland. Het onderzoek laat zien dat teams waarin teamleden elkaar stimuleren om in hun prestaties boven zichzelf uit te stijgen (gedeeld transformationeel leiderschap), effectiever zijn in de zin dat teamleden zich in hogere mate betrokken voelen bij het team en tevredener zijn. Teams die veel directief leiderschap delen, elkaar dus taken toebedelen en kritische feedback geven, zijn daarentegen minder effectief: hun leden ervaren juist minder betrokkenheid bij het team en zijn minder tevreden. Gedeeld leiderschap kan dus positief bijdragen aan de effectiviteit van teams, maar kan die effectiviteit ook onderuit halen, afhankelijk van de manier waarop teamleden elkaar leiden.

Het onderzoek laat verder zien dat formeel leiderschap samenhangt met de werkprestaties van het team. Het lijkt erop dat leiderschap van teamleden belangrijk is voor sociaal-emotionele uitkomsten zoals betrokkenheid en tevredenheid, terwijl hetzelfde leiderschapsgedrag van de formele leider belangrijk is voor het presteren van teams. Hetzelfde leiderschapsgedrag van teamleden en leiders heeft dus verschillende functies in teams.

In hoofdstuk 4 heb ik gekeken wat het effect is van leiderschapsgedrag van collega's voor de individuele effectiviteit van teamleden. De teams die werkzaam waren bij de bank (109 teamleden) hebben nog 2 keer dezelfde vragenlijst ingevuld, waardoor inzichtelijk wordt hoe leiderschap en individuele effectiviteit zich ontwikkelen door de tijd heen. Teamleden die veel transformationeel leiderschap ontvangen van hun collega's zijn effectiever in hun prestaties, voelen zich meer betrokken bij het team en zijn tevredener. Dit geldt echter alleen voor teamleden die hun taken ervaren als complex, waarbij kennis van verschillende bronnen gecombineerd moet worden; teamleden die hun taken eenvoudig en gemakkelijk vinden zijn niet effectiever wanneer collega's

transformationeel leiderschap tonen. Integendeel, ze worden zelfs iets minder effectief in het verrichten van hun werkzaamheden.

Gezien de bevindingen van hoofdstuk 3 verwachtte ik dat directief leiderschap van collega's negatief zou uitwerken op de individuele effectiviteit van teamleden. Ik dacht dat wanneer collega's taken toewijzen en kritische opmerkingen maken, teamleden dit als ongepaste en ongewenste inmenging zouden ervaren en geïrriteerd zouden raken. De uitkomsten bevestigen dit echter nauwelijks. Het kan zijn dat teamleden directief leiderschapsgedrag van collega's negeren en naast zich neerleggen. Het kan ook zijn dat de relatie tussen directief leiderschap van collega's en individuele effectiviteit van teamleden complexer is. Directief leiderschap kan bijvoorbeeld erg welkom zijn voor nieuwe teamleden of teamleden met minder expertise. Toekomstig onderzoek moet uitwijzen hoe directief leiderschap van collega's en effectiviteit van individuele teamleden precies samenhangen.

In hoofdstuk 5, tenslotte, heb ik de bevindingen van de voorgaande hoofdstukken geïntegreerd en geef ik enkele aanbevelingen voor de praktijk. Het onderzoek dat ik rapporteer in dit proefschrift laat zien dat de effecten van gedeeld leiderschap complexer zijn dan in eerste instantie gedacht. Gedeeld leiderschap is niet louter positief maar kent ook negatieve gevolgen, zoals een verlaagde effectiviteit van teams die veel directief leiderschap delen (hoofdstuk 3). Gedeeld directief leiderschap blijkt daarbij met name de betrokkenheid van teamleden en hun tevredenheid met het werk te ondermijnen, terwijl het geen invloed heeft op de prestaties van het team. Tot slot laat dit proefschrift zien dat gedeeld leiderschap niet altijd en voor iedereen van belang is. Teamleden die hun taken ervaren als complex hebben baat bij transformationeel

leiderschap van collega's, terwijl teamleden met makkelijke taken hier niet van kunnen profiteren (hoofdstuk 4).

Wat kunnen leiders en teamleden hiervan leren? Omdat leiderschap nog steeds door velen wordt gezien als iets wat formele verticale leiders doen, is bewustwording van gedeeld leiderschap een eerste belangrijke stap. Leidinggevenden kunnen met hun team de functie en het nut van gedeeld leiderschap bespreken en vragen hoe teamleden vertoond onderling leiderschap ervaren. Daarbij kan gericht de (in)effectiviteit van verschillende leiderschapsgedragingen worden geadresseerd. Want voor teamleden is het belangrijk zich te realiseren dat onderling leiderschapsgedrag het team verder kan helpen maar ook desastreus kan uitpakken. Als teamleden leiderschap tonen is het belangrijk de ander in zijn waarde te laten en op een motiverende, intellectueel stimulerende en ondersteunende (lees: transformationele) manier te leiden. Het is ook van belang dat teamleden erop letten wie ze aansturen, namelijk collega's met complexe taken die hulp nodig hebben en niet collega's die hun taken tot in detail beheersen. Tot slot gaat het succes van gedeeld leiderschap niet alleen over de eigen bijdrage. Als teamleden goed op de hoogte zijn van elkaars kennis en ervaringen en de juiste persoon stimuleren om het voortouw te nemen is de kans op een positieve bijdrage door gedeeld leiderschap groot.

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Nele Manheim, april 2017