



Collaborative Remembering: Theories, Research, and Applications

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Concluding Remarks: Common Themes and Future Directions

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Abstract and Keywords

In this chapter, we provide concluding remarks on the edited volume, *Collaborative Remembering: Theories, Research, and Applications*. We first discuss common themes that emerge across the chapters. Specifically, we discuss points of overlap and contrast between research and applications, costs and benefits of collaboration, accuracy, scaffolding, the shared nature of the original experience, technology, and culture. Given these themes, we then propose that future research should consider the context and goals of collaboration and the nature of individual differences among and within groups. We end the book with a call to integrate methods and concepts from across fields and perspectives.

Keywords: collaborative remembering, social memory, memory, collaboration, collective memory

The chapters in this volume present a comprehensive overview of different perspectives, approaches, and methodologies used to examine collaborative remembering. Collaborative remembering refers to a range of social memory phenomena, and chapters highlight the various ways in which collaborative remembering has been conceptualized and studied across research areas (including cases of direct collaboration, anticipated future audiences, perceived

group members, extended groups, and larger cultural contexts). The chapters also highlight the many different methodologies and metrics used to examine collaborative memory in its various forms. Considered as a whole, this volume provides a framework for considering the complexity and nuance of how collaborative remembering is operationalized and measured across perspectives.

In this conclusion, we first identify common themes that emerge across chapters. Given the many different conceptualizations and assessments of collaborative remembering in this volume, it is important to examine how findings and conclusions generalize (or not) across perspectives. Our goal in this chapter is to discuss the points of overlap and contrast between different approaches. Notwithstanding some generalizability across chapters, we illustrate how differences in the research questions, methodologies, and measurements can sometimes lead to different conclusions. We conclude by proposing future research directions for a more integrative approach to understanding social memory phenomena.

Points of Overlap and Contrast

From the Lab to the World

The book has been organized in a manner that emphasizes the value of both basic and applied research on collaborative remembering. In the first section of the book, *Approaches to Studying Collaborative Remembering*, the chapters focus on basic research and theory from a range of disciplines and subdisciplines. In the second section, *Applications of Collaborative Remembering*, basic research is applied to real-world problems in a variety of settings. The distinction between basic and applied research is not neatly defined, as many chapters in the Approaches section also highlight wider applications and many chapters in the Applications section also include basic research findings. Nonetheless, the connection between basic and applied research can be seen.

One important conclusion to emerge across chapters is that basic laboratory findings do broadly generalize to applied settings. For example, developmental research examining parent- child memory scaffolding (Haden *et al.*; Fivush *et al.*; Wang; see Chapters 2, 3, and 17) has been applied to parenting interventions in community contexts (Reese; Chapter 18) and clinical contexts (Salmon; Chapter 19). Cognitive research on memory conformity (Rajaram; Gabbert & Wheeler; **(p.460)** Henkel & Kris; see Chapters 4, 6, and 8) has informed guidelines and practice in legal settings where eyewitness accuracy is paramount (Paterson & Monds; Chapter 20). Research identifying the roles of cross-cueing and reexposure in cognitive studies of collaborative inhibition (Rajaram; Henkel & Kris; see Chapters 4 and 8) have been applied to proposed intervention programs for healthy older adults and older adults suffering from dementia (Blumen, Chapter 24). Discourse processing research examining how information is exchanged and communicated in social settings (Müller & Mok;

Bietti & Baker; Brown & Reavey; McVittie & McKinlay; see Chapters 9–12) has been used to benefit memory performance for dementia patients (Müller & Mok; Hydén & Forsblad; see Chapters 9 and 25), and amnesiac patients (Gordon *et al.*; Chapter 23). A discourse processing approach has also opened up new perspectives on understanding the interplay between workers in organizational contexts (Bietti & Baker; see Chapter 10), patient–clinician dyads in neuropsychological interviews (McVittie & McKinlay; see Chapter 12), and how individuals construct and tell life stories that are not entirely their own (Brown & Reavey, Chapter 11). Finally, philosophical research on extended cognition (Michaelian & Arango-Muñoz; Wilson; see Chapters 13 and 14) has encouraged some psychologists to see social interaction in collaborative remembering as potentially beneficial rather than inevitably distorting, and has been applied to digital design efforts in which technology and electronic media cue memory (van den Hoven *et al.*, Chapter 22).

Costs and Benefits of Collaborative Remembering

A number of chapters in this book are concerned with evaluating the costs and benefits of remembering with others. As noted in the Introduction, such costs and benefits are often measured in terms of productivity and/or accuracy. Across research traditions in the book, collaboration has been shown to both disrupt and benefit memory, and in some contexts, both can occur simultaneously. Specifically, collaboration can inhibit memory (Rajaram; Henkel & Kris; Blumen; see Chapters 4, 8, and 24) and cause forgetting (Hirst & Yamashiro, Chapter 5); collaboration can also enhance memory and provide reminders (e.g., Hydén & Forsblad, Chapter 25). Further, collaboration can both increase and decrease memory accuracy (Rajaram; Gabbert & Wheeler; Henkel & Kris; see Chapters 4, 6, and 8). The differences in conclusions reflect the distinct phenomena studied and also perhaps differences in methodology (e.g., the operational definitions of collaboration, benefits, and interference, who is remembering, what they are asked to remember, and who they are compared to), and also the nature of assessment (i.e., whether researchers are most interested in measuring production, content, accuracy, process, or function). Future research can focus on mapping out these variations to understand when collaboration benefits memory and when it has costs, and on what metrics.

Accuracy

Several chapters in this book also discuss the specific role of social factors on memory accuracy. Accuracy refers to how well the information remembered corresponds to the original event or episode. Research on accuracy is typically focused on the content of what is remembered, although the processes of how accurate and inaccurate information get incorporated into the group are also important as is the function of the interaction. Interestingly, chapters in the book demonstrate that collaboration can both increase and decrease accuracy, and again, we note that these processes may operate simultaneously in some contexts. Specifically, research on collaborative inhibition concludes that one

benefit of collaboration, at least for freely interacting groups, is the possibility of error correction (Rajaram; Henkel & Kris; Blumen; see Chapters 4, 8, and 24). That is, collaborative groups may be more accurate than individuals because collaborators (**p.461**) can correct each other's errors. Adopting a different emphasis, research on memory conformity and social contagion conclude that when a collaborator's mistake is not corrected, it is often incorporated into one's own memory (Rajaram; Gabbert & Wheeler; Henkel & Kris; Paterson & Monds; see Chapters 4, 6, 8, and 20). In this way, collaboration can also decrease accuracy. Again, the different conclusions reflect distinct phenomena and highlight that different experimental paradigms focus on different aspects of the effects of collaboration on accuracy. Future research is necessary to understand how and when collaboration influences accuracy across contexts. There is also a need for more conceptual fine-tuning of the overlap and contrast among various perspectives studying specific cases of accuracy (Brown & Reavey, Chapter 11).

Scaffolding

Across several chapters, there is general agreement that effective scaffolding within collaborative groups—where one partner supports and extends the other's memory contributions by asking questions, providing a recall structure, or adding cues and prompts for the other to build from—is important for enhancing memory. Research focused on scaffolding is typically focused on process, but with the added assumption that there is asymmetry in the abilities of individuals within the group. Importantly, the forms and nature of scaffolding vary across participant groups and research contexts. Research using sociocultural developmental methods (e.g., Haden *et al.*; Fivush *et al.*; Reese; Salmon; see Chapters 2, 3, 18, and 19) typically describes open-ended questions (e.g., what, why, where) as the most effective prompts for eliciting autobiographical details from children who are preschool aged or older. In a different context, Hydén and Forsblad (Chapter 25) suggest that yes/no questions are especially effective for eliciting memory and cueing task performance in dementia patients. Gordon *et al.* (Chapter 23) take yet a different line of reasoning, suggesting that the most successful scaffolding strategy for amnesiac patients is to establish common ground between the patient and the conversation partner. Finally, Bietti and Baker extend these classic notions of scaffolding as a verbal activity to also include other modalities. They argue that multimodal remembering sequences—with scaffolding that is verbal, corporal, social, and material—benefits remembering in organizational settings.

These different perspectives reflect genuine differences in the kinds of scaffolding that are beneficial in different groups and different contexts. However, cross-literature research has not yet determined how successful scaffolding might be similar or different across the lifespan and across different everyday groups and contexts. One potentially unifying concept is that of *sensitivity*, in which the best scaffolding in parent-child interactions is dynamic and develops with the changing abilities of the child (Reese, Chapter 18). Thus,

we might expect that scaffolding can look quite different, depending on the individual to be scaffolded, their abilities, the memories to be recalled, and the goal of the remembering.

Shared Nature of the Original Experience

Several chapters in this book examine how the shared versus unshared nature of the original experience influences the effects of collaboration. Shared memory can refer to situations in which group members divide up responsibilities or cognitive labor, communicate to or discuss an event with others, and/or when group members have a common experience or shared reality (Echterhoff & Kopietz, Chapter 7). Across chapters in the book, whether the experience was shared as a common experience is important for processes and outcomes of collaboration. For example, in cases where encoding is not shared, more work is necessary to keep group members on the same page as they collaborate (e.g., Bietti & Baker; Hydén & Forsblad; see Chapters 10 and 25) and this might be especially difficult when collaboration serves different functions across members of the group **(p.462)** (Pasupathi & Wainryb, Chapter 15). Considering a different perspective, shared encoding may be particularly important for understanding collaboration among long-standing groups who share and discuss events over long periods, such as couples and families (e.g., Fivush *et al.*, Chapter 3). Overall, more research needs to be done to explicate the influences of shared encoding on both the processes and outcomes of collaborative remembering across domains.

Role of Technology

Another interesting point of comparison across chapters in this book concerns the role of technology. While there is general agreement that technology influences memory, different researchers focus on distinct contexts in which this influence may have varying costs and benefits. Michaelian and Arango-Muñoz (Chapter 13; see too Wilson, Chapter 14) argue that technology can be part of an extended cognitive system and may work to scaffold memory. Van den Hoven *et al.* (Chapter 22) apply this argument to their design work and present a range of design possibilities that rely on technology to cue memory retrieval. Of course, the effects of technology are not only or always positive: Hoskins (Chapter 21) argues that technology can both benefit and distort memory. Relying on methodologies from media studies, Hoskins argues that the accessibility and increasingly pervasive role of technology and media have transformed what it means for individuals and groups to remember and also to forget. Specifically, technology can interfere with individuals' forgetting of their own past experiences, and also creates ethical issues surrounding individuals' right to be forgotten by others (Hoskins, Chapter 21). Technology has not just changed how much we can remember: it has also changed how and why we remember.

The work described in several chapters supports the idea that technological (or material) resources are a crucial component of social remembering (see Michaelian & Arango-Muñoz, Chapter 13, for further discussion of technology-mediated interactions). However, as technology and material memory supports become increasingly integrated into collaborative groups, such as the older couples who share a calendar, it will be important to examine how and when technology and other material resources interface with social remembering across populations and memory content.

Role of Culture

Across chapters of this book, there is general agreement that culture influences memory. For example, according to Wang's cultural dynamic model of remembering (Chapter 17), Western parents often reminisce with their children to promote bonding and foster autonomy, while East Asian parents reminisce to convey moral lessons and disciplinary expectations. Likewise, Western autobiographies are typically written for an audience who celebrate individuality, while East Asian autobiographies are typically written for an audience who value social cohesion and harmony. Culture also influences collective narratives. As Abel *et al.* (Chapter 16) discuss, Russians' schematic narrative template for their role in World War II (an "Expulsion-of-Alien-Enemies" narrative template) is distinct from non-Russians. Notwithstanding the general agreement that culture influences memory, there is a need for further systematic research across cultures and levels of memory that focus on generalizability across contexts.

Summary

When considering what we have learned from this body of work, it is clear that there is great generalizability and overlap between approaches and conclusions across perspectives. Also important, however, is that the phenomena of collaborative remembering are complex and diverse and significant differences, nuances, and results emerge from different lines of research.

(p.463) We argue that the various points of tension between perspectives challenge assumptions, raise awareness of alternative approaches and ideas, and hopefully will encourage dialog and debate. In the next section, we suggest some considerations and directions for future research

Ways Forward

Collaborative Remembering in Context

As is clear from our discussion, emerging themes and nuanced differences across perspectives underscore the importance of contextual factors on collaborative remembering. One way to move forward in both research and applications is to more systematically examine the full range of possible outcomes, the conditions under which they emerge, and the contexts in which they might be considered costs or benefits (or neutral). What counts as memory

success, for example, depends very much on the goals of the specific group in the remembering situation. Moving forward, we need to recognize that different contexts have different goals, different definitions of collaborative remembering, and different means of assessing any influence of collaboration.

One means to achieve this is to further extend research into a wider range of contexts. Specifically, while some research domains have been extended into some applied settings, more could be done to extend *each* research domain into *each* applied setting. For example, while the sociocultural developmental model has been successfully applied to improve parent-child communication and child outcomes (Reese; Salmon; see Chapters 18 and 19), we don't know whether similar principles apply across the lifespan and in other kinds of groups. While the collaborative recall paradigm (Rajaram, Chapter 4) has been argued to have applications for memory support in old age (Blumen, Chapter 24), we know little about how the principles of collaborative recall might apply to other domains such as organizational settings or classroom settings. Applying different basic research domains to different applied contexts will help to determine when and how findings generalize across remembering groups with their different aims, functions, and definitions of success.

It is also important to more systematically examine the metrics used across contexts. Throughout this book, the comparative group against which collaborative remembering is valued and measured varies between literatures. In the collaborative recall paradigm, for instance, collaborative groups are compared to the pooled performance of the same number of people recalling individually (Blumen; Henkel & Kris; Rajaram; Chapters 4, 8, and 24). In other literatures, collaborative group recall is also conceptualized as potentially a distinctive emergent output, not straightforwardly reducible to the sum of individual memories (Michaelian & Arango-Muñoz; Wilson; see Chapters 13 and 14). In still other literatures there are no individual units to make comparisons against. For example, in the discourse processing literature and the developmental literature, the focus is on comparing different kinds of collaborative groups and the range of communicative styles used during collaboration. The various metrics are not necessarily incompatible, but may be critical drivers of the kinds of conclusions that are made within a domain and why. For instance, while benefits of collaboration might be identified for the performance of dementia patients (compared to remembering alone), this same outcome might be reported as a cost or 'collaborative inhibition' using the metric of pooled individual performance used in the collaborative recall literature (Rajaram, Chapter 4). When possible, future research should more systematically examine the various metrics across a range of contexts.

Individual Differences, Group Differences, and Individuals as Part of Multiple Groups

A second way to move the field forward is to fully appreciate the individual differences

and group differences in processes and outcomes of collaborative remembering. That is, we should not **(p.464)** expect collaborative remembering to look the same across all groups, and future research could focus on mapping the individual and group parameters that predict the processes and outcomes of collaborative remembering. Individuals in a collaborative group bring their profile of abilities, strengths, and weaknesses, and in some contexts, the combination of abilities makes each collaborating group, their dynamics, and their potential, unique. Diversity in outcomes is a particular challenge for the field and requires the integration of diverse methodologies and approaches.

Research presented in the book has begun to address the role of individual differences within specific research areas. For example, Paterson and Monds (Chapter 20) outline a series of 'estimator variables' (such as age, closeness with conversational partner, and personality) that predict and determine how likely people are to incorporate misleading suggestions from a collaborator (see Gabbert & Wheeler for a related discussion of individual difference moderators on the memory conformity effect). Rajaram (Chapter 4) discusses the role of individual differences and group differences (such as familiar vs. unacquainted dyads, novices versus experts, and young versus older adults) on the magnitude of the collaborative inhibition effect (see too Blumen; Henkel & Kris; Chapters 8 and 24). Coming from the developmental perspective, Fivush *et al.*, Haden *et al.*, Reese, and Salmon each discuss the individual differences in communicative style that parents use when reminiscing with their children. Finally, several chapters examine directly or are relevant to understanding neuropsychological individual differences in collaboration (Müller & Mok; McVittie & McKinlay; Salmon; Blumen; Hydén & Forsblad; see Chapters 9, 12, 19, 24, and 25). For example, Gordon *et al.* (Chapter 23) demonstrate that the patterns of gains and losses in a collaborative learning paradigm vary between patients with hippocampal amnesia and controls.

Future research can build on this work to examine individual and group differences across a wider range of contexts and across time. For example, notions of scaffolding in the book are currently applied to asymmetrical pairings, in which one individual needs memory support (either because of developing or failing cognitive abilities) and the other partner is able to provide this support for them. Less clear is how these processes play out in other kinds of groups, where abilities are more equal, or where abilities are declining in both parties but they still have relative strengths and weaknesses that they can coordinate and combine. Also important is how scaffolding processes change over time as the abilities of one or more partners change. One possibility is that social scaffolding for memory does not fade or get dismantled as we become mature adults. Rather, multiple forms of scaffolding remain essential across the lifespan.

Future research must also consider that individuals are members of multiple groups ranging in size: they are members of a couple, a family, a work team, a neighborhood, a society, and so we need to examine individuals as embedded into their various groups and how these group memberships interact. Again, several chapters in this volume have begun to address the connections between these group sizes, as well as the complexity involved with making such connections. For example, Wang (Chapter 17) demonstrates that cultural norms influence memory across group sizes such that individual memory and small group memory are shaped by larger cultural factors. Other chapters suggest that work in small group processes such as socially shared retrieval induced forgetting (Hirst & Yamashiro, Chapter 5) and collaborative inhibition (Rajaram, Chapter 4) scale up to create convergence and shared memory (and forgetting) in larger scale collectives. Finally, Abel *et al.* (Chapter 16) suggest mechanisms from studies of individual and small group memory (such as schema) inform larger scale cultural narratives for historical events. Importantly, however, they also highlight critical differences between small group research on collaborative recall and research on collective memory (including the specificity of the definitions, and how relevant the material recalled is to personal identity). Also important is that several chapters in the volume discuss conceptual and ethical issues surrounding individual and small group memories embedded within larger cultural contexts. For example, Brown and Reavey (Chapter 11) discuss **(p.465)** the complexities of how survivors of the London transport bombings reconstruct their own personal experiences of the trauma within the context of public discourse and collective memory of the event (see also Wilson, Chapter 14, for related discussion on eugenics survivors in Canada). Further, Hoskins (Chapter 21) argues that individuals' increasing use of technology to record, edit, and share events is changing the fundamental conceptualizations of what is collective memory. Future research can build upon this research to examine the connections across group sizes and levels across a wider and more systematic range of contexts. Also important will be to determine how the relationship between individual and collaborative mechanisms vary (or not) across levels and group size.

Summary

We have argued that research on collaborative remembering should extend in two ways: (1) by considering the context and goals of the collaboration; and (2) by considering the nature of the individuals and the groups doing the collaborating. In order to address these, there is a need to study a wider range of groups that vary along key dimensions including length of relationship, reasons for remembering together, shared and unshared experiences. There is also a need to examine these groups in a wider range of contexts and across various metrics. Finally, we need to consider and account for individual differences and also how individual membership in one group or another change

across contexts and levels of analyses. We need bigger, richer data sets that combine outcomes and processes.

Concluding Remarks

Most clearly, from the chapters in this book, it is clear that there are many literatures focused on related questions in social remembering: how is memory influenced by social factors along a range of phenomena (remembering in anticipation of a future audience, remembering in the presence of others, remembering in direct collaboration with others, and remembering within our broader social and cultural contexts), what are the processes, functions, and outcomes of remembering with others and how do these change across contexts. Each literature addresses these questions in different contexts and with different assumptions, methods, and conceptualizations of collaborative remembering.

In order to break down the silos that have developed in these relatively separate and independent literatures, more genuinely integrative research is required. Stepping out of the bounds of particular research traditions is challenging, and involves an openness to the methods and concerns of other traditions. The chapters presented in this volume offer a starting point. This book includes dedicated chapters offering perspectives from the fields of Developmental, Cognitive, and Social Psychology, Discourse Processing, Philosophy, Neuropsychology, Design, and Media Studies. In addition, chapters in the volume allude to perspectives in Political Science, History, Anthropology, Transactive Memory, and Organizational Psychology. As well as the domains represented in this book, there are connections to be made with psychological literatures on topics such as personality and individual differences, relationships, belief and meta-memory, decision-making, linguistics, and joint action, to name a few. We propose that the field continue to move forward by exploring ideas and concepts across disciplines and subdisciplines to further bridge the gap between theory, laboratory research, and applications.

In conclusion, this book presents the current state of collaborative memory research within and across a range of research areas. By highlighting the points of overlap and contrast between perspectives, we hope to illustrate the many distinct, yet complementary ways in which researchers are examining collaborative remembering. Ultimately, we hope to encourage additional **(p. 466)** interdisciplinary dialog and awareness regarding the different questions, methods, and assumptions across research areas and how such differences inform current and future research questions of our field. As we suggested in the introductory chapter, remembering together is a pervasive and significant feature of human life. As this book demonstrates, researchers across many fields are beginning to tap and understand the extraordinarily diverse forms and effects of collaboration in memory.

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