Learning and Leadership in Organizations:
A Group Process Perspective

by

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"What you get by achieving your goals is not as important

as what you become by achieving your goals."

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SUMMARY

Organizations are faced with a number of challenges for effectively managing their workforce, such as maintaining and developing employees' knowledge against the background of demographic shifts, ensuring employees' pro-organizational behavior, and conducting work in self-managed teams. Across four empirical chapters, the present dissertation investigates learning (studies 1 and 2) and leadership processes (studies 3 and 4) related to these organizational challenges, with an emphasis on the influence of the group context. For example, trainings in organizations are mostly conducted in groups in which employees share knowledge with each other and engage in discussions, thus affecting their learning outcomes. Similarly, leaders must be accepted by the group to establish their position and effectively guide group members' behavior. Thus, the intra- and interpersonal processes associated with the group context have important implications for understanding contemporary organizational challenges.

Drawing from social identity theory and the information elaboration lens, studies 1 and 2 investigate processes and boundary conditions of knowledge development in age-diverse groups. On the one hand, according to social identity theory, learning in age-diverse groups can be impaired because individuals tend to prefer others whom they perceive as similar to themselves (i.e., "in-group" members) over others perceived as dissimilar ("out-group"). Because dissimilar group members are perceived as a potential identity threat, employees' willingness to share knowledge with each other might be reduced in age-diverse groups. On the other hand, the information elaboration perspective argues that members of age-diverse groups could potentially tap a larger pool of knowledge from different areas and engage in deeper knowledge processing discussions, which may promote learning outcomes. Indeed, based on 31 in-depth, longitudinal interviews involving young and older trainees enrolled in a full-time intergenerational learning program at an automobile manufacturer, the first study shows that not all types of knowledge (i.e., expert, practical, social, and meta-cognitive knowledge) were exchanged equally between employees from different generation across a group's lifespan. The data revealed that in newly formed trainee groups, employees from

different generations required some time before feeling safe enough to start interacting with the "out-group" (i.e., members from a different generation). Furthermore, while there was an intense phase of knowledge exchange after employees got to know each other better, participants also tended to split up into sub-groups again towards the end of the program. Building on these findings, this study develops a phase model of intergenerational learning in organizational groups.

Study 2 adds to this perspective by investigating boundary conditions of knowledge sharing in age-diverse groups in a short-term learning experience. 211 employees participated in a one-day collaborative group training and associated survey. In this setting, group members did not have much time to get to know each other, such that the depth of knowledge exchange might have been hampered in age-diverse groups through the occurrence of social identity processes that made participants feel insecure. Indeed, the results showed that perceived age diversity, but not objective diversity, was negatively linked to learning outcomes, and this relationship was mediated by knowledge sharing. Moreover, psychological safety climate was found to act as a buffer against the negative effects of perceived age diversity (moderated mediation model). Overall, studies 1 and 2 contribute to our understanding of employees' knowledge development in organizations as a social process that can be influenced by the (time-sensitive) interactions with other training group members.

Turning to the role of leaders in dealing with organizational challenges, in the next two chapters I consider the group context when investigating leaders' effect on followers' pro-organizational behavior (study 3) and the development of group members into informal leaders in self-managed teams (study 4). In particular, study 3 adopts a social identity lens to examine how leaders shape followers' behavior through their effect on followers' identity. A scenario study with 138 participants and a field study with 225 employees suggested that leaders perceived as ethical influence their followers' pro-organizational behavior through affecting followers' moral identity. Furthermore, these identity effects were more pronounced when followers perceived their leader as being highly group-prototypical, i.e., as being representative for the group and embodying the group's identity.

Study 4 complements this identity-related perspective on leadership by focusing on the social interaction processes through which individuals gain interpersonal influence over time, i.e. through which they emerge as leaders. Particularly, this study adds to leadership theorizing by explicating how emergent leadership is associated differently with task-, relations- and change-oriented communication as the social context changes over a team's lifecycle. Data were gathered at three measurement points in a sample of 42 self-managed teams working on an 8-week consulting. Multilevel modelling indicated that task-oriented communication was a stable predictor of emergent leadership. Relations-oriented communication gained importance, such that it predicted emergent leadership at the end. Change-oriented behaviors lost relevance, such that they were only a predictor of emergent leadership at the beginning of project work.

In sum, this dissertation provides novel theoretical and empirical insights into the role of learning and leadership as dynamic processes embedded in a group context that help organizations to deal with current challenges. The presented studies showcase qualitative as well as quantitative approaches; they rely on multiple sources of data (i.e., supervisor/trainer/mentor narrative, employee ratings, information on objective team composition, behavioral data) as well as different forms of data collection (interviews, survey measures, experimental and field study designs, video-taping/interaction coding). The results are obtained using a range of analytical methods (qualitative content analysis/Gioia method, moderated meditation index, and micro-level temporal interaction analysis). The findings have important implications for conceptualizing and designing learning in organizational groups in a way that promotes active sharing and integration of knowledge. Moreover, this thesis emphasizes the scholarly value of theory development and empirical analysis in understanding leadership as a relational process shaped through the interactions between leaders and followers. The insights presented in this dissertation are also highly relevant for human resource management practitioners who are in charge of training employees in diverse learning groups and responsible for selecting and developing leaders.

CHAPTER 1

GENERAL INTRODUCTION

To stay competitive, organizations have to deal with manifold challenges when managing their workforce, such as demographic shifts, continuous knowledge creation, an increasing awareness of ethical conducts, and the trend towards flat hierarchies (Ben-Menahem, von Krogh, Erden & Schneider, 2016; Frese, 2008; Leibold & Voelpel, 2006; Ng & Feldman, 2015; West, 2012). The present dissertation investigates learning (studies 1 and 2) and leadership processes (studies 3 and 4) related to these contemporary challenges by emphasizing the group context as an important influence factor. Indeed, employees in today's organizations increasingly have to collaborate in interactive group settings (Magni, Paolino, Cappetta & Proserpio, 2013; van Knippenberg & Mell, 2016). While an individual's resources are limited (West, 2012), groups of individuals can combine their extended range of knowledge to learn from and with each other (Ropes, 2013) and increase task performance if they value each other's knowledge (Homan, van Knippenberg, Van Kleef & De Dreu, 2007; Jackson & Joshi, 2011; van Knippenberg, De Dreu & Homan, 2004). Leaders are also embedded in groups and can only exhibit their influence on group members if followers are willing to accept them (Hogg, 2001; Hogg, van Knippenberg & Rast, 2012; van Vugt, Hogan & Kaiser, 2008).

The social interactions occurring among group members and between group leaders and followers have important identity implications, which in turn influence organizational members' attitudes and behavior. According to social identity theory (Tajfel & Turner, 2004), individuals continuously construct and change their identity by interacting with others. Social identity is defined as "the individual's knowledge that [s/]he belongs to certain social groups together with some emotional and value significance to [her/]him of this group membership" (Tajfel, 1972, p. 292). Due to a preference for confirming rather than threatening one's identity, individuals generally prefer others who are similar to them to those with different characteristics (Van der Vegt & Bunderson, 2005). Individuals who are dissimilar are likely to be evaluated overly critically and to be categorized as out-group members. In contrast, individuals perceived as similar are classified as belonging to the in-group (Brewer, 1979).

The social identity perspective can serve as an integrative conceptual focus for linking individual identity-related processes to group phenomena (e.g., Hogg, Abrams, Otten & Hinkle, 2004; van Knippenberg et al., 2004) and to leadership (Hogg, 2001; Hogg & van Knippenberg, 2003; Hogg et al., 2012). Social identity processes in this regard can have both negative and positive connotations. On the negative side, the tendency to categorize others into in-group versus out-group members may increase social tensions in groups, inhibit knowledge exchange between members, and reduce the effectiveness of leader behaviors when group members limit their interactions with others whom they perceive as dissimilar (van Knippenberg et al., 2004). On the positive side, identity-related categorization processes can also promote group cohesion and leader effectiveness if group members feel safe in social interactions and perceive strong similarities to other group members or with their leader. Furthermore, the quality of social categorization processes associated with group members' social identity might also change over time, such that both positive and negative consequences occur at different time points (Doosje, Spears & Ellemers, 2002; Hogg et al., 2012).

In this introductory chapter, social identity theory and SIMOL — the social identity model of leadership (Hogg, 2001; van Knippenberg, 2011) — are presented as overarching theoretical frameworks that motivated the research presented in this dissertation. Of note, the studies presented in the four empirical chapters do not aim to explicitly test the assumptions of social identity theory, but rather integrate this approach with other literature about group and leadership processes in order to develop theory about the outlined learning and leadership challenges faced by organizations today. As such, the four empirical chapters contribute to the goal of creating relevance and rigor in management research by integrating (1) theory development, (2) sound empirical hypotheses testing, and (3) transfer to management practice.

SOCIAL IDENTITY THEORY AND LEARNING IN ORGANIZATIONAL GROUPS

When employees engage in learning activities, they are oftentimes embedded in a group (e.g., Magni et al., 2013), such that their learning processes are likely influenced by the social context. This holds for formal learning environments such as organizational trainings or systematic human resource development programs (e.g., Eisenbeiss & Otten, 2008) and informal learning environments such as working together in a group on a new task (e.g., Chen, Donahue & Klimoski, 2004). Learning is an active process of relating novel information to previous experiences and assimilating this information, rather than passively adopting it (Kostopoulos, & Bozionelos, 2011). In order to learn effectively, individuals need to be highly involved in the learning activity, share their expertise with others and make sense of new information through social exchange (Magni et al, 2013; van Knippenberg et al., 2004). This perspective is particularly pertinent as the nature of work has shifted from simple, physically demanding tasks to complex and diffuse work means and outcomes, continuously changing work tasks, and reduced supervision (Frese, 2008; Grant & Parker, 2009). As a result, most individuals—as employees and learners—find themselves in far more responsible and autonomous roles compared to traditional, hierarchical structured work environments (Bell & Kozlowski, 2008; Kraiger & Ford, 2007; Magni et al., 2013; Parker, 2014). These changes are also reflected in professional development practice. For example, 'trainings' are regularly labeled 'workshops' or 'webinars' to signal that knowledge is dispersed and must be given shared meaning through learner–learner interactions (Kraiger, 2008a; 2008b).

Following the idea that individual learning outcomes in human resource management activities can greatly benefit from social interactions such as knowledge sharing in groups, the question arises how group members influence each other in this process. In particular, social identity theory implies that individuals might not willingly share their knowledge with every other group member, but prefer those who are similar to themselves as interaction partners (Tajfel & Turner, 2004; Van der Vegt & Bunderson, 2005) and limit their social interactions

with dissimilar others, which can increase social tensions within the group (Jehn, Northcraft & Neale, 1999). This in turn may have a negative effect on the overall learning outcome when individuals are more concerned with using their cognitive energy to resolve social tensions rather than engaging in the learning activity. As such, identity-related social categorization processes can be a potential threat to knowledge sharing activities in learning groups, particularly as organizational work and training groups become more diverse (van Knippenberg et al., 2004).

On the other hand, group members' diverse background can also constitute an opportunity for learning in groups. This idea is reflected in the information elaboration perspective of diversity (Williams & O'Reilly, 1998). Groups whose members contribute diverse information, expertise, and skills to the learning situation can combine their knowledge in order to profit from a large information pool. In addition, the quality of information processing may be of high value in heterogeneous groups because group members have to discuss their different viewpoints thoroughly to agree on a common understanding (Gerpott & Lehmann-Willenbrock, 2015; van Knippenberg et al., 2004). From this perspective the deeper information elaboration in diverse groups can positively influence individuals' learning processes.

From this line of reasoning follows that it is important to understand what managers and trainers can do to reduce identity-related social categorization processes invoked by perceived differences and increase information elaboration in learning groups. Yet, although individuals are frequently trained in heterogeneous training groups, the influence of diversity in these formal training settings has rarely been considered (Schmidt, 2009). This is particularly noteworthy since research has spent much effort on understanding the mechanisms linking work team diversity to performance (e.g., Guillaume, Dawson, Otaye-Ebede, Woods & West, 2015; van Knippenberg & Schippers, 2007) as well as diversity and team learning (e.g., Ely, Padavic, & Thomas, 2012; Van der Vegt & Bunderson, 2005). However, the findings from work teams do not necessarily translate to the processes occurring in organizational

training groups. Contrary to most training groups, work teams are characterized by common work goals, and team learning refers to a relatively permanent change in the team's collective level of competence (Ellis et al., 2003; Senge, 1990). Training groups are conceptually and practically distinct from work teams in that they are comprised of temporarily organized individuals, who often do not know each other, and who share related learning needs, but do not necessarily share common work goals.

In an attempt to address this lack of research regarding the role of diversity in the training area, this dissertation integrates social identity theory and the information elaboration perspective with group development theory to derive predictions that favorable learning outcomes will result when members of training groups actively share their knowledge and engage in information elaboration without experiencing inhibiting identity-related social categorization processes. In particular, I take a closer look at two aspects that could be beneficial for increasing knowledge sharing in training groups as a means to improve learning outcomes, namely (1) the time a training group spends together and (2) the climate characterizing the training group.

SOCIAL CATEGORIZATION PROCESSES AND TIME SPENT TOGETHER

Groups are dynamic entities that develop and change over time (e.g., Cronin, Weingart, & Todorova, 2011; Kozlowski, 2015). Group members might begin feeling more similar to each other as time passes. In the beginning, individuals often worry that they have to give up their individuality by becoming part of the group and thus (over-)react hostilely towards other group members (Bonebright, 2010). After group members have spent some time together, they frequently start developing shared mental models, in-group feelings, and ways to optimize collaboration (Neuman & Wright, 1999; Tuckman, 1965). As a consequence, knowledge sharing activities within the group may increase once people get to know each other better. Indeed, research has provided evidence that the negative effects of easily visible diversity

attributes such as age or gender on group performance decrease as time passes (Harrison, Price, Gavin, & Florey, 2002).

Whereas research on (organizational) learning in diverse groups has not considered such a temporal perspective to date, the importance of considering changes in interaction and adaption processes over time has a long tradition in various other fields of research, such as (1) group development theory (e.g., Chang, Bordia & Duck, 2003; Gersick, 1988; 1989; Tuckman, 1965; Tuckman & Jensen, 1977), (2) acculturation research (Berry, 1997) and (3) the mentoring literature (e.g., Humberd & Rouse, 2016; Kram, 1983; Levinson, Darrow, Klein, Levinson & McKee, 1978). First, the group development literature provides ample evidence that groups develop over time and that groups' interaction processes change according to specific group phases. For instance, it is commonly agreed that groups need to complete an initial team building phase before they can operate effectively (Raes, Kyndt, Decuyper, Van den Bossche, & Dochy, 2015; Tuckman, 1965; Tuckman & Jensen, 1977). Only after group members have discussed and agreed on group norms, they can concentrate on their tasks and become problem-solving entities (Tuckman, 1965). For the context of trainings in organizations, these notions suggest that learning groups will also undergo an initial group building phase, in which knowledge exchange activities between group members might not be very intensive. During early phases of the learning activity, group members might not want to open up too much towards dissimilar others, thus focusing more on the transfer of objective information and expert knowledge. Later on, once individuals recognize shared characteristics between themselves and the other group members through increased interaction (Humberd & Rouse, 2016), more private types of knowledge might be shared, too. For example, members of the training group may start talking about personal experiences or provide others with learning opportunities through sharing information from their social network.

Second, acculturation theory has raised the idea that individuals adapt their behavior over time when confronted with new situations. Acculturation refers to interactions between

individuals from dissimilar cultural backgrounds and to the cognitive adaptation processes that

occur as a result of such contact (Berry, 1997; Schwartz & Zamboanga, 2008). For example,

Berry (1997) proposed that individuals either (1) assimilate the new culture and discard their

heritage culture, (2) separate from the new culture and retain their heritage culture, (3) integrate

the new and heritage cultures, or (4) marginalize both cultures by neglecting their heritage and

the new culture, depending on situational and individual factors. In a similar vein, different

forms of "acculturation" ― that is, ways of learning from and with one another ― might

characterize learning relationships in diverse training groups. Members with different

backgrounds may, for instance, stick to their old perspectives when interacting with each other,

or they may substitute their former knowledge with new information from other group members.

Furthermore, they can also integrate their own and the other group members' expertise to

develop new knowledge. Lastly individuals may recognize that their own and the other persons'

knowledge are incorrect and other sources should be used to learn how to solve a task or

problem. These different options for knowledge exchange processes in diverse training groups

suggest that the nature of learning processes is not stable, but instead fluctuates and changes over

time. Sometimes individuals might assimilate their knowledge to those of others, and other times

they might stick to their own perspective, depending on how much identity threat (i.e., potential

harm to the value of one's identity, cf. Petriglieri, 2011) they perceive through the different view

of their dissimilar training colleagues.

Third, the mentoring literature has argued that mentors and their protégés require some

time to develop mutual trust and to identify with each other (Humberd & Rouse, 2016; Kram,

1983). Mentoring relates to a unique work relationship helping the protégé to develop within a

particular job, organization, or career path and ideally also allowing the mentor to gain new

perspectives (Chandler, Kram & Yip, 2011; Ragins, 2012). Comparable to diverse training

groups, the interaction partners in mentoring programs usually possess different types of

knowledge and vary in their expertise, but they share the goal of engaging in a learning

relationship. Diverse background can be beneficial in mentoring relationships for experiencing mutual growth and affirming a positive identity (Ragins, 2012). However, interactions in the mentoring context can also develop into dysfunctional relationships characterized by a lack of trust and even bullying (Eby, Butts, Durley & Ragins, 2010; Eby & McManus, 2004). Hence, comparable to learning relationships in organizational groups, on the one hand mentoring partners' different background and expertise can support the learning process through the development of new perspectives. On the other hand, their diverse background can also inhibit a mutual development of one's self through the evocation of identity threat perceptions. Importantly, the quality of mentoring relationships is not stable but changes throughout the learning phases (Kram, 1983; Ragins, 2012). Similarly, the quality of knowledge exchange processes in diverse training groups might also be subject to changes, depending on group members' feelings of identity threat across different learning phases (Holmes, Whitman, Campbell & Johnson, 2016; Petriglieri, 2011).

To summarize, there is ample evidence from other research areas arguing that identity-related social categorization processes in groups (and thus the outcomes of activities conducted in groups) vary over the course of a group's lifespan. Particularly, while employees likely prefer to engage in learning processes with similar individuals (such as same-age colleagues) in the beginning, assimilation processes may increase perceived similarity and consequently learning activities with dissimilar group members over time. Furthermore, different types of knowledge ranging from objective to more private information might be exchanged with others at different points in time of the learning experience. Building on these conceptual ideas, Chapter 2 describes the empirical results of an in-depth qualitative field study investigating *what* types of knowledge are exchanged *when* in age-diverse (intergenerational) learning groups. By investigating how learning processes unfold in heterogeneous learning groups in a long-term training intervention, this chapter addresses calls for research that can account for the temporal dynamics of group processes (Cronin et al., 2011; Ployhart & Ward, 2011).

SOCIAL CATEGORIZATION PROCESSES AND GROUP CLIMATE

Members of organizational learning groups do not always have time to socialize and get to know each other prior to collaborating. In this case, social categorization processes arising from diversity perceptions might have a more salient effect on knowledge sharing, and in turn learning outcomes. In an attempt to integrate the social identity perspective with the information elaboration approach, van Knippenberg and colleagues (2004) proposed the Categorization-Elaboration Model (CEM), arguing that individuals' affective reactions towards social categorization processes constitute important boundary conditions influencing the degree to which individuals engage in knowledge elaboration. In other words, while social categorization processes occur more or less automatically (depending on the salience of diversity), their influence on individuals' knowledge sharing and information elaboration behavior is dependent on employees' evaluation of the extent that their self is subjectively threatened or challenged through the categorization of the group into more and less similar colleagues. Transferring this idea to ad hoc training groups, this dissertation investigates the group's psychological safety climate (i.e. employees' perceived risk to raise one's opinion in the group) as a boundary condition influencing the link between diversity perceptions, knowledge sharing, and learning outcomes.

Group climate might be particularly important in short time training interventions, when participants do not have much time to get to know each other. Even if an individual perceives other group members as dissimilar when meeting them for the first time, this does not necessarily imply a negative affective reaction and an unfavorable bias towards them. Defense mechanisms and negative consequences only occur if an individual either perceives an identity threat for themselves or for their subgroup's identity (van Knippenberg et al., 2004). In the absence of such threats however, learning processes might not suffer from social categorization processes.

In a safe environment, individuals are more likely to develop trust even in dissimilar or unknown individuals (Roussin & Webber, 2012). A climate in which individuals are not feeling afraid of the consequences of taking interpersonal risks in a group (e.g., opening up, sharing one's expertise) is referred to as a psychological safe climate (e.g., Edmondson & Lei, 2014; Kahn, 1990). A climate characterized by high psychological safety inspires "a sense of confidence that the team will not embarrass, reject, or punish someone for speaking up" (Edmondson, 1999, p. 354). From the theoretical vantage point that identities are inherently social (Mead, 1934), a group climate of mutual appreciation can help individuals to feel accepted and maintain a positive identity. In such an environment, individuals will share their knowledge with others because they are not worried about threatening their self-image or status within the group when sharing information. Thus, a high psychological safety climate can serve as a buffer against the negative affective-evaluative reactions towards group-members who are perceived as dissimilar.

Importantly, the beneficial effects of a high psychological safety climate for learning outcomes in training groups are expected to play out in the short-term. For example, Homan and colleagues (2007) showed that convincing groups of the value of diversity immediately improved their performance in an idea generation and selection task through deeper information elaboration. These earlier findings suggest that a positive attitude towards the other group members in a training group can directly reduce identity threat and influence group collaboration processes in the short-term. Chapter 3 empirically investigates this idea in a field study of one-day training groups at an automotive company. The findings highlight the role of psychological safety climate as a boundary condition for the link between perceived diversity, knowledge sharing, and learning outcomes (moderated mediation model).

SOCIAL IDENTITY THEORY AND LEADERSHIP IN ORGANIZATIONAL GROUPS

Social identity theory also provides a helpful conceptual lens for understanding how organizational members claim and grant leader and follower identities through social interactions in groups (DeRue & Ashford, 2010; Hogg, 2001; Hogg et al., 2012). Leadership is a relational property within groups, meaning that leaders cannot exist without followers and vice versa (Hogg, 2001; van Vugt et al., 2008). It is an interdependent process and a structural feature of in-groups, implying that leader emergence and leader effectiveness are inherently linked to followers' social cognitive processes occurring because of their group membership. This notion has been recognized more than a decade ago by Hogg (2001), who is often referred to as the founding father of the social identity theory of leadership. Hogg and colleagues have criticized the "heroization" in traditional leadership approaches and pointed out that there is a lack of research conceptualizing leadership as a group-membership-based influence process (Hogg, 2001; Hogg & van Knippenberg, 2003; Hogg et al., 2012).

The central notion of the social identity model of leadership effectiveness (SIMOL, Hogg, 2001; van Knippenberg, 2011; van Knippenberg & Hogg, 2003) is that the group prototypicality of the leader — the extent to which employees perceive a leader to represent the group and embody the group identity — is pivotal for understanding leadership effectiveness. Individuals are more likely to accept leaders who are perceived as highly prototypical for the group (Hogg et al., 2012). Moreover, followers tend to and evaluate prototypical leaders as charismatic (Platow, Haslam, Foddy, & Grace, 2003) as well as trustworthy (van Knippenberg, & van Knippenberg, 2005). However, although previous conceptual work argues that group prototypical leaders possess an important identity function for followers, empirical work has not addressed this notion to date (Hogg et al., 2012). Furthermore, not only followers' identities are shaped by their leaders, but also leadership identity is co-constructed by followers (DeRue &

Ashford, 2010). These mutual identity construction processes are inherently tied to the group context, because leadership and followership roles are reciprocally related. This means that granting one group member a leader identity implies the instantiation of follower identities for other group members. Notably, this conceptualization also moves the research field away from a static understanding of leadership and followership toward a dynamic focus on how leader and follower identities emerge and change over time (DeRue & Ashford, 2010).

This dissertation aims to provide empirical evidence for the conceptual argument that both leaders and followers shape each other's roles and identities. As such, this research also builds on recent developments in identity research arguing that one's identity is not stable but continuously created through social interactions among individuals (Lord, Gatti & Chui, 2016). First, turning to the leader-follower identity relationship, I will elaborate on how leaders influence their followers' behavior through affecting followers' identity. Second, I will point out how an analysis of the verbal behavior occurring in initially leaderless groups can help deepen our understanding of the co-construction of leadership roles through social interactions between group members.

LEADERS CO-CONSTRUCTION OF FOLLOWERS' IDENTITY

The social identity perspective argues that followers refer to their leaders to define their identity (Hogg et al., 2012). However, traditional leadership research has paid only limited attention to this argument and mostly referred to social exchange theory (Blau, 1964; Gouldner, 1960) or social learning theory (Bandura, 1977; 1986) to explain how leaders influence their followers' behavior. According to social exchange theory, followers feel obligated to act reciprocally by helping the organization in a variety of ways when leaders have treated them fairly. From a social learning perspective, employees tend to imitate the behaviors of important role models, such as their leaders. However, these explanations are rather general and do not take into account the identity-related consequences of particular leadership styles. In other words, if identities are inherently social (Mead, 1934), followers might not only act reciprocally or imitate

leaders' behavior, but also change parts of their self-concept (Lord et al., 2016; Weichun, Riggio, Avolio & Sosik, 2011). This effect on followers' identities can have important implications for their subsequent attitudes, motivation and behavior (DeRue & Ashford, 2010).

This dissertation focuses on ethical leadership as an example for a leadership style with a unique moral component. In line with an identity-based approach to leadership and followership, the moral component of the leader's behavior is expected to affect followers' moral identity. Researchers and practitioners alike have become increasingly interested in ethical leadership to avoid ethical scandals, ensure organizations' adherence to ethical principles, and foster employees' voice behavior (e.g., Lam, Loi, Chan & Liu, 2016; Reiley & Jacobs, 2016). Ethical leaders are characterized by having moral values (moral person dimension) and by acting ethically and promoting ethical conduct at work (moral manager dimension; Treviño, Brown, & Hartman, 2003; Treviño, Hartman, & Brown, 2000). Leaders perceived as being and acting ethical not only help deter employees from negative behavior, but can also increase positive employees' behavior, particularly their organizational citizenship behavior (Avey, Palanski, & Walumbwa, 2011; Fehr, Kai Chi & Dang, 2015; Kacmar, Bachrach, Harris, & Zivnuska, 2011). This construct refers to employees' voluntary actions contributing to the effective functioning of the workplace (Podsakoff, MacKenzie, Paine, & Bachrach, 2000).

Despite the proliferation of research on ethical leadership, the field still possesses a nascent understanding of how ethical leadership's *unique moral dimension* affects followers' behaviors (Den Hartog, 2015; Zhu, Treviño, & Zheng, 2016). This dissertation adopts a social identity lens to argue that leaders who are perceived as ethical might change their followers' sense of moral identity, but only if they are recognized as being highly prototypical for the group. Notably, scholars have only recently begun to acknowledge that individual differences such as employees' personality traits or (moral) identity can change during adulthood (Roberts, Walton & Viechtbauer, 2006; Shao, Aquino, & Freeman, 2008; Zhu et al., 2016), implying that followers' self-concepts might also be malleable by leaders (Lord et al., 2016). Combining these

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findings with the assumption that followers' identity construction processes might only be affected by group prototypical leaders (Hogg et al., 2012), Chapter 4 empirically examines the role of leaders as "entrepreneurs of identity" (Reicher & Hopkins, 1996). In particular, I argue that perceived ethical leadership influences followers' behavior through its effect on follower's moral identity, but only if leader group prototypicality is high. As such, the studies presented in Chapter 4 are among the first to use an identity perspective to explore the psychological processes via which ethical leadership influences follower behavior.

FOLLOWERS CO-CONSTRUCTION OF LEADERSHIP IDENTITY

Not only followers' self-concept can be influenced by leaders, but leadership roles must also be granted by followers (DeRue & Ashford, 2010). From an evolutionary perspective, leadership emerges naturally in social systems because groups possess a survival advantage due to improved social coordination if they agree to follower a leader (e.g., Spisak, O'Brien, Nicholson & van Vugt 2015; van Vugt et al., 2008). Thus, even in initially leaderless groups, it is likely that one or more group members develop into a leadership position (e.g., Spisak et al., 2015). Group members might choose those individuals as a focal point who can convince them of their leadership qualities and who seem to be competent to help the group accomplish their goals (van Vugt, 2006). In line with this notion, it is well established that (social) intelligence and personality characteristics such as extraversion are related to the likelihood of developing into a leader role (Judge, Ilies, Bono, & Gerhardt, 2002; Kenny & Zaccaro, 1983; van Vugt, 2006).

This dissertation goes beyond linking individual characteristics to leader emergence by focusing on what team members actually do to be ascribed leadership in initially leaderless teams. Integrating group process models with an interaction-focused perspective on leader-follower relationships, the study presented in Chapter 5 investigates emergent leaders' verbal conduct over time in self-managed teams working on a consulting project. This chapter not only adds to the literature by focusing on the communicative behaviors through which leaders

and followers co-construct leadership (Fairhurst & Uhl-Bien, 2012; Lehmann-Willenbrock, Meinecke, Rowold, & Kauffeld, 2015), but also by taking into account the temporal dynamics of claiming and granting leader and follower identities in social interactions (DeRue & Ashford, 2010). As such, it addresses recent calls to pay more attention to the role of time in leadership and to the fine-grained interactive dynamics of emergent leader-follower processes in groups (e.g., Cronin et al., 2011; Dinh et al., 2014; Humphrey & Aime, 2014; Kozlowski, 2015).

Previous research has mostly focused on identifying team needs across the lifecycle and paid less attention to how leadership unfolds over time through behaviors that fulfill team needs (Morgeson et al., 2010). In other words, there is a lack of agreement on what team members do at which time point to be perceived as taking over leadership by their peers. Chapter 5 challenges the intuitively appealing notion that emergent leadership is ascribed to team members who engage in behaviors that are in line with the focus of team members' attention (i.e., convergent communication). Contrary, emergent leadership may be associated with divergent behaviors, such that it positively relates to communicative acts that fill unfilled gaps by concentrating on what the other team members are not sufficiently doing (i.e., divergent communication). This line of reasoning draws from leader substitute literature (Kerr & Jemier, 1978; Podsakoff & MacKenzie, 1997) that suggests a high team need for directive related advice when teams start to collaborate and members possess a limited amount of knowledge. Individuals who initiate change, make sense of information and shape the direction of the project work in this initial phase may help the team to collaborate efficiently, thus likely being ascribed a leadership role. Over time, as teams get more knowledgeable and the deadline comes closer, members tend to focus on the project work and are in less need for directions. In this context, emergent leadership might be positively associated with relations-oriented behaviors that ensure a supportive social climate and support the team to efficiently collaborate in stressful situation. Thus, whereas team members focus on building relationships with others in the initial formation phase and become more task- and change-focused over time, emergent

leadership may be positively related to the opposite behavioral pattern (i.e., task- and change-oriented communication in earlier team phases, relations-oriented behaviors towards the end). To summarize, Chapter 5 presents the first study that empirically investigates the micro-level social dynamics underlying the development of leader-follower relationships through interaction analysis in self-managed groups. Analyzing these social and mutual influence processes is particularly important for understanding emergent leadership in contexts increasingly characterized by self-directed project work and missing hierarchies.

DISSERTATION OUTLINE

This cumulative dissertation contains four empirical chapters, concluded by a general discussion. All four empirical chapters are based on field data, using a blend of qualitative and quantitative methodologies and both short- and long-term research designs. Because the studies reported in the chapters reflect collaborations with my supervisors, members of my committee, and other researchers, I refer to these co-authors by using "we" instead of "I" throughout these chapters.

The first part of this dissertation (Chapters 2 and 3) is focused on learning through knowledge sharing in age-diverse training groups, using different field study approaches. Based on a qualitative field study with 31 interviews conducted over a timespan of three years, Chapter 2 develops a phase model of intergenerational learning in organizations. The findings indicate which types of knowledge employees in intergenerational training groups acquire from one another, and how these learning processes differ at different time points. Chapter 3 further analyzes the processes and boundary conditions influencing learning in a short-term training intervention by exploring how knowledge sharing and psychological safety promote employees' learning outcomes. This study is based on a questionnaire survey in a sample of 211 employees participating in a collaborative one-day training at a large automobile manufacturer.

Chapters 4 and 5 shift the focus from learning in groups to leader-follower identity and

interaction dynamics in groups. Particularly, Chapter 4 analyzes leaders' behavior and their group prototypicality as factors influencing employees' pro-organizational behavior. We argue that moral leaders affect their followers' moral identity, which prompts followers to act in line with their self-perception and thus show more organizational citizenship behavior. Furthermore, this process is expected to be moderated by leader prototypicality, meaning that the effect of ethical leadership through followers' moral identity on organizational citizenship behavior is particularly strong when the leader is highly prototypical for the group. A scenario study ($N = 138$) in which we manipulated ethical leadership and leader prototypicality (between subject 2x2 factor design) and a field study of $N = 225$ confirmed that ethical leadership influences organizational citizenship behavior through follower's moral identity, but only if the leader is perceived as prototypical for the group.

Chapter 5 builds on the idea that leadership is co-constructed through group members' social interaction processes in which they mutually claim and grant leader and follower identities. In particular, we add to leadership theorizing by explicating how emergent leadership is associated differently with task-, relations- and change-oriented communication as the social context changes over a team's lifecycle. We argue that emergent leadership is positively associated with task- and change oriented communication in earlier team phases because teams require a direction that enables efficient project work. Over time, as teams get more knowledgeable, teams are in less need for directive advice and relations-oriented communication becomes more important for predicting emergent leadership because it helps teams to establish a social supportive climate under stress. We test our hypotheses at the micro-level of communicative acts in 42 self-managed teams over the course of a project. At week 1, 5, and 7, we gathered round-robin leadership ratings, videotaped team meetings and applied a fine-grained quantitative interaction approach resulting in data sets of $N_{t1} = 39,966$, $N_{t2} = 56,504$, and $N_{t3} = 43,622$ verbal behaviors. Multilevel modelling showed that task-focused verbal behaviors

were a stable predictor of emergent leadership over time. In contrast, change-oriented communication predicted emergent leadership only at the beginning, and relations-oriented communication only at the end of the project.

In concert, the four empirical studies advance both theory and practice by deepening our understanding of learning and leadership processes as embedded in organizational group contexts. Chapter 6 summarizes the four empirical studies and provides a general discussion of their major findings, theoretical implications, and practical insights. Furthermore, in integrating the intergenerational learning perspective of Chapters 2 and 3 with the leader-follower identity reasoning of Chapter 4 and the focus on the micro-dynamics of group work in Chapter 5, I also derive ideas for future research. Overall, I hope that this dissertation not only contributes to the theoretical and practical understanding of current organizational challenges, but that it will also inspire future research on how and when individuals share their knowledge to learn from each other, follow their leader, and take over leadership roles in organizational groups.

CHAPTER 2

A PHASE MODEL OF INTERGENERATIONAL LEARNING IN ORGANIZATIONS [1]

ABSTRACT

Demographic changes challenge organizations to qualify employees across all career stages and to ensure the transfer of company-specific knowledge between experienced and young workers. Human resource development programs for employees from different generations may help address these challenges. However, there is a lack of insight into what types of knowledge employees in intergenerational training groups acquire from one another, as well as how these learning processes differ at different time points. Over a span of 3 years, we conducted 31 interviews at an automobile company involving young (16–19 years) and experienced participants (41–47 years) of a full-time intergenerational learning program and their instructors. Our findings show that both generations possess distinct expert, practical, social, and metacognitive knowledge, and that they exchange different types of knowledge at different time points. We integrate these findings into a phase model of intergenerational learning comprising three phases: (1) familiarization, (2) assimilation, and (3) detachment. Our results suggest that intergenerational learning should be conceptualized as a bidirectional process with different foci of mutual knowledge exchange across different temporal phases. To facilitate intergenerational learning, instructors should adapt their teaching methods to employees' phase-specific needs and find ways to systematically map older and younger employees' specific knowledge contents.

NOTE:

CHAPTER 3

AGE-DIVERSE TRAINING GROUPS: HOW KNOWLEDGE SHARING AND PSYCHOLOGICAL SAFETY PROMOTE LEARNING OUTCOMES [2]

ABSTRACT

Demographic shifts in the Western industrialized countries have resulted in an increasingly age diverse workforce, with implications for human resource development generally and for diverse training groups particularly. The purpose of this paper was to deepen our understanding of the processes and boundary conditions through which age diversity in formal training settings influences learning outcomes. Data were obtained via a survey of 211 employees participating in a collaborative one-day training at a large automobile manufacturer. Perceived age diversity, but not objective diversity, was negatively linked to learning outcomes. Knowledge sharing mediated this negative relationship. Furthermore, psychological safety climate augmented the indirect negative effect of perceived age diversity on learning outcomes through knowledge sharing (moderated mediation model). When participants indicated a high level of psychological safety, their knowledge sharing activities were high, regardless of perceived age diversity. However, when psychological safety climate was low, perceived age diversity was strongly negatively linked to knowledge sharing. The findings imply that age diversity influences learning in training through knowledge sharing, but only when the learners find diversity salient. Practitioners are advised to improve psychological safety climate in training, as it buffers the potential negative effects of perceived age diversity on knowledge sharing and learning.

NOTE:

CHAPTER 4

AN IDENTITY PERSPECTIVE ON ETHICAL LEADERSHIP TO EXPLAIN ORGANIZATIONAL CITIZENSHIP BEHAVIOR: THE INTERPLAY OF FOLLOWER MORAL IDENTITY AND LEADER GROUP PROTOTYPICALITY [3]

ABSTRACT

Despite the proliferation of research on ethical leadership, there remains a limited understanding of how specifically the assumingly moral component of this leadership style affects employee behavior. Taking an identity perspective, we integrate the ethical leadership literature with research on the dynamics of the moral self-concept to posit that ethical leadership will foster a sense of moral identity among employees, which then inspires followers to adopt more ethical actions, such as increased organization citizenship behavior (OCB). We further argue that these identity effects should be more pronounced when leaders are perceived to be group prototypical, as their actions then speak louder to followers' sense of identity. Two studies—a scenario experiment with 138 participants and a field study with 225 employees—provided support for our hypothesized moderated mediation model. Perceived ethical leadership positively affected OCB via followers' moral identity but only under conditions of high perceived leader group prototypicality. We discuss how the identity pathway of ethical leadership can facilitate novel theorizing about moral transference. Our findings also suggest that, when hiring external ethical leaders or training internal managers, practitioners are well advised to consider that these individuals may only be effective in morally transforming followers when they are perceived as prototypical for the group.

NOTE:

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CHAPTER 5

EMERGENT LEADERSHIP IN SELF-DIRECTED TEAMS: COMMUNICATION SHIFTS OVER TIME [4]

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[4] This paper has been published as Gerpott, F. H., Lehmann-Willenbrock, N., Voelpel, S. C. & van Vugt, M. (2016). Emergent Leadership in Self-Directed Teams: Communication Shifts over Time. *Academy of Management Proceedings.* doi:10.5465/AMBPP.2016.15203abstract. The current version of the paper is under review at *The Academy of Management Journal* (revise & resubmit).

ABSTRACT

Emergent leadership is a dynamic process evolving through interactions that are embedded in the social context. We add to leadership theorizing by explicating how emergent leadership is associated differently with task-, relations- and change-oriented communication as the social context changes over a team's lifecycle. We argue that task- and change oriented verbal behaviors predict emergent leadership in earlier phases but lose relevance over time because members are in less need for advice as they become more knowledgeable. Relations-oriented communication should gain importance for emergent leadership because of its functionality for establishing a supportive climate under stressful conditions. We test our hypotheses at the micro-level of communicative acts in 42 self-managed teams over the course of a project. At week 1, 5, and 7, we gathered round-robin leadership ratings, videotaped team meetings and applied a fine-grained quantitative interaction approach, resulting in data sets of $N_{t1}=39{,}966$, $N_{t2}=56{,}504$, and $N_{t3}=43{,}622$ verbal behaviors. Multilevel modelling indicated that task-oriented communication was a stable positive predictor of emergent leadership. Relations-oriented communication gained importance, such that it predicted emergent leadership at the end. Change-oriented lost relevance, such that it was only a predictor of emergent leadership at the beginning of project work.

NOTE:

CHAPTER 6

GENERAL DISCUSSION

The studies presented in this dissertation applied a wide range of methods to empirically investigate how learning and leadership processes unfold as dynamic, inherently social phenomena in organizational groups. Chapter 1 embedded the research presented in this dissertation within the context of current organizational challenges, such as an increasingly age-diverse workforce, a growing awareness of ethical conducts, and the trend towards organizing work in self-managed groups (Ben-Menahem, von Krogh, Erden & Schneider, 2016; Frese, 2008; Leibold & Voelpel, 2006; Ng & Feldman, 2015; West, 2012). Furthermore, I presented social identity theory (Tajfel & Turner, 2004) and the social identity model of leadership (SIMOL; Hogg, 2001; van Knippenberg, 2011) as theoretical frameworks that motivated the research presented in this dissertation.

Chapters 2 and 3 shed light on the role of (dis-)similar group members in affecting what is learned in organizational training groups. Both chapters took into account group members' age diversity but differed in their time perspective on learning in training groups. Specifically, Chapter 2 examined what types of knowledge are exchanged, and when the different types of knowledge are exchanged, over the course of a longitudinal training program in an organization. Chapter 3 analyzed employees' knowledge sharing behavior as affected by the perceived group psychological safety climate in a one-day training intervention.

Chapters 4 and 5 shifted the focus of attention towards leadership as a relational, dynamic process that is shaped by the interactions between leaders and followers in organizational groups. Chapter 4 presented empirical evidence indicating that leaders perceived as ethical influence their followers' pro-organizational behavior through changing followers' moral identity, but only in conditions of high leader group prototypicality. Chapter 5 added to this perspective by analyzing the fine-grained interaction behaviors of emergent leadership in self-managed teams over the course of a project.

The present chapter briefly summarizes the findings of Chapters 2 through 5 and discusses their theoretical and practical implications. Furthermore, I point out limitations of the

research presented in this dissertation and derive ideas for future research. Particularly, by integrating the intergenerational learning perspective (Chapters 2 and 3) with the identity rationale (Chapter 4) and the focus on the behavioral micro-dynamics of group work (Chapter 5), I discuss how future research can develop theoretical and practical insights into intergenerational learning at the level of micro-dynamic knowledge exchange acts in organizational groups. I conclude by summarizing how the work presented in this dissertation contributes to the development of a deeper theoretical understanding of learning and leadership processes and helps address contemporary organizational challenges.

GENERAL DISCUSSION: FINDINGS

Before integrating the major findings across the four empirical papers to discuss their implications for research and practice, I will shortly summarize the main results presented in Chapters 2 to 5.

CHAPTER 2: A PHASE MODEL OF INTERGENERATIONAL LEARNING

The in-depth qualitative study on intergenerational knowledge exchange presented in Chapter 2 was based on 31 interviews conducted over a span of three years in a full-time training program at an automobile company involving young (16–19 years) and experienced participants (41–47 years) and their instructors. We found that both generations possessed distinct expert, practical, social, and meta-cognitive knowledge. Importantly, not all types of knowledge were exchanged equally at all points in time. Providing evidence that learning processes change over the course of a training program, the young and experienced participants exchanged different types of knowledge at different time points. We integrated these findings into a phase model of intergenerational learning comprising three phases: (1) familiarization, (2) assimilation, and (3) detachment. First, during the familiarization phase intergenerational learning processes occurred mostly in the area of expert and practical knowledge. Once intergenerational participants got to know each other better, they entered the assimilation phase during which they emphasized the

exchange of practical, social and meta-cognitive knowledge. Finally, in the detachment phase, participants began to separate from one another and mainly exchanged social knowledge. Overall, this study indicated that the types of knowledge exchanged in intergenerational groups changed across time, thus emphasizing the importance of longitudinal designs for fully capturing the temporal dynamics of intergenerational learning processes in organizations.

CHAPTER 3: AGE-DIVERSE TRAINING GROUPS: HOW KNOWLEDGE SHARING AND PSYCHOLOGICAL SAFETY PROMOTE LEARNING OUTCOMES

Chapter 3 also investigated learning in intergenerational groups, again using a field-study design, but shifted the focus towards ad hoc training groups in which the interplay of employees' diversity perceptions and team climate evaluations are important antecedents for explaining knowledge sharing. Data for this study were gathered via a survey of 211 employees participating in a collaborative one-day training at an automobile company. As hypothesized, the group's age diversity as perceived by the trainees was negatively linked to learning outcomes, and this relationship was mediated by knowledge sharing. Moreover, providing evidence for the assumption that subjective salience of diversity is pivotal for influencing outcomes, objective age diversity had no effect on participants' learning outcomes or knowledge sharing activities. Furthermore, psychological safety climate augmented the indirect negative effect of perceived age diversity on learning outcomes through knowledge sharing (moderated mediation model). When participants perceived a high psychological safety climate in the group, their knowledge sharing activities were high, regardless of perceived age diversity. However, when psychological safety climate was low, perceived age diversity was strongly negatively linked to knowledge sharing. Thus, psychological safety climate buffered the negative effects of perceived age diversity on knowledge sharing and learning in organizational trainings. Overall, this study indicated that employees' learning in intergenerational ad hoc training groups through knowledge sharing is mostly influenced by (1) whether they perceive the group as being age-

diverse, and (2) whether they perceive the group's psychological safety climate as being negatively affected.

CHAPTER 4: AN IDENTITY PERSPECTIVE ON ETHICAL LEADERSHIP TO EXPLAIN ORGANIZATIONAL CITIZENSHIP BEHAVIOR: THE INTERPLAY OF FOLLOWER MORAL IDENTITY AND LEADER GROUP PROTOTYPICALITY

Chapter 4 shifted the research focus from employees' learning outcomes as affected by their identity-related knowledge sharing activities with dissimilar group members towards employees' behavior as affected by their leader. Particularly, we analyzed how employees' perceptions of ethical leadership and leader group prototypicality influenced their pro-organizational behavior through their moral identity. To investigate this identity rationale, we conducted a scenario study with 138 participants and a field study with 225 employees. In the scenario study, participants were randomly assigned to one of four scenarios varying with regard to the content of a vignette (2x2 between-subject factorial design). In each vignette, participants were asked to imagine a leader responsible for their work group. The leader descriptions contained the manipulations. The first factor varied the degree of ethical leadership (low versus high), while the second factor varied leader group prototypicality (low versus high). Data showed that the indirect effect of the ethical leadership condition through follower moral identity on organizational citizenship behavior was significant. Furthermore, the conditional indirect effect of perceived ethical leadership on organizational citizenship behavior through follower moral identity was significant in the high leader group prototypicality condition, but not in the low leader group prototypicality condition.

The findings of the scenario study could be replicated in the field study. Employees rated their day-to-day supervisor's ethical leadership behaviors and group prototypicality. Furthermore, participants provided us with data about their organizational citizenship behavior and moral identity. Results confirmed that the indirect effect of perceived ethical leadership on

organizational citizenship behavior through follower moral identity was significant. The conditional indirect effect of perceived ethical leadership on organizational citizenship behavior was significant at high and medium values of leader group prototypicality, but not if leader group prototypicality was low.

Overall, this study provided evidence that those leaders who are perceived as representative for the group possess an advantage in terms of influencing their followers' sense of self, which in turn might result in an increase of followers' pro-organizational behavior. Thus, identity-related processes are not only important for predicting employees' behavior when interacting with each other (see Chapter 2 and 3), but also for understanding how leaders can affect followers' behavior.

CHAPTER 5: EMERGENT LEADERSHIP IN SELF-DIRECTED TEAMS: COMMUNICATION SHIFTS OVER TIME

Chapter 5 payed tribute to the fact that leader and follower roles are not always clearly defined but evolve over time. Indeed, conceptual work has argued that leader and follower identities are created through ongoing social interactions (DeRue & Ashford, 2010), and that social influence comes into existence through processes that increase followers' agreement with the leader's ideas and suggestions (Hogg, 2001). In an attempt to shed more light on the verbal behaviors contributing to leader emergence in initially leaderless groups, Chapter 5 described the results of a longitudinal interaction analysis study investigating emergent leaders' behaviors at the micro-level of communicative acts in 42 self-managed teams. 136 junior consultants (three to five members per team) were videotaped at three points in time throughout the course of an eight-week consulting project. The teams worked in a highly competitive setting, with a final presentation in front of the company's top management at the end of the project. Emergent leadership was assessed with a round-robin design that provided all team members with emergent leadership ratings at the beginning, middle, and end of a project. Multilevel modelling revealed that task-oriented communication was a stable predictor of emergent leadership,

change-oriented communication was important at the beginning, and relations-oriented statements at the end of the project. The results indicate that it is not only important to consider what individuals say but also when they say it to develop a complete understanding of emergent leadership. Overall, Chapter 5 complements Chapter 2 in emphasizing the importance of considering the role of time when explaining emergent phenomena in groups. Furthermore, this study is among the first to investigate group members' actual behavior (instead of survey proxies) at the event-level to explain how individuals are ascribed leadership in self-managed teams.

THEORETICAL CONTRIBUTIONS AND IMPLICATIONS

The findings summarized above provide several contributions for building and testing theory that takes into account both the (identity-related) group context and the role of time for explaining learning and leadership in organizations. While the specific theoretical contributions of each study are discussed in the respective Chapters 2 to 5, this chapter adopts an integrative lens to point out how a temporal account of the interplay between social identity, learning, and leadership in groups can advance our understanding of intra- and interpersonal processes occurring in organizations. In other words, while each study makes unique contributions to the learning and leadership literature, this chapter focuses on the broader implications of the empirical findings of this dissertation that are relevant to developing group process theory.

Building on prior theorizing, I structure this discussion along the differentiation between cumulative and emergent group-level phenomena (Cronin, Weingart, & Todorova, 2011; Kozlowski, 2015; Kozlowski & Klein, 2000). Particularly, I first discuss how this dissertation's findings contribute to our knowledge about the link between cumulative phenomena – collective group properties such as the group's age composition – and learning outcomes in organizational trainings. Second, I turn to this dissertation's implications for conceptualizing emergent group-level phenomena in organizational research, that is group processes created through interactions between group members and unfolding over time.

COLLECTIVE GROUP PROPERTIES AND OUTCOMES IN TRAINING GROUPS

Collective group properties refer to the group-level accumulation of individual properties, such as a group's-age composition or gender heterogeneity (Cronin et al., 2011; Kozlowski, 2015; Kozlowski & Klein, 2000). Although such phenomena are only minimally dynamic (Cronin et al., 2011), they may influence within-team dynamics such as the learning processes occurring in training groups. More specifically, and as pointed out in the introduction (Chapter 1), cumulative characteristics have important identity-related consequences for group members that can drive individuals to categorize others into similar in-group members and dissimilar out-group members. As such, group properties merit theoretical consideration (Kozlowski, 2015) for understanding learning processes in organizational groups.

Notably, although diversity attributes have been widely studied in the work team performance context (Guillaume, Dawson, Otaye-Ebede, Woods & West, 2015; van Knippenberg & Mell, 2016; van Knippenberg & Schippers, 2007; Williams & O'Reilly, 1998), there is a lack of research investigating the influence of group properties on learning in human resource development initiatives. This is astonishing because from a theoretical perspective, information elaboration – one of the core processes influencing diversity's effect on group outcomes (e.g., Hoever, van Knippenberg, van Ginkel & Barkema, 2012; van Ginkel & van Knippenberg, 2008) – might be particularly important to foster employee learning in training groups. Given the substantial financial investments in organizational trainings and the need to continuously develop employees in order to stay competitive (e.g., Miller, 2013), it is pivotal to develop a theoretical understanding of how the group composition influences learning in organizational training groups. The studies presented in Chapters 2 and 3 of this dissertation have taken a first step to reach this aim by conceptually arguing and empirically showing that knowledge exchange as a form of information elaboration constitutes a central mediating process for explaining learning outcomes in age-diverse training groups. Furthermore, the findings highlight the time spent together (Chapter 2) and psychological safety climate

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(Chapter 3) as influential boundary conditions for individual learning through knowledge sharing in team settings.

Going forward, as I point out in more detail in the future research section of this chapter, it would be interesting to combine traditional theories linking group composition and outcomes (i.e., social identity theory, the information elaboration perspective, and the integration of both perspectives in the categorization-elaboration model by van Knippenberg, De Dreu & Homan, 2004) with a temporal, behavior-oriented approach that takes into account changes in group members' perceptions across time (see next section). Based on the findings presented in this dissertation, I am confident that such a conceptual integration could help to understand the within-team process dynamics resulting from relatively static group properties that how and when knowledge is developed in diverse training groups.

EMERGENT PHENOMENA AND GROUP PROCESSES

Emergent phenomena relate to group processes that unfold over time, originate within the individual but manifest collectively and are created through interactions between group members (Kozlowski, Chao, Grand, Braun & Kuljanin, 2013). As such, they "get to the core of team process dynamics directly" (Kozlowski, 2015: 274). Although it is widely acknowledged that (emergent) group processes are inherently dynamic (e.g., Arrow, Poole, Henry, Wheelan, & Moreland, 2004; McGrath, Arrow, & Berdahl, 2000; Ilgen, Hollenbeck, Johnson, & Jundt, 2005; Salas, Stagl & Burke, 2004), they are often treated as static in research (Cronin et al., 2011; Kozlowski, 2015; Tannenbaum, Mathieu, Salas & Cohen, 2012). Whereas cross-sectional studies can provide some hints of the relationships between group inputs, processes, and outcomes in groups, this picture might change once groups move forward towards the next project phase. Indeed, the longitudinal studies presented in Chapter 2 and 5 indicate that it is essential to account for different group phases in order to understand the temporal dynamics of learning and leadership in organizational groups. These studies applied two different methodologies – a qualitative (Chapter 2) and a quantitative approach (Chapter 5) – to develop theory that explicitly

incorporates the role of time in organizational group contexts. While both chapters show that theory development incorporating the role of time is a useful endeavor to deepen our understanding of emergent group phenomena, scholars are well advised to carefully select their research method to fit the question at hand (see also Kozlowski, 2015).

On the one hand, the in-depth qualitative analysis presented in Chapter 2 resulted in a new model of intergenerational learning across different phases of a longitudinal training program. This methodology was useful for conceptualizing a model in an area where previous work has been mostly atheoretical and lacked a longitudinal perspective (Kessler & Staudinger, 2007; Pinto, 2011; Ropes, 2013). On the other hand, the quantitative behavioral interaction analysis approach presented in Chapter 5 helped to test theoretical assumptions derived from dynamic team leadership models and leader substitute theory. Thus, instead of developing a new model, this study aimed to integrate different research streams to predict the verbal behavior of emergent leaders in initially leaderless groups. This approach is also referred to as theory elaboration, that is the process of conceptualizing and conducting empirical research using preexisting conceptual ideas as a starting point for developing new theoretical insights by structuring theoretical constructs to explain empirical observations (Fisher & Aguinis, 2017).

On a related note, although Chapter 4 did not explicitly investigate the role of changes over time in a group context, it described the results of an experiment which assumed that followers' moral identities represent emerging self-constructs. Particularly, the presented experiment captured changes in followers' moral identities by manipulating their perceptions of ethical leadership and leader group prototypicality. The theoretical rationale for this study reflects a recent trend in identity research to depart from conceptualizing identity as a relatively stable trait-like concept describing enduring qualities and instead emphasize its dynamic nature as a conglomerate of continuously changing self-schemata (Lord, Gatti, & Chui, 2016). Thus, coming back to the topic of emergent group phenomena, an important implication of this thesis is that future theory needs to be more specific about the contextual conditions for emergent social identity processes in organizational groups.

MANAGERIAL CONTRIBUTIONS AND IMPLICATIONS

The empirical work underlying this dissertation was developed in close collaboration with the participating organizations, and the results were used to directly improve the training interventions described in Chapters 2 and 3. Particularly, after presenting the results to the top management of the automobile company, it was decided to (1) train the trainers and (2) establish a change management initiative with the aim of developing a company culture characterized by a high appreciation of age diversity.

First, the trainers participated in a seminar helping them to understand the importance of a psychological safe climate in the training group, and the temporal embeddedness of learning processes between employees from different generations. They developed a definition of their trainer role as a facilitator of interaction processes between trainees. Furthermore, the trainers learned about techniques that can help groups establish an open discussion culture, and they were advised to explicitly map down the knowledge available in the group (see recommendations for practice in Chapter 2).

Second, as advised in the managerial implications section of Chapter 3, the "train-the-trainer" initiative was accomplished by a company-wide change management program including corporate communication activities and supervisor trainings with the purpose of establishing a positive diversity climate. A hospitable climate for diversity might help create a general psychological safe work environment on an organizational level, which in turn can improve employees' day-to-day learning and performance outcomes (Singh, Winkel, & Selvarajan, 2013).

More broadly speaking, the insights presented in this dissertation can be used to adapt human resource management practices for (1) training employees in diverse learning groups and (2) selecting and developing leaders. First, diverse training groups are a reality of organizational life that is mostly not systematically considered. Instead of trying to design training groups as homogenous as possible or downplay differences between participants, trainers should learn that

diversity can be a potential source of disruption, but can also improve group learning if managed correctly. Composing (age-)diverse training groups does not automatically result in learning from one another but calls for instructors' or supervisors' active engagement (Tempest, 2003). In short-term training programs, the trainer's focus should be on encouraging employees to share their knowledge and establishing a safe discussion climate. Notably, it is not necessary to explicitly discuss the differences between participants if the training only lasts for a short period of time; it can even be detrimental if the salience of diversity attributes is raised without being able to use them for improving the groups' information elaboration processes (van Knippenberg, De Dreu & Homan, 2004). In contrast, in long-term training initiatives it becomes more important for the group to develop shared mental models to be able to effectively learn from and with each other. Thus, reflecting on the specific knowledge and background of the training group members can help to identify experts on particular topics and deepen the group's information elaboration processes. Additionally, the long-term character of the program raises the group's importance for participants' identity construction processes. Thus, a reflection on the differences and similarities between trainees constitutes an important first step for reducing the likelihood of an identity threat. To conclude, although it is still pivotal to support knowledge sharing and high levels of psychological safety climate in long-term training initiatives, these processes might change over time and call for different reactions of the trainer (see Chapter 2).

Second, Chapters 4 and 5 have a number of practical implications for selecting and developing leaders. Our findings indicate that both formal and informal leaders must be accepted by their followers as capable of representing and influencing the group in order to exploit their leadership potential. On the one hand, our findings may encourage human resource management practitioners to reconsider their criteria for selecting leaders. The most common approaches to assess the leadership potential of candidates is to review their past experience, to ask for references, to conduct interviews and to observe their behavior in an assessment center. The low

reliability of these methods in predicting future success as a leader can be explained by the fact that leadership is a flexible, social, and task-dependent process emerging through leader-follower interactions (Lord et al, 2016). To illustrate, the external recruitment of leaders may not turn out to be successful if followers do not perceive those leaders as being prototypical for their group or if the leader communicates in a way not matching the phase-dependent group needs. An innovative approach would be to allow the group to select their future leader through a short collaboration period or an assessment center evaluated by the group. This could ensure that the group gets along with the leader's way of interacting with them and that they select a leader with high group prototypicality. However, this procedure might not work well for newly formed teams which do not know yet what the group stands for. In such a setting, it might be important to allow the group to interact intensively with each other and with their leader to develop a shared understanding of group states. Thus, instead of starting to work immediately on the task in the day-to-day environment, it could be useful to incorporate group building exercises that allow group members to learn from each other and form their identity in relation to the group.

On the other hand, beyond the recruitment of new supervisors, (potential) leaders could also be trained to gain the acceptance of the group by convincing followers to see them as representative for the group (see Chapter 4). Furthermore, they could be taught about effective communication strategies that help strengthen their leader position (see Chapter 5). In other words, our findings can inform human resource development activities to include knowledge about group prototypes, group phases, and interaction dynamics. Such knowledge could be advantageous for employees who strive for leadership positions.

To summarize, the findings presented in this dissertation were used to directly improve training programs at the involved organization. Furthermore, the results have a number of broader implications for fostering knowledge exchange in age-diverse training groups as well as selecting and developing leaders in organizations.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The empirical studies presented in this dissertation also possess some limitations that may help delineate areas for future research. While the study-specific limitations are discussed in detail in the respective Chapters 2 to 5, I focus in this chapter on one overall area for improvement concerning all four studies, namely the integration of research on cumulative and emergent group phenomena. In other words, this dissertation does not combine research on cumulative group properties (such as age diversity) with research on emergent diversity using quantitative behavioral analysis methods. That means diversity in group interaction processes and group emergent states as a consequence of group diversity characteristics were not considered. Although beyond the scope of this dissertation, such an approach has a high potential for bridging and integrating the diversity and group process literature (van Knippenberg & Mell, 2016).

While diversity attributes are present at the first meeting of any group (i.e., the individual employees are always characterized by these attributes), emergent diversity refers to diversity in group interaction processes and in group emergent states (e.g., mental models) that come into existence when the group starts engaging in conversations. As pointed out before, cumulative group properties such as a group's intergenerational composition can impact group members' interaction behaviors and the degree to which group members converge or diverge in their perceptions of group states through inhibiting social identity processes. To illustrate, while a homogenous group often quickly agree on the predominant mental models used in the group, heterogeneous groups may exhibit a less uniform perception pattern, resulting in a higher risk of social tensions and reduced well-being (Arendt, Barysch, Funk & Kugler, 2016; Kunz et al., 2016).

Going forward, I argue that the lacking integration of research in compositional diversity with research on emergent diversity could be overcome by integrating insights from the diversity literature (van Knippenberg et al., 2004) with a micro-dynamic perspective on the interaction

processes occurring in diverse teams (Kozlowski, 2015; van Dijk, Meyer, van Engen, & Loyd, 2017, van Knippenberg & Mell, 2016). Particularly, the research program I suggest in the following focuses on the emergent behavioral processes contributing to successful learning in intergenerational organizational groups.

As mentioned before, diversity scholars have mostly relied on two theoretical perspectives – the social categorization perspective and the information elaboration approach – to develop propositions about the antecedents of performance in diverse groups. Van Knippenberg, De Dreu, and Homan (2004) integrated these two perspectives into an overarching model, the so-called Categorization-Elaboration-Model (CEM). The CEM incorporates the view that social categorization and information elaboration processes always occur simultaneously. Yet, depending on the employee's affective evaluation of the social categorization – i.e., to what extent is the fact that the other is different from myself threatening my identity? – interpersonal differences might either stimulate or hinder the depth of knowledge exchange processes. This implies that diversity can have both positive and negative effects, and the key to understanding the outcomes of intergenerational learning relationships lies in understanding the interplay of the described two core processes (see Figure 6.1). Whereas Chapter 2 already provided qualitative evidence that knowledge exchange processes change over time and Chapter 3 identified the group's psychological safety climate as an important boundary condition, the field still lacks insights on how knowledge sharing processes emerge over time on a behavioral level in diverse groups. Yet, this understanding would be important to effectively manage and influence intergenerational learning relationships. Furthermore, the focus on this "black box" of knowledge exchange behavior in intergenerational learning relationships closely fits with repeated calls for studies that shed light on the micro-dynamics affecting processes and outcomes in (generational) diverse teams (e.g., van Dijk et al., 2017; van Knippenberg & Mell, 2016).
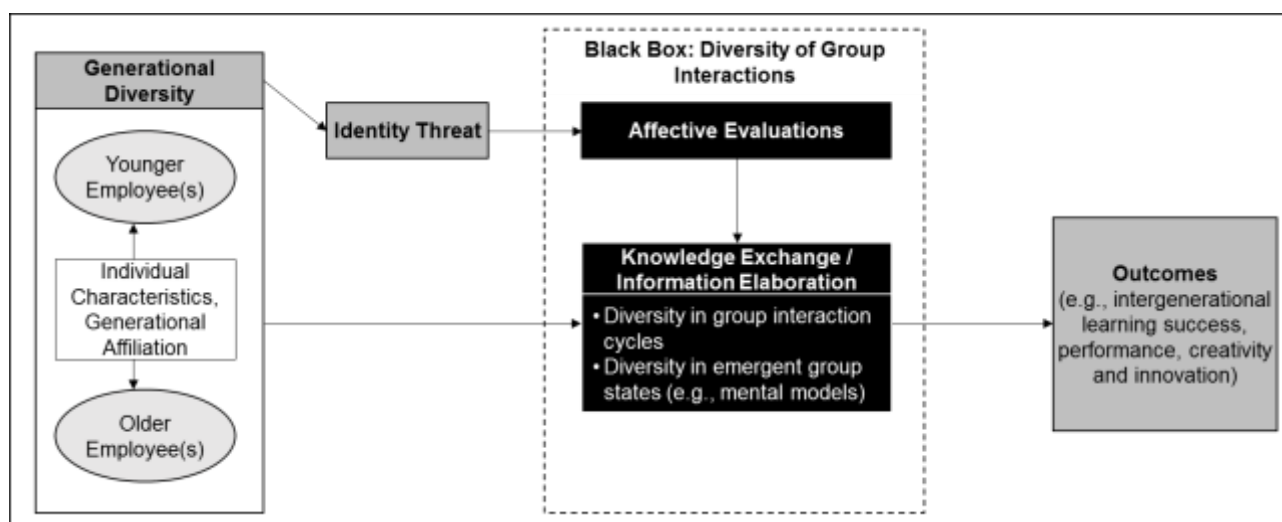
Figure 6.1. Future research program: Investigating diversity in group interactions as a black box (expanded CEM-Model).

To summarize, in an attempt to address the limitations of this dissertation, I suggest to extend the CEM for explaining intergenerational learning by focusing on a dynamic perspective of knowledge exchange processes as emergent behavioral phenomena unfolding through social interactions. Thus, going beyond the CEM's focus on linking team diversity with outcomes, I assume that the model also provides a good starting point for linking groups' age diversity with groups' diversity in the nature and development of intergenerational interactions. An empirical research program expanding the CEM in the suggested way would also be an important step to theory elaboration, i.e., the empirical refinement of an existing theory (Fisher & Aguinis, 2017).

CONCLUDING REMARKS

Against the background of demographic shifts, this dissertation analyzed learning (Chapters 2 and 3) and leadership processes (Chapters 4 and 5) related to current organizational challenges such as maintaining and developing employees' knowledge, ensuring employees' pro-organizational behavior, and conducting work in self-managed teams.

The four empirical field studies presented here address several gaps in the group and leadership literature, rely on multiple data sources (employee ratings/narratives, objective team composition, supervisor/trainer/mentor ratings/narrative, behavioral interactions) and multiple

forms of data collection (interviews, survey measures, experimental and field study designs, behavioral interaction coding), and showcase a range of analytical approaches (qualitative analysis/Gioia method, moderated meditation index, interaction analysis, multilevel modelling). The findings have important implications for conceptualizing and designing learning in organizational trainings in dependence from the group context to ensure that knowledge is actively shared and integrated. Moreover, the results emphasize the value of theory development and empirical work in understanding leadership as a relational process shaped through the temporal interaction dynamics between leaders and followers. Lastly, the results of this dissertation can be translated into a number of directly applicable practical recommendations that address contemporary organizational challenges. In sum, a temporal group process perspective fits well with the dynamics of (organizational) life: Everything changes and nothing stands still.[7]

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[7] πάντα χωρεῖ καὶ οὐδὲν μένει (own translation of a quote ascribed to the Greek philosopher Heraclitus of Ephesus).

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APPENDIX

CHAPTER 3 – MEASURES

Measure of Perceived Age Diversity (Harrison, Price & Bell, 1998)

1. How similar were the participants of the training with respect to age?

Measure of Knowledge Sharing (Faraj & Lee, 2000)

1. I shared my expert knowledge with the other participants.

2. I shared my experiences about processes and courses of action with the other participants.

Measure of Learning Outcomes (Magni, Paolino, Cappetta & Proserpio, 2013)

1. I learned new expert knowledge about the principles of continuous improvement through the training.

2. I gained new knowledge about processes and courses of action according to the principles of continuous improvement through the training.

3. I think that the information and abilities learned in the training will improve my work performance.

Measure of Psychological Safety Climate (van Ginkel & van Knippenberg, 2000)

1. I had the impression the other group members wanted to hear what I had to say.

2. I had the impression the other group members would appreciate discussion.

3. I expected the other members to react positively when I disagreed with them.

4. This group appreciated it when I mentioned new information.

CHAPTER 4 – SCENARIOS

The leader descriptions were based on the scale items of leader group prototypicality (Giessner et al., 2013) and ethical leadership (Brown et al., 2005; similarly employed by van Gils et al., 2015).

High leader group prototypicality

Imagine that you are working for a supervisor named Alex. Alex embodies the norms of your team and is generally a good example of the kind of people who are members of your team. Alex has much in common with the members of your team. That means, Alex generally represents what is characteristic about your team.

Low leader group prototypicality

Imagine that you are working for a supervisor named Alex. Alex does not embody the norms of your team and us generally not a good example of the kind of people who are members of your team. Alex has nothing in common with the members of your team. That means, Alex does not at all represent what is characteristic about your team.

High ethical leadership

Alex is a supervisor who very strongly believes in doing the "right" thing in terms of ethics, without making compromises. Alex likes to be seen as a person who always makes ethical decisions. Alex consistently acts according to ethical values when making decisions. This is the reason that Alex does not tolerate any violations of ethical standards. When faced with dilemmas at work, Alex asks, "What is the right thing to do?"

Low ethical leadership

Alex is a supervisor who doesn't believe in doing the "right" thing in terms of ethics. That is why Alex often makes compromises regarding ethics. Many people will describe Alex as

a person who never makes ethical decisions. Alex hardly ever acts consistently according to ethical values when making decisions. This is the reason that Alex tolerates violations of ethical standards. When faced with dilemmas at work, Alex says "Get it done by any means."

CHAPTER 4 – MEASURES

Measure of Moral Identity (scenario study and field study, Stets & Carter, 2012)

Instruction: Please think about what kind of person you are for each pair of characteristics and place yourself along a continuum between the two contradictory characteristics. A value of 1 reflects agreement with one bipolar characteristic, 5 reflects agreement with the other characteristic and 3 places you halfway between the two.

honest/dishonest

unfair/fair

not hardworking/hardworking

untruthful/truthful

principled/unprincipled

caring/uncaring

selfish/selfless

helpful/not helpful

compassionate/hardhearted

unkind/kind

stingy/generous

friendly/unfriendly

Measure of Organizational Citizenship Behavior (scenario study and field study, Williams & Anderson, 1991)

Organizational Citizenship Behavior – Individual:

1. I help others who have been absent.

2. I help others who have heavy work loads.

3. I assist my supervisor with his/her work (when not asked).

4. I take time to listen to co-workers' problems and worries.

5. I go out of way to help new employees.

6. I take a personal interest in other employees.

7. I pass along information to co-workers.

Organizational Citizenship Behavior – Organizational:

8. My attendance at work is above the norm.

9. I give advance notice when unable to come to work.

10. I take undeserved work breaks.

11. I spent a great deal of time with personal phone conversations at work.

12. I complain about insignificant things at work.

13. I conserve and protect organizational property.

14. I adhere to informal rules devised to maintain order.

Measure of Ethical Leadership (field study, Brown, Treviño & Harrison, 2005)

1. Listens to what employees have to say.

2. Disciplines employees who violate ethical standards.

3. Conducts his/her personal life in an ethical manner.

4. Has the best interests of employees in mind.

5. Makes fair and balanced decisions.

6. Can be trusted.

7. Discusses business ethics or values with employees.

8. Sets an example of how to do things the right way in terms of ethics.

9. Defines success not just by results but also the way that they are obtained.

10. When making decisions, asks "what is the right thing to do?

Measure of Leader Group Prototypicality (Giessner, van Knippenberg, van Ginkel & Sleebos, 2013)

1. My supervisor is an embodiment of the norms of our team.

2. My supervisor is a good example of the kind of people who are members of our team.

3. My supervisor has much in common with the members of our team.

4. My supervisor represents what is characteristic about our team.

5. My supervisor is very similar to the members of our team.

6. My supervisor resembles the members of our team.