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RESEARCH ARTICLE

Remembering in the wild: recontextualising and reconciling studies of media and memory

Tim Fawns

University of Edinburgh, Edinburgh, UK
Corresponding author: Tim Fawns, email: tfawns@ed.ac.uk

Abstract

Studies that locate memory entirely within the head may pay less attention to the properties, practices or cultures of the media with which people remember than studies of 'memory in the wild', where memory is seen to extend beyond the individual, into the distributed activities of people and material things. While memory in the head is, apparently, individual and susceptible to universal effects, memory in the wild is emergent and relational. Studies of memory in the wild, therefore, produce results that are harder to pin down but may form a stronger basis for interpreting the importance of context. It is an important, interdisciplinary challenge to reconcile evidence from studies based on these different conceptions, so that we can better understand how people remember and forget, individually and collectively, and the relationship between context, environment, and memory. I argue that wherever *memory* is located or studied, all *remembering* can be framed as in the wild, and that doing so supports ecological validity, conceptual precision, reflexivity, and realistic application of conclusions beyond the research context. A key part of my argument is that the relationship between media, technology, and memory is situated, highly complex, and not easily generalisable. Remembering in the wild supports the conceptual precision needed to understand the subtle and entangled implications of technological change in relation to memory.

Keywords: media; memory; psychology; media studies; laboratory experiments; naturalistic enquiry; ecological validity

Wild views of memory and remembering

Where is memory? Barnier and Hoskins (2018) argue that most memory research can be crudely divided into that which studies *memory in the head*, and that which studies *memory in the wild*. Memory in the head is individual, internal, self-contained, yet susceptible to universal effects. This is the focus of much of memory psychology. Examples include many studies of episodic and semantic memory (Tulving 1972), mental time travel (Suddendorf et al 2009), scene construction (Hassabis and Maguire 2007), source monitoring (Johnson et al 1993), and memory accuracy (Koriat et al 2000). Memory in the wild is, often, emergent, relational, and contextual; located out in the world, distributed across people, places, and things. Memory in the wild cannot be reduced to the individual (Barnier and Hoskins 2018, 389). It is social and material, and located in relation to cultural and personal, historical trajectories of practice, emotion, and belief. Examples of memory in the wild include work on transactive memory (Wegner 1987), collective memory (Halbwachs 1992), prosthetic memory (Landsberg 2004), postmemory (Hirsch 1997),

mediated memory (Hoskins 2011; van Dijck 2007) and distributed, embodied, embedded, enacted, or extended remembering (e.g. Brown and Reavey 2018; Clark and Chalmers 1998; Harris et al 2014; Sutton et al 2010; Tribble 2005). As even this very selective list demonstrates, there are many ways to conceive of memory in the wild.

When it comes to media and memory, this head/wild distinction can have profound implications. Generalisations appear simpler when memory is located in an individual's head because it is separated from the social and contextual influences that act on it. Laboratory experiments, for example, are designed to minimise 'contextual noise' so that memory can be measured in a 'purer' form. Yet, choices are still made, implicitly or explicitly, about what counts as neutral (e.g. the physical environment and materials, or the behaviour of the researchers) and representative of the wider population (e.g. participant engagement with tasks and media). The same can be true of naturalistic studies of individuals operating in more complex settings, where choices must be made (again, implicitly or explicitly) about what counts as 'natural'.

Naturalistic enquiry may be more conducive than laboratory studies to studying memory in the wild for the simple reason that it is, ideally, designed not to control context but to embrace it, seeing it as inevitable and fundamental to everyday memory (Neisser 1978). However, naturalistic research does not necessarily study memory in the wild. Whether memory is in the head or wild depends on how memory is conceived rather than on the research setting. Outside of the laboratory, there is still an important distinction between whether context is an external factor that acts on a separate, internal memory, or whether context is a constituent element of an emergent, distributed remembering system that makes use of, but is not entirely contained within, the brain.

Perhaps, it is not so important where memory is, since we are not actually studying *memory* much of the time. The use of proxies like questionnaires, narratives, or brain scans, indicates the inaccessibility of internal memory processes. Their observable manifestations are always coupled with some form of externalisation (Tulving 1982). Any expression of memory as an object of study must be a form of *remembering* that is not just influenced *by* context, but produced *in* context. A participant recounts a narrative because a researcher has given particular instructions in a particular setting; another completes a questionnaire in response to being shown a particular photograph for a particular purpose. These instances of remembering happen because of the context, and they manifest in direct response to that context. I propose that recognising context as a constituent element, rather than an external influencer, is a framing of *remembering in the wild*.

In this commentary, I argue that wherever *memory* is located, all *remembering* can be framed as in the wild, and that doing so supports ecological validity, conceptual precision, reflexivity, and realistic application of conclusions beyond the research context. A key part of my argument is that the relationship between media, technology, and memory is situated, highly complex, and not easily generalisable. Only with remembering in the wild will we have sufficient conceptual precision to understand the subtle and entangled implications of technological change in relation to memory.

Appreciating context

As Tulving noted, all remembering is cued (Tulving 1984). His concept of *synergistic ecphory* (the coming together of internal memory trace and external retrieval information) conveys a rich sense of the distribution of remembering processes between brain and environment without implying that memory systems extend beyond an individual's head. However, this mix of information has important implications for how we understand research into memory and media. Through engagement with media, for example, we

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manipulate and configure our available retrieval information. This is a natural part of remembering: we have always incorporated elements from the world around us into our remembering activity (Donald 1991), whether they be landmarks, cave paintings, post-it notes, conversations, photographs, or web pages. However, retrieval information is not static or inert – elements of our environment influence remembering processes as well as content. In making use of the world to help us remember, we distribute some of our remembering agency. The combinations of multiple media (e.g. photographs and mobile phones and social media platforms) and their entanglements in our social relations with other people are too complex for us to control, particularly if we look across longer time periods. Consider the use of photographs in remembering. We do not simply look at a photograph and remember. Photography practices are diverse and idiosyncratic, they often involve other people, and their effects are entangled with other technologies and media (e.g. cameras, albums, physical displays, and social media platforms) (Fawns 2020) as well as longer term social and cultural activities and values (Keightley and Pickering 2014).

Recall during experiments, interviews and other research methods is situated within these wider histories, and ongoing reconfigurations of memory and identity (Fawns 2022). A thoroughly contextualised understanding of remembering also requires understanding the role of research (including settings, tasks, media) and researchers, as part of the situated remembering activity of participants. Whether it is acknowledged or not, there are always multiple media involved, research tasks are not neutral elicitations of memory, and researchers are not neutral implementers of methods from outside of the action.

Experimental studies seeking effects of one kind of medium, such as photographs, often ignore the influence of other media that are in play, or how multiple media combine in influencing acts of remembering. All media, including word lists, questionnaires, brain scans, etc., inevitably, are non-neutral (Grall and Finn 2022). For example, the Memory Characteristics Questionnaire (MCQ), a commonly used tool for testing the phenomenological qualities of recall (Johnson et al 1988), not only measures but also influences recall by prompting participants to consider past episodes in multiple ways. Constraints placed on the remembering context in the interests of standardisation or control should also be taken into account. Examples include: focusing on individual participants or prescribed groups; participants' awareness of being researched; bounding of events, locations, and time periods; determining which media are to be used (e.g. specific photos or kinds of photo); determining legitimate forms of response (e.g. narratives, questionnaires, recognition, 'free recall'); determining which forms of practice are included (e.g. looking at but not taking photos, or vice versa); and more. Researchers, themselves, cannot help being co-participants in their research. Through instructions, body language, power dynamics, etc., they contribute directly and indirectly to what is remembered. Of course, researchers often recognise these limitations, and there are pragmatic arguments for using the best methods and resources available. However, there is still an obligation to help readers meaningfully interpret results by thoroughly describing the factors that matter, and using a theoretical lens capable of making sense of the implications.

I argue that a theoretical lens that locates remembering in the wild is more powerful in relation to analysing these issues of context than one that locates remembering inside the head. If remembering happens in the head, media are more likely to be seen simply as tools or cues, external to memory processes and, therefore, to the primary expertise of the memory researcher. Media properties, practices, and cultures may, therefore, be largely ignored. On the other hand, a wild view of remembering can help us see that there is no hard boundary between remembering with and without media, and that media and technology are deeply embedded in our ways of thinking, experiencing, and

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bringing order to the world (Sutton 2010). Properly theorised, seeing remembering as in the wild can support a more meaningful account of the complex social and material relations in which remembering is entangled as part of a cognitive ecology (Hutchins 2010).

This more complex account can be supported by generating research data that is directly about context and how it is entangled in memory-related activity. An example is the work of Kath Bicknell, John Sutton, Celia Harris, Amanda Barnier, and others (see Sutton et al 2020; or Bicknell and Sutton's 2022 book on *Collaborative Embodied Performance: Ecologies of Skill*, for more developed examples from a different field). Building on a research programme spanning more than a decade, which includes collaborative remembering experiments with couples in their homes (Barnier et al 2018; Harris et al 2014, 2018, 2022; Sutton et al 2010), they simultaneously conducted an ethnographic study of two couples as they participated in those experiments. Participant observation, analysis of video footage and semi-structured interviews with these two couples generated insights beyond the experimental data. For example, participants' activity and the recall strategies they used in a given test were shaped by seating arrangements, room layouts, fluctuating anxiety, familiarity with researchers, methods, current affairs, shared histories (including international travel), and so on. This does not mean that the experiment was invalid, but that all experiments are context-rich and differently meaningful to different participants. It is not a question of preventing the research environment from shaping results, but understanding how it does so.

Conceptual precision

A nuanced appreciation of the complex, contextual relationship between media and memory would caution researchers against extrapolating results of experimental studies to all humans, or all photographic media, technologies or practices. It would show, for example, that Henkel's (2014) 'photo-taking impairment effect' (where taking photos was found to impair recall and recognition of photographed objects under certain conditions) cannot be generalised to photography and memory more widely without acknowledging the limitations of neglecting historical context or limiting photographic practices (Fawns 2022). Similarly, a more thorough appreciation of the role of context would illuminate the problem with Sparrow et al (2011) proposing a very broad 'Google effect' without that search engine, nor the Internet, featuring in their methods or results (Heersmink 2016). These studies suggest something interesting about how we pay attention that is worthy of further exploration, but it is premature to make claims beyond the limited forms of media engagement featured in the research. Controlled media-memory studies can help us understand something about memory mechanisms, but not much about generalisation to wider populations (Mook 2013). As Mook argues, our goal is often not to generalise to a wider population but to better understand how something (remembering, in this case) works. Media and technology are not homogeneous things with fixed properties, where one instance can stand in for all related instances and produce the same results. Understanding the role of media in relation to memory requires paying attention to specific media properties, practices, and cultures.

Choices relating to media must be carefully explained and justified, since they are important to the activity that takes place (Grall and Finn 2022). There are simply no abstract, objective, or archetypal media-memory practices, and media are never representative of everyday experience (Grall and Finn 2022). These challenges reinforce the importance of describing and analysing the role of context. While it is not possible to find media and tasks that are meaningful to all people and situations (Kvavilashvili and Ellis 2004), whichever media and tasks feature in our research become meaningful to these participants in relation to this particular research context. Understanding this

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situated combination of factors is an important aim for research into media and memory. Furthermore, researchers must take care to consider the wider social and material contexts in which media feature in research. For example, we cannot understand everyday photography without understanding the technologies of camera, photographs, albums, and social media platforms, and how they are integrated into broader life.

Ecological validity

Brown and Reavey (2015) proposed an expanded view of memory that allows for connections between individual and collective; and between cognitive, social, and material forms of remembering. This move from memory to remembering is crucial because it is the situated activity, rather than the system itself, about which researchers from different disciplines are most likely to find commonality. In relation to the activity of remembering, different perspectives are not equivalent, but nor are they incompatible. For example, in the psychology of memory, ecological validity calls for us to interpret remembering as embedded in an ecology where context is not noise but a constituent element (Neisser 1978). Drawing on a tradition of work in media studies on 'media ecologies', Brown and Hoskins (2010) and Hoskins (2016) develop the idea of a 'memory ecology', foregrounding the interdependence of material and cultural environments with cognition and emotion. While these different views may lead to different conclusions, they find common ground in their focus on the emergent, contextualised articulation of memory. Perhaps, then, the answer to Barnier and Hoskins's (2018, 389) question, 'how are memories in the head and in the wild related' lies in expressions of ecological validity around *remembering*, whether or not *memory* is conceived of as individual and internal, or collective and distributed. The relation between head and wild is that, no matter where memory is, all remembering is always in the wild.

This reframing can explain why there is no clear-cut, binary distinction between laboratory and naturalistic methods (Winograd 1988). Remembering in lab studies cannot be disconnected from the natural world, and field studies cannot avoid influencing that which they seek to study (Kvavilashvili and Ellis 2004). These issues do not invalidate the results of memory research. Even outside of research, people are never free to do exactly as they want because they are part of ecologies that constrain possibilities for action. What is important is how we theorise and take account of these limitations to representativeness and generalisability. 'Wild' views allow us to reflexively reconcile lab and natural settings as just another remembering context. A lab is, potentially, just as ecologically valid as family reunions, conversations in a park, or watching TV after work, as long as we recognise that it is not context-free, and that prescriptive and highly-constraining choices of event-type, location, timing, media, and options for response all contribute to the emergent remembering activity. Indeed, it is impossible to choose a representative context for everyday remembering due to the diversity of ways in which everyday life emerges in socially and materially situated activity. I do not mean that labs are somehow equivalent to family homes in relation to remembering, but that we cannot take any context for granted as representing the kinds of remembering people do.

More important than how we label a research study (e.g. as lab or naturalistic) is its utility (Winograd 1988), which is contingent on our justifications for applying our conclusions to other situations. If context plays a constituent, rather than merely an influencing, role, then the qualities of remembering are not transferable in any straightforward way. They are differently produced in relation to whatever conditions are present at the time. This makes blanket claims such as that Google is 'making us stupid' (Carr 2010) or that taking photos 'impairs' memory (Henkel 2014) problematic because they do not take into account the importance of particular situations, individual practices, or cultures of

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use. Of course, there are patterns of commonality across situations and across individuals, even if these may be founded upon, or entangled in, layers of culture (Bartlett 1932; Wang 2019). However, in relation to digital media and technology, the slowly emerging evidence does not support simple conclusions. Instead, it paints a complex picture of different effects that are dependent on different factors (Schacter 2022).

Seeing remembering as inevitably situated can generate richer understandings but make it harder to extrapolate those understandings to human memory more generally. This may seem like a serious limitation to many researchers, but, I argue, it gives us a more honest and sophisticated understanding of how remembering actually works in relation to the complexities of media and the world around us. Wild views support greater reflexivity around the remembering context and, therefore, more precise and appropriate application of results and conclusions. More nuanced understandings may help us to elaborate or critique other generalisations, particularly those featuring linear, causal affects: *if this then that*. For remembering in the wild, *this* is always an entangled construct. Remembering is never free from the intertwining of individual, social, cultural, political, economic, and environmental factors, and this is heightened when we turn our attention to the role of media and technology.

The results of any memory study can be reframed as a particular case of wild remembering through interpretation of the environment and research practices as non-neutral, and as socially, materially, and culturally situated. Methodology sections of experimental papers, in particular, are often rich with mechanical details but lacking in conceptual precision about media and reflexivity about context. Yet, if we are interested in particular individuals, groups, and situations, we need to go beyond statistics and interrogate the heterogeneity of contexts, samples, and populations. A necessary ingredient in this analysis is a clearly articulated theory of remembering that takes the external world, including media and technology practices, meaningfully into account.

Mixing disciplines for a richer picture

It is an important, interdisciplinary challenge to reconcile evidence from different methods and methodologies (Barnier and Hoskins 2018; Brown and Reavey 2015; Sutton 2010). To see the richness and variety of lived experience, we need multiple approaches working together (not always in harmony, for disagreement, tension and debate are constructive aspects of interdisciplinary work). This kind of cross-fertilisation poses some significant quandaries. How do we work across disciplines and perspectives without getting bogged down in longstanding ontological or disciplinary debates (e.g. what kinds of knowledge are valid; what counts as evidence, or, indeed, the mind)? I argue that any philosophical divide between head and wild research will be more easily negotiated with a focus on remembering rather than memory.

Locating remembering in the wild, rather than in the head, provides a more versatile conception with which to cross the divide because it can allow for memory systems to remain firmly in the head. Wild remembering still involves brains, and can accommodate internal constructs such as episodic or semantic memory, associated feelings, emotions and imagery, as long as these are understood as part of a wider, distributed activity (Fawns 2022; Sutton 2010). Thus, it does not stop researchers from collaborating with, or engaging with, those who locate and study memory in the head. As Tulving (1991, 41) argued, 'memory, like countless other objects of scientific curiosity, can be studied and described at many different levels, from many different perspectives, using many different approaches and methods'. Tulving, the originator of the episodic/semantic distinction (Tulving 1972), exemplifies an openness to reframings of memory. His work, although it cautiously suggests a view of memory in the head and has primarily featured word lists

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and the study of apparently independent memory systems in labs, demonstrates a profound respect for the influence of the environment on memory. Tulving recognises that we must extract memory from the head to study it – it must always be converted via proxies (e.g. verbal expressions of recall) that can be observed by researchers (Tulving 1982). Through such conversions, memory is performed out in the wild (even where the wild is partly constituted by a lab) because performance is necessarily situated in context. Nor does Tulving strictly confine memory systems to the brain, taking care to clarify that what we are studying is the convergence of cognitive processes grouped together under the label of 'memory' (Tulving 2002). For him, what matters is not a strong commitment to established conceptions of memory but the potential value of different conceptions and approaches to our greater understanding.

Conclusion

A key challenge for the field of memory studies (and thus a core provocation for *Memory, Mind & Media*) is to reconcile understandings of memory in the head and in the wild. An important aspect of this is to reconcile evidence from experimental studies that, for the most part, pay little attention to the contexts, practices, and cultures of media engagement, with studies (including those from other disciplines) in which such things are part of what it means to remember. In this commentary, I have argued that the distinction between head and wild (Barnier and Hoskins 2018) can be explained in ecologically valid terms by reframing all *remembering* as in the wild. Even when the memory system is considered to be in the head, and even when that head is in a lab, the system still remembers in the wild. This can help us to take account of the complex contexts and relations in which empirical results are produced, and help us not to jump too far ahead of the evidence or to accept sensationalised claims (e.g. Google is making you stupid, photos are destroying memory, etc.). It can also create the versatility we need for interdisciplinary debate and collaboration, by allowing for different conceptions of memory systems while taking account of contextual factors and media and technology practices as constituent elements of remembering.

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Tim Fawns (University of Edinburgh) is a senior lecturer of clinical education at the University of Edinburgh. His research interests include clinical and digital education, technology, photography, and autobiographical memory.

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