Chapter 5

General discussion and conclusion

In this dissertation I studied the way organizational members handle errors on an intergroup level from the perspective of social identity theory (SIT). I argued that as a cause of social identity threat, errors trigger employees to resist the negative consequences of the threat. I was particularly interested in how this shaped intergroup behavior in the context of error handling. The preceding chapters have demonstrated various aspects of the intergroup perspective on error handling that I encountered while conducting qualitative research among employees in four organizational settings: midwives’ handover (Chapter 1), a project team and associated stakeholders (Chapter 2), a hospital department (Chapter 3), and three branches of a casino (Chapter 4). At the beginning of this dissertation I argued that exploring several settings and bringing the findings together would present a more convincing picture of what the intergroup perspective to organizational error handling entails. In this chapter I reflect on how well the dissertation lives up to its promise to provide this convincing picture.

The findings generally demonstrate that analyzing error handling at the intergroup level is important because it gives insight into the ways employees respond to errors in certain organizational contexts. Important aspects of context were for instance the presence of differing perspectives on childbirth in health care professionals who have different organizational roles (Chapter 1), preoccupation with risk prevention in a political environment (Chapter 2), strong divisions between health care professionals (Chapter 3), and conflicting institutional logics (Chapter 4). These aspects
helped increase awareness of group membership and triggered the urge to protect the self and the group against identity threat in the face of errors. Consequences of identity threat for intergroup behavior include disagreement on decisions (Chapter 1), withholding information (Chapter 2), efforts to maintain hierarchy and status differences (Chapter 3), and sensitivity to criticism which limits learning from errors (Chapter 4). Consequences are relevant because the performance of organizations depends, among other factors, on how well different groups can cooperate and deal with errors constructively. The responses to identity threat described in this dissertation all constitute possible hazards for constructive error handling.

**Theoretical contributions**

In this dissertation I intended to make two theoretical contributions. The first was to study error handling in organizations in intergroup situations, which departs from existing error handling research that focuses on the individual, group, and organizational levels. Second, I aimed to contribute to SIT with a qualitative study of identity threat processes, focusing on language use, instead of using quantitative research methods which is more common in SIT research. To evaluate the actual contribution this dissertation makes to the literature, in this section I discuss how my research findings add to the scientific debates on (1) error handling in organizations and (2) SIT.

**Contribution to research on error handling in organizations**

This dissertation has demonstrated the importance of studying the intergroup level of organizational error handling. The three empirical
chapters describe social identity threat in relation to errors, triggered by the intergroup context in which cooperation takes place. Each chapter yields implications for the behavior of organizational members. Besides that, the findings can be aggregated to illuminate overarching factors related to ingroup and intergroup behavior that may have an important impact on error handling. The factors shed light on the conditions under which error-related identity threat processes are likely to occur. Three factors that emerged from this dissertation are theoretically discussed here in more detail: the level of interdependence between groups, the role of location, and the degree of hierarchy between professional groups.

**Interdependence between groups** A simple model of the level of interdependence between groups differentiates between pooled, sequential, and reciprocal interdependence (Thompson, 1967). Pooled interdependence is the loosest form of interdependence between groups whereby each department or business unit has different functions (Saavedra, Earley, & Vandyne, 1993). As groups with different functions, they perform their tasks independently from one another and there is no task-related necessity of interaction between the groups. The performance of the organization as a whole, however, does depend on the performance of the individual groups. Thus, the total revenue of the casino does not depend on the level of interaction between dealers and catering employees, but on the sum of their respective revenue. In this dissertation, the pooled type of interdependence is scarcely present because the intergroup level of analysis is central, and this level implies contact between groups.

Sequential interdependence means that the output of one (representative of a) group is important for the next step in a chain process that is carried out by (a representative of) another group. Thus, in terms of
interdependence between groups, one group must act before another can. The groups of employees have different roles and tasks, which they execute in a prescribed order. The work flow moves in only one direction (Saavedra et al., 1993). In this dissertation, handover between midwives (Chapter 1) is an example of sequential interdependence, as handover transfers the responsibility for care from the community midwife to the clinical midwife. Their roles and tasks are different in that community midwives supervise physiological births whereas clinical midwives, as the term implies, guide childbirth in a hospital setting, using the medical interventions at hand.

In reciprocal interdependence the work sequence goes in more than one direction (Thompson, 1967). Groups have different, often specialist roles with different expertise, and perform different parts of the task in flexible order (Saavedra et al., 1993). A setting that entails reciprocal interdependence is the infrastructure project of Chapter 2 that has to integrate and use expertise from various professionals such as engineers and contractors. Another setting with reciprocal interdependence is the hospital department in Chapter 3, where nurses, residents and physicians carry out different aspects of the overall task of patient care, requiring frequent interaction and adaptation. Finally, in the casino branches of Chapter 4, observers and table managers need to interact when camera footage inspection is needed to resolve a conflict with a guest regarding bets and payments. In this case, observers require input from table managers on the location and time an incident took place, and the exact question that must be answered (e.g., on what number did a guest place his bet?). After inspecting the camera footage, the observer has to transfer the required information back to the table manager. Thus, the interaction takes place in a prescribed order but the work sequence does not occur in only one direction. Therefore this can be labeled as reciprocal interdependence.
The more complex forms of sequential and reciprocal interdependence are common in organizations. Moreover, in these forms of interdependence knowledge has to be transferred frequently between groups, which entails a relatively high chance of errors. Therefore, three elements of knowledge transfer that can be influenced by social identity factors are relevant to inspect, namely the persuasiveness, effectiveness and acceptability of information. First, the extent to which messages are persuasive partly depends on social identity factors (Wood, 2000). Persuasiveness is connected to cognitive processing of information. Specifically, messages from ingroup members are cognitively processed more thoroughly, which increases the persuasiveness of ingroup messages as opposed to outgroup sources (Mackie, Worth, & Asuncion, 1990). This can for instance explain why the project team members in Chapter 2 did not take the input of the new project principal seriously: they were simply not paying attention to what he was saying and therefore did not find his arguments for making changes in the project organization convincing. Second, people perceive communication as more effective when they identify with the same group as their communication partner, as opposed to when they do not (Grice et al., 2006). Chapter 1 showed the example that community midwives and clinical midwives with their own identity perspectives had different ideas of what type of information was important during handover. Such differences can negatively influence the effectiveness of handover because the type of transferred information may not match the preferred type of information. Third, the acceptability of information can be studied by looking at the acceptance of criticism. Research on the response to criticism (see Chapter 4) shows that group membership has an influence on how well criticism is accepted: no matter how well-substantiated the criticism is, if it comes from an outgroup member it is less likely to be incorporated by the
receiving party, because outgroup members are trusted less than ingroup members (Esposo et al., 2013).

In conclusion, when groups depend on one another for the execution of tasks, this augments the difficulties that arise in knowledge transfer, because the persuasiveness, effectiveness, and acceptability of information depends highly on group identity. Increased interdependence and the accompanying problems in knowledge transfer can consequently impact negatively on the occurrence and handling of errors. For instance, if important information is disregarded then this may result in errors. Also, in the aftermath of error occurrence, if factors that contributed to the error are evaluated and someone interprets this as criticism, it may hinder learning from the error because the information will most likely not be incorporated in future behavior. Thus, by emphasizing situations in which groups depend on each other and explaining the factors that complicate error handling in these situations, the intergroup level of research advocated in this dissertation holds important implications for error handling in organizations.

**Location** The second factor related to intergroup behavior that can have an important impact on error handling is location. In general, location can be a source of identity in the sense that the “material, geographic world shapes the ways in which people socially construct their identities” (Larson & Pearson, 2012, p. 241). Researchers studying the link between people’s direct work environment and their identity found that the place one works is an important component of social identity and thus influences identity construction in organizational contexts (Rooney et al., 2010). One’s social identity can come under threat when one’s environment is physically changed, for instance in the case of a shift to shared flexible workspaces (Elsbach, 2003).
Location can also signal differences between groups within organizations. Work spaces can be an affirmation of (group) status, an example of which is the fact that managers often have more privacy in and barriers around their work space than people with lower status and power (Elsbach & Pratt, 2007). Physical aspects of the work space also mark territories within organizations that include ingroup members but exclude outgroup members (G. Brown, Lawrence, & Robinson, 2005). This exclusion can impede cooperation over the boundaries of these territories because outgroup members can feel “alienated and unwelcome in the ingroup’s space” (Elsbach & Pratt, 2007, p. 211). Tagliaventi and Mattarelli (2006) concluded that working side-by-side is crucial for optimal knowledge transfer across professional boundaries because operational proximity stimulates the use of non-specialized language which increases the quality of transfer of knowledge.

The literature summarized above indicates that location plays an important role in intergroup cooperation. Whereas in Chapter 2 and Chapter 3 this aspect does not come to the fore explicitly, Chapters 1 and 4 show location to be an influential factor in the interaction between (professional) groups with implications for error handling. In Chapter 1, the role of location comes to the fore during handover, which entails a shift from extramural to intramural care. On the one hand, community midwives, who usually provide extramural care in home care settings, enter the hospital for handover as outsiders, whereas the obstetrics department in the hospital is the “home” of the clinical midwife. The feeling of being an outsider at the location may make community midwives feel inferior and therefore threatened in their identity of health care professional. Furthermore, the hospital is where the medical paradigm dominates. Therefore handover clearly takes place on the “territory” of clinical midwives. On the other hand,
clinical midwives have to defend their territory in their interaction with community midwives who bring their “alien” physiological perspective to the hospital. Community midwives sometimes even express criticism of the medical paradigm that is central to clinical midwives’ work, for instance by questioning the necessity of medical interventions. Thus, for both groups the encounter in the hospital can trigger identity threat and responses to this threat, which has a profound impact on the way they cooperate during handover.

A different yet equally crucial role of location emerges in Chapter 4. In a casino, observers and table managers work in different physical spaces. Observers work in a room with a large number of video screens showing images of the casino from many viewpoints. Table managers do not have direct access to this room, whereas observers walk freely across the casino floor. Moreover, the room is situated higher in the building in a secluded office area. The physical and psychological separation from the casino floor is quite profound. Connecting this to the literature on the impact of location on identity and intergroup cooperation, it can be said that the way in which observers and table managers are separated from each other may impede their cooperation severely, particularly in situations where observers give feedback about errors.

**Hierarchy between professional groups** As emphasized in Chapter 1 and 3, professional groups are an important source of identity in organizational contexts. Professional identity can be described as the “relatively stable and enduring constellation of attributes, beliefs, values, motives, and experiences in terms of which people define themselves in a professional role” (Ibarra, 1999, pp. 764-765). The concept of professional identity as a form of social identity is used frequently in health care research.
(Burford, 2012; Hotho, 2008), where issues of professional hierarchy are often salient. Research in this area has shown that physicians shaped the residents’ professional identity in a way that confirmed and maintained their own traditional hierarchical dominance and power (Apker & Eggly, 2004); that general practitioners (GPs) constructed a moral hierarchy between the medical profession and managers in response to the great amount of political power managers had over the changes in the profession of GPs (Hotho, 2008); and that strong identification among low-status professional groups such as health care assistants inhibited interprofessional cooperation (Lloyd, Schneider, Scales, Bailey, & Jones, 2011). Burford (2012) applied SIT to several areas of medical education and concluded that professional identity influences teamwork and interprofessional learning, as well as intergroup bias in assessments.

Other areas than health care also recognize the impact of professional identity on the way professionals act. For instance, interesting research is being done on stigmatized professions such as exterminators and morticians and the way professionals deal with this stigma (Ashforth et al., 2007; Slay & Smith, 2011). Relatively absent in this research outside of health care, however, is the way professionals relate to other (professional) groups and what the role of professional identity is in this intergroup cooperation. Professional identity as a source of social identity and the consequences of professional identity for intergroup behavior in general and intergroup error handling in particular is an understudied subject. Professional hierarchy is important because while professions are generally considered to be prestigious, knowledgeable and autonomous (Slay & Smith, 2011), hierarchy between professions can threaten this positive aspect of being a professional. When hierarchy becomes salient during professionals contacts, this can have important consequences for the quality of intergroup
cooperation in general and error handling in particular.

The research in this dissertation adds significant knowledge to this domain, specifically with the studies presented in Chapters 1 and 3. In the latter chapter the focus was explicitly on professional identity. It showed that responses to identity threat in the context of incidents may keep hierarchical divisions between health care professionals in place and thus hinder intergroup cooperation. Chapter 1 hinted at the presence of hierarchy, within the professional group of midwives. Although community midwives and clinical midwives were both in the same professional group, there was a professional hierarchy with community midwives at jeopardy because of the increasing medicalization of childbirth. During handover, the dominance of the clinical paradigm also signaled the status hierarchy, causing identity threat for community midwives, which can negatively influence intergroup error handling. On the other hand, Chapter 4 showed that a lack of (professional) hierarchy can also cause problems when organizational members lack legitimacy to comment on others’ behavior.

What this dissertation adds in terms of new insights for error handling research is the relevance of the presence or absence of professional hierarchy in the way groups cooperate with each other in the context of error handling. These results show that not only organizational or team or department identity is relevant, but also identification with an extra-organizational category such as a profession (Lammers & Garcia, 2009). When professional hierarchy becomes salient in intergroup error handling, it can inhibit error handling through identity threat and the responses to identity threat. The intergroup perspective on organizational error handling illuminates the role of professional identity and explains how hierarchy between professionals can cause identity threat and the negative consequences associated with it.
Contribution to social identity theory

The second contribution I intended to make was to add a contextualized, qualitative study with a strong focus on language use to SIT research, which mostly relies on quantitative (experimental) research designs. To position this contribution specifically, it is useful to introduce a model that distinguishes between three types of identity research in organizations: functional, interpretive and critical research (Alvesson, Ashcraft, & Thomas, 2008). Functional research is interested in cause-and-effect relations, managerial or organizational outcomes, and aims at improving organizational effectiveness. Interpretive research is interested in the ways people communicate meaning and create narratives within a specific organizational context. Lastly, critical research has an emancipatory basis and focuses on power relations. This type uses the concept of identity to understand intergroup relations in terms of control and resistance. Though power relations definitely play a role in the studies of this dissertation (see the previous subsection on hierarchy between professional groups), the approach chosen in the critical type of research diverges so substantially from the research in this dissertation that I will disregard it in this discussion.

My dissertation combines functional and interpretive research in the field of identity research and therefore answers the call of Alvesson et al. (2008) to combine research types so “organizational studies of identity might develop from streams of largely disconnected work to a more engaged conversation” (Alvesson et al., 2008, p. 9). In the following paragraphs I elaborate on this contribution. First I briefly explain the functional type of research that is most prevalent in SIT studies, and summarize the criticism of it. Second, I characterize the interpretive research approach to identity in organizations. Third, combining insights from these two types of research I explain how this dissertation makes a contribution to SIT on the points that
have been criticized.

Most SIT research takes place in the domain of functional research. In its mission to uncover causal relationships that point to relevant organizational outcomes, SIT research often uses quantitative experimental research designs. This type of research has proven to be very suitable for producing valuable knowledge on the complex ways in which social identity affects positive and negative aspects of organizational behavior in terms of organizational members’ motivation, collective performance (Ellemers et al., 2004; Van Dick, 2001), and deviant behavior (Hogg & Terry, 2000). However, it has also received criticism. Haslam and Ellemers (2006) comment that SIT research sometimes eliminates complexity and thus offers a too simplistic account of identification, and that identification is sometimes mistakenly treated as an individual difference variable, which diverts attention away from the fluid changeable character of identification and from the psychological and contextual processes that continuously shape social identification. Alvesson et al. (2008) similarly question functional research in terms of its static view of relatively stable identities; its—in their words—arbitrary division between personal and social identity; and the fact that broader contextual influences on identification such as historical, cultural, or institutional factors are not taken into account.

Alvesson et al. (2008) argue that unlike the functional type of research, the interpretive research approach to identity in organizations views identification “not only in cognitive terms, but also as a symbolic, rhetorical and/or discursive process” (Alvesson et al., 2008, p. 14). This type of research often has an explicit focus on the way identity is socially constructed through language (Rhodes & Brown, 2005). For instance, a narrative approach to identity purports that people tell stories to reconcile the different aspects of their identity (Somers, 1994). This narrative approach is
also applied to organizations, where collective identities are considered as
discursive constructs that are the result of the different narratives told by
organizational members (A. D. Brown, 2006). In a different form of
interpretive research, ordinary work meetings are analyzed to find out that
identity is constructed on a micro-level in everyday conversations (e.g.,
McInnes & Corlett, 2012).

In the context of identity construction through language, the concept
of identity work is important. Identity work is defined as “the ongoing
mental activity that an individual undertakes in constructing an
understanding of self that is coherent, distinct and positively valued”
(Alvesson et al., 2008, p. 15). Snow and Anderson (1987) first used the
concept in their study of identity construction among homeless people in
Austin, Texas. They were interested in how people low in societal status
uphold a sense of self-worth and dignity. The same interest triggered
research on how human service workers such as firefighters and 911 call-
takers manage their identity and make sense of their work through humor
(Tracy, Myers, & Scott, 2006); how people with dirty occupations such asexterminators and morticians normalize the negative connotations of their
work (Ashforth et al., 2007); and how prison inmates manage their
stigmatized identities through discourse (Toyoki & Brown, 2014).

The concept of identity work is similar to the ideas in SIT on identity
threat and responses to identity threat, in the sense that both notions focus on
the way fragile, stigmatized or low-status groups maintain a positive and
distinctive identity. To illustrate the resemblance, Alvesson’s definition of
identity work implicitly mentions two types of identity threat, namely
distinctiveness threat and value threat (Branscombe et al., 2001). Research
on identity work thus is implicitly about how people deal with (social)
identity threat and, vice versa, research on responses to identity threat is in
essence about identity work. Interpretive research has for instance explored how internal tensions related to different aspects of one’s identity trigger identity work (Beech, Gilmore, Cochrane, & Greig, 2012). This is similar to the notion from SIT that people may experience identity threat when they feel a simultaneous conflict between multiple sources of identity. One study on how professional accountants use identity work in response to organizational failure states that organizational failure can threaten a professional’s view of the self and thus forms a threat to someone’s identity (Gendron & Spira, 2010).

My research integrates the functional and interpretive perspective on identity in organizations in the sense that I used interpretive methods to add knowledge to the literature using the functional perspective. I was primarily interested in organizational outcomes in the form of intergroup error handling and factors that complicate this. However, because I was convinced that qualitative methods would be an important addition to the functional perspective, I also focused on language use in the form of discourse (see Chapter 2) and narrative (see Chapter 3). To address the criticism on functional SIT research, I have given much attention to the complexity of identity processes in organizations and the contextual factors that shape this complexity. I have shown how employees are embedded in their organizational, institutional and professional context and are influenced by it in their behavior. Specifically, I used literature from the respective thematic fields (i.e., health care organizations in Chapter 1 and 3, project management literature in Chapter 2, and literature on the hospitality and safety objectives in casinos in Chapter 4). I described the settings in full, and used ample quotes to give the reader insight into the study setting and language use of respondents. Based on the results of this dissertation I want to conclude with the claim that the two types of research can complement each other by
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focusing on different aspects of identity in organizations and by
countervailing the points where the other research type may fall short. I have
thus used the strengths of functional and interpretive types of research to
come to a fuller understanding of people’s intergroup behavior in
organizations.

Practical contributions

The responses to identity threat described in this dissertation all
constitute hazards for constructive error handling in organizations. Chapter 1
described the way midwives distrusted each other and questioned each
others’ decisions; Chapter 2 found that the project team withheld
information from other stakeholders; Chapter 3 pointed to the role of
narratives in maintaining hierarchy and status differences between
physicians, residents, and nurses; and Chapter 4 showed how social identity
factors triggered sensitivity to criticism of casino employees’ behavior.
Given these findings, the intergroup perspective on error handling is relevant
for organizations because this perspective sheds a new light on why error
handling between groups is often so problematic.

Specifically, on the organizational level the intergroup perspective
indirectly points to factors that complicate learning from errors. Generalizing
from the findings, it can be said that intergroup factors potentially influence
performance, cooperation, and learning in relation to errors. This is because
the identity threat associated with errors results in organizational members
trying to protect their own position; consequently, they encounter conflict,
disagreement, and irritation, as the results of the empirical chapters show.
Thus, employees are to a certain extent distracted from their primary work,
such as making sure babies are delivered, tunnels are renovated, patients are
operated upon, or guests are entertained. This “distraction” can seriously hamper performance and cooperation in the present moment, as well as long-term learning. Learning from errors is important because as earlier research shows, organizations that manage errors constructively and try to learn from errors are more successful (Van Dyck et al., 2005). It is thus important for organizations to recognize signals of disadvantageous intergroup behavior. That said, it may be easier said than done because upper management is part of the organization and thus of the intergroup context. Combining insider and outsider perspectives on the relationships between organizational groups can stimulate awareness of management’s own position and role in the organization.

On an intergroup level, error-related identity threat may be unwelcome or counterproductive when people’s responses bring organizational groups apart in their mutual understanding and cooperation instead of closer together. Polarization between groups means there is greater psychological and physical distance to be covered when information needs to be transmitted from one group to another, or when groups need to work together on one task. This makes it more difficult to deal with errors constructively. These situations call for people who can build bridges between groups. Boundary spanners are people who interact over the boundaries of groups (Richter, West, Van Dick, & Dawson, 2006). The present research, however, indicates that people who fulfill this position by no means have an easy task in bridging these boundaries because they can be seen as hostile outgroup members and therefore trigger negative responses (Rink, Kane, Ellemers, & Van der Vegt, 2013). Hereby the conditions that lead someone to fulfill a boundary spanning role are also relevant. For instance, the external appointment of a boundary spanner such as the new project principal in Chapter 2 may yield more negative responses than an
internal promotion of a colleague (e.g., the observers in Chapter 4). In conclusion, whereas organizations need boundary spanners who can stimulate constructive intergroup error handling, at the same time the results of this dissertation show the difficulty of building bridges between polarized organizational groups. More research is necessary to understand under which circumstances boundary spanners can be successful.

This research has zoomed in on the problematic aspects of intergroup error handling and on contextual factors that inhibit intergroup cooperation. It must be emphasized, though, that there are also functional and positive aspects to the processes described here, that is, on an intragroup and personal level. Belonging to a group can protect people against the negative impact of identity threat such as underperformance and distress (Reddy, 2011). Thus, upholding a positive view of the self and the group may tie down the negative emotions caused by errors (Zhao, 2010) and motivate people to carry on with their tasks. Other research concludes that identity threat can also result in identity growth, a positive individual development whereby the self-concept becomes ever more authentic and integrated (Kreiner & Sheep, 2009). For organizations it is important to consider both the negative aspects of error-related identity threat—which surface mainly on the organizational and intergroup level—and the positive aspects, which facilitate positive intragroup interaction and individual responses.

Future research directions

Given the differential impact of social identity threat on intra- and intergroup outcomes, future research should attempt to connect the different levels of research on error handling. Multilevel research (Hitt et al., 2007)
should give more insight into the conditions under which making errors lead to identity threat, and what responses to threat can be expected. For instance, multilevel studies could explore what influence organizational error culture has on the extent to which people and groups experience (individual an/or collective) identity threat related to errors. Furthermore, previous research has explored individual-level emotions triggered by errors (Zhao, 2010), but it would be useful to consider group-based emotions as well. Group-based emotions are different from individual emotions in that the former is triggered by event affecting an ingroup, whereas the latter only affects the individual (Kessler & Hollbach, 2005). Thus, events that elicit social identity threat such as errors are also likely to lead to the experience of group-based emotions. A thorough understanding of what type of group-based emotions arise in the context of errors and how these emotions interact with individual-level emotions is important for hypothesizing on the impact of errors on groups and individuals alike, and for more accurately predicting outcomes for error handling. Lastly, further research could investigate the impact of identity management strategies (Blanz et al., 1998) on intra- and intergroup error handling. For instance, emphasizing positive characteristics of the ingroup may yield more constructive intragroup behavior but less constructive intergroup behavior. Summing up, multilevel research could yield a more encompassing understanding of intergroup error handling by connecting the different organizational levels on which error handling is relevant.

Furthermore, the three factors (group interdependence; group location; and professional hierarchy) described as contributing to or hindering error handling most likely do not work in isolation but can be integrated. That is, if groups are more dependent on one another, then aspects that hinder knowledge transfer become more relevant. Location can
complicate knowledge transfer and increase hierarchal differences between professional groups—on the other hand, location can also be used as a resource to ameliorate tensions between groups. As such, the interplay of these factors can create complex and problematic situations for intergroup error handling, but it can also help to overcome problems. However, there have not yet been systematic studies that answer the question of what type of configuration leads to more positive outcomes. A possibility for future research would be to conduct a comparative study whereby organizational settings that vary in the three factors are analyzed in terms of intergroup error handling. Of course, these three factors were merely the ones that came to the fore most strongly in the studies of this dissertation; they are by no means the only discernible factors. It would therefore be advisable to maintain open to possible additional factors at play in other organizational settings.

Moreover, studying the connection between narratives and error handling could result in an even more stringent connection between functional and interpretive research on identity in organization in the context of intergroup error handling. Because members of different organizational groups can have diverging stories regarding the same events, organizations consist of “a multiplicity of individual and collective identity narratives which variously stand alone, inform each other, harmonize and clash” (Humphreys & Brown, 2002, p. 440). This could compromise efforts to identify deeper-lying causes for errors and deal with errors adequately. In this dissertation the focus was more explicitly on people’s experiences—in specific on the ways they dealt with identity threat and how this affected intergroup relations—than on organizational outcomes in terms of error handling. The studies in this dissertation do show implications for error handling in organizations, but no firm conclusions can be made about how
this connects to differentiation in error narratives. A future study might extend the current research by exploring whether the possible incongruence of these identity narratives has an effect on the ability to manage errors in organizations. One reason for a negative effect could be confusion resulting from these different stories regarding who is responsible for an error. A result of this confusion might be that ineffective measures are taken to handle the error. However, the assumption that conflicting stories about errors hinder error management requires more substantiation. Future research may attempt to extend the knowledge on this topic.

Lastly, another research direction could be a systematic study of the connection between types of errors and identity threat. Possibly, different types of errors lead to different types of identity threat. For example, individual errors based on lack of knowledge or distraction during task execution (Reason, 1990) may not trigger social identity threat because of the individual nature of the error. However, errors are often complex, in terms of the cause and perhaps in the type of response they elicit. Errors can originate at a dyadic or even collective level, whereby coordination between individuals or groups rather than individual-level behavior is crucial (Bell & Kozlowski, 2011). Given these important variations in error causes, it would be relevant to explore whether separate error types do cause different responses to social identity threat. Clarifying these connections would add important knowledge to the intergroup perspective on error handling.

**Reflections on methodology**

In this section I reflect on three important elements of the chosen methodology: data collection, the interview method, and data analysis. Regarding the first element, an important consideration is that during the
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data collection phase, I prepared all the interviews, but I was not always the (sole) interviewer. The interviews in Chapters 1 and 3 were conducted by Master’s students under my supervision. In these two cases, I developed the interview schemes with the students, joined them on their first interview when possible, and gave feedback on their interview technique afterwards. I conducted most interviews in Chapter 2 with a fellow PhD candidate who attended the 30 project meetings that served as additional data for this chapter. I collected the research material for Chapter 4 (see Appendix for an overview of the specific contributions of me and others to this dissertation).

Not being at all interviews sometimes made it harder to analyze the resulting material, because the experience of “having been there” is lacking. For instance, when data analysis is based solely on interview transcripts it can be harder to detect emotions, which is potentially important for interpreting the sentiment the respondent wanted to convey. Also, when others conduct the interviews it is not always possible to follow an iterative data collection method whereby later interviews build on earlier interviews to corroborate tentative interpretations. This is because this type of data collection requires extensive coordination with the interviewer and the interviews sometimes took place irregularly and in a short time frame. Furthermore, interviewees possibly held the students in lower regard and therefore disclosed different information to them than they might have done to me. That said, I often felt I was treated like a “student” working on her “study assignment,” so I do not believe that there were significant differences in this respect. However, a senior researcher could possibly have gained more information from respondents, but unfortunately this is impossible to check.

On the other hand, this characteristic of my data collection had advantages worth mentioning. Foremost, for the analysis in Chapters 1 to 3 I
could discuss and compare my interpretations with those of the Master’s students and fellow PhD candidate, and I also had the opportunity to ask them whether important emotions had come to the fore in the interviews. In this way, I built in important moments of verification and gained more information than would have been possible had I done all the interviews and data analysis by myself. That data collection does not depend on one researcher’s idiosyncratic interpretations can thus be an advantage that contributes to the credibility of the findings (Krefting, 1991).

The second element I want to reflect on is the interview method. I used qualitative research because I wanted to obtain the in-depth experiences of employees in relation to errors. However, every research method also has its disadvantages that must be acknowledged and reflected upon. First, it is important to realize that any type of research (with the exception of unobtrusive observation perhaps) changes elements of the environment that may have an effect on the outcome. Merely knowing they are in an experiment can change people’s behavior, as the famous Hawthorne studies suggest (Levitt & List, 2011; Olson, Verley, Santos, & Salas, 2004). In the case of interviews, people are brought into an artificial setting—a room with an interviewer—and they are asked to talk about subjects that the interviewer usually introduces. In this dissertation, all involved were at work when they were interviewed, although most people were not completely familiar with the room where interviews took place. Necessarily, the interviewer asked questions related to the central topics of this thesis. Thus, the interviewees were invited to talk not only about errors but also about work-related sources of social identity, that is, the groups they felt connected to at work.

A disadvantage of this method of interviewing is that asking people about their membership of certain groups and relationships with other groups makes them more aware of these categories than they might have been at the
onset of the interview. This was always an important consideration for me when I was developing interview topic lists. We asked open questions to try to limit coloring questions (and therefore answers) with the presuppositions of the interviewer. In most cases, however, the interviewees introduced the categories naturally rather than having them imposed on them by the interviewer. We could often distinguish multiple group memberships. Sometimes, which group membership was the most meaningful for the respondent only became clear after multiple interviews or as late as during data analysis. Similarly, in formulating important concepts the interviewers began questioning as neutrally as possible. For instance, in Chapter 2, the interviewers used the word “risk” fewer than 20 times, whereas the interviewees used it more than 400 times in project meetings and interviews combined. In this case, the theme of risk discourse emerged when data analysis revealed how often the term “risk” was used. This is evidence that I was open to concepts, categorizations and themes introduced by the interviewees.

A more general question one can ask about the interview method is what a person’s response says about their past or future behavior. Should interviewees be considered as objective informants who give unbiased information about what they have done or what they are going to do? The answer is no, and this is exactly the point. That respondents are not objective gives a researcher the opportunity to study subjective processes, in this case related to social identity. Personal accounts may not reflect enduring, stable identities or facts, but they do show perspectives, perceptions, and interpretations at a given moment, and this is the way I looked at them. Thus, although it is unknown whether narrated behavior correlates with actual behavior (Chapter 3) or what sensitivity to criticism means exactly for the acceptability of criticism (Chapter 4), what respondents say in interviews is
interesting information in itself because it represents their perspective on situations directly related to their identity.

However, I did not uncritically accept the way people depicted their own reality in interviews. There are too many limitations to a single research method—in this case, qualitative interviews—to rely on only this one source of data when drawing scientific conclusions. Rather, I used respondents’ subjective experiences as an important—but not the only—source of information and tried to bring these experiences to a more abstract level, in order to be able to make theoretical claims instead of merely exploring respondents’ idiosyncratic views on events. In order to accomplish this, I explored perspectives from various members of several groups of employees, which enabled me to corroborate or contrast findings from separate interviews. Furthermore, I used different information sources to support findings from interviews. For instance, in Chapter 1, I also used research reports, articles from popular media, and historical information on the position of the midwife, which each in their own way confirmed and supplemented the individual realities midwives described in the interviews. In Chapter 2, not only did I use research material from both interviews and project meetings, but because Freek van Berkel followed the project intensively for eight months we also had access to written reports, informal conversations, and concrete outcomes such as delays in obtaining necessary permits. Lastly, in Chapter 3 I had ample additional material at my disposal: earlier research conducted within the casinos on error handling and communication between table managers and observers, as well as policy documents on the implementation of the new role of observers. Taking into account that I incorporated these different types of data in my analysis, I feel confident that I was able to come to a reliable representation of the processes at play.
The third element I want to reflect on is that when I analyzed the data, I assumed that to some extent people deliberately use strategies to ward off identity threat. Therefore, my analysis considered people’s accounts to be somewhat deliberate and strategic. Nevertheless, one can question that aspect of data analysis. For instance, one can be critical of the assumption that identity threat is present at all. As earlier research acknowledges, identity threat in itself is difficult to measure; thus, the presence of threat is often deduced from the response to it (Scheepers & Ellemers, 2005). By describing the situational factors that make the existence of identity threat plausible I have tried to increase the credibility of this assumption. Moreover, one can question if it is possible to assess whether something is an identity management strategy, or merely a good analysis of a situation or a factual description of how somebody behaved. Indeed, the approach to analysis has been to view language use as subjective and strategic rather than objective and neutral, for the reasons mentioned above. As Hunt and Benford (1994, p. 492) state: “individuals’ accounts are appropriate data sources if researchers interpret them as topics of analysis instead of objective, factual reports.” That is what I did.

Conclusion

By adopting an intergroup perspective, this dissertation contributes to research on error handling in organizations. Using SIT as a theoretical lens, I explored the role of identity threat in the way organizational members respond to possible and actual errors. By conducting qualitative research focused on language use, I also contribute to SIT research, which usually employs quantitative methods. My analysis of data from four qualitative case studies in diverse organizational settings provides a thorough basis for
arguing that the intergroup level of error handling is an important research area. Chapter 1 introduced the concepts and theories in a description of a case with a high risk of errors; Chapter 2 studied the response to the risk of (future) errors; and Chapter 3 and 4 focused on the response to errors that had already occurred. Chapter 3 dealt with organizational members’ narratives about their own and others’ errors, and in Chapter 4 the response to feedback on errors was central. Each individual chapter contributes to specific application areas, namely health care (Chapter 1 and 3), project management (Chapter 2), and the casino industry (Chapter 4). Together, all the chapters add significantly to our knowledge on how organizational members—arranged in subgroups such as project teams and departments, or groups with a common professional background—are affected by error handling processes at the intergroup level of analysis.