An Interviewer's Guide to Autobiographical Memory

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When interviewing people about their experiences, what they tell is really their memories about experiences – their autobiographical memories. In the present article I will discuss what implications this perspective has for interviewing. I will argue that autobiographical memories are not representative of experiences on two grounds: 1) they are not accurate representations of the original experience and 2) memories of concrete examples – specific memories - are not representative of the individual's "total" of experiences – they are highly selected. Thus, where interviewers are typically concerned about how representative their sample is and what implications this has for generalizing to other people, i.e. representativeness *between* individuals, I'm suggesting that interviewers should also be concerned about how representative the interviewees' memories are of their experiences, i.e. representativeness *within* the individual.

First, I will outline different types of autobiographical memory. Then I focus on one type of autobiographical memory, namely specific memories, because 1) it is one of the most well-researched types of autobiographical memory, which will often pop up in interviews as "stories" and 2) authoritative texts on interview methods typically emphasize that interviewers should ask for concrete examples and specific episodes (e.g. Kvale, 1997), which are often retained in memory as specific memories. I will touch upon two central issues regarding specific memories: Their accuracy and the processes involved in developing long term specific memories. Then I illustrate how this knowledge may inspire reflections when conducting interviews where I use Kvale's (Lave & Kvale, 1995) interview with Jean Lave. Extending the practical implications I discuss how Conway's (2005) theory of autobiographical memory may help interviewers to guide interviewees' to recall specific memories.

The article does not contain an exhaustive review of studies in the area, but highlights generally accepted knowledge in the field of autobiographical memory. The basic assumptions in the article are that there is correspondence between the real world, subjective experience and memory for those experiences and that knowledge about memory can be gained from the way people talk about it and describe it (obviously distinctions between the real world, subjective experience, memory and language are also assumed). The degree of correspondence and the correspondence between the real world and subjective experience is not discussed in the present article, rather the focus is on the correspondence between subjective experience and memories.

Types of Memory and Autobiographical Memory

There is general agreement that long term memory[1] is divided into three major systems: 1) procedural or implicit memory (i.e. memory revealed “when performance on a task is facilitated in the absence of conscious recollection” (Graf & Schacter, 1985, p. 501)), which refers to memory for cognitive, perceptual or motor skills, like reading or riding a bicycle; 2) semantic memory, which is memory for facts, like who is presently the head of the psychology department and 3) episodic memory, which refers to memory for information located at specific time and space units, like “the day I defended my Ph.D. thesis” (Eysenck & Keane, 2005). The last two types are both understood as explicit memory, that is memory, which “requires conscious recollection of past experiences” (Graf & Schacter, 1985, p. 501), which is typically what interviews focus on. Autobiographical memory is often discussed in relation to episodic memory (Conway & Rubin, 1993), but has also been defined as “memory for information related to the self” (Brewer, 1986, p. 26). Thus, it may also contain semantic knowledge of the self, like where I was born and the name of my grandparents, which are not associated with the recall of specific memories containing that information. Hence autobiographical memory cuts across both episodic and semantic memory. Within the autobiographical memory literature several subtypes have been identified (Brewer, 1986, Conway, 2005): 1) facts, like eye colour and occupation, which has hardly received any attention in the autobiographical memory literature and hence I’ll only describe the following in more depth: 2) self-schemata, 3) generic memory and 4) specific memories[2].

Self-schemata refers to knowledge about self that is more complex and contextualized than facts, but more general than specific or generic memories, like self-schemata about “being shy” (not just the fact of being shy, but the accumulated knowledge about feelings, thoughts etc. connected with being shy, although the content of self-schemata may be communicated as facts or statements). Self-schemata have not received much attention in the autobiographical memory literature but is a central concept within cognitive therapy and some cognitive theories of emotion (Beck, 1976; Power & Dalgleish, 1997). However, self-schemata are assumed to possess some of the same characteristics as other schemata, like organizing information in an economical fashion, because several experiences are “stacked” to achieve general knowledge. Thus, when the interviewee’s responses reflect self-schemata (“I am a very positive person”), it probably refers to a number of more or less abstracted experiences, where each particular experience may differ from this schematic knowledge. The divergence between the original

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1 As opposed to sensory memory, short term memory and working memory, which will not be discussed in the present article.

2 One limitation to this categorization is that it has been established, it is my impression, through a mix of introspection and studying what participants say when they are asked to recount their past experiences (see for example Barsalou, 1988). While there is nothing wrong with introspection and analysing how people talk about their past, this obviously means that we can in no way be sure that the categories exhaust, reflect and distinguish the true range of “memory for information related to the self” (Brewer, 1986, p. 26). It is possible that some types of autobiographical memory have not yet been identified or that some existing categories need to be collapsed. Also, different ways of talking about autobiographical memory may not reflect underlying differences in memory representations. In addition, when people talk freely about their past experiences they are likely to intermix all the different types of autobiographical memory and knowledge about “naturalistic remembering” is at present limited.

experiences and schematic knowledge may occur because once a schemata is established it is thought to guide cognitive processes, like encoding and recall of a particular experience (Bartlett, 1932). There are, however, disagreements about how conservative self-schemata are and the degree of distortion of information and it has also been suggested that there may be individual differences in the rigidity and distortion properties of self-schemata (Dalgleish, 2004).

Generic memories refer to memories of repeated and similar experiences, like "being shy when meeting important people at conferences" and are thus more abstracted than specific memories but more specific than self-schemata. Generic memories are thought to reflect some of the same mechanisms as schemata, like "stacking" similar experiences, but because generic memories have a strong sensory and especially visual-spatial component, stacking of experiences cannot cut across very different experiences and thus generic memories are more specific than self-schemata. If the interviewee's responses reflect generic memories ("after dinner, I sometimes take the children to the bedroom and we go jumping in the bed"), the interviewer may assume that the experiences do have some typicality, otherwise a generic memory would not have been formed, but, as with self-schemata, the generic memory represents the average and thus may lack in specific detail and differ from particular experiences. There is general agreement that depression and perhaps also some other disorders are associated with a greater likelihood of recalling generic memories compared to specific memories and it is possible that this may be an enduring characteristic (Williams, 1996).

In general it is important for the interviewer to reflect upon that neither generic memories nor self-schemata are representative of concrete experiences, they are averaged across experiences that are in some way similar and those experiences that differ from the average may either be shaped to "fit" the generic or schematic memory structure or be retained as specific memories.

Characteristics of Specific Memories

Specific memories are defined as "a recollection of a particular episode from an individual's past" (Brewer, 1986, p. 34), like "talking to David Rubin after my presentation at the conference in Stockholm" and a typical operationalisation is to ask participants to recall a memory of an episode lasting no more than one day. Specific memories are characterized by their strong sensory – especially visual-spatial – component (Brewer, 1986; Rubin, 1995). The reliving that takes place while the individual is remembering the experience may be accompanied by a change to the grammatical form of present tense when telling about the specific memory. It has also been suggested that specific memories contain certain canonical categories of information, like ongoing activity, location, persons, other's affect and own affect (adapted from Brown & Kulik, 1977). While most of us will have specific memories for yesterday it is unlikely that all of us will retain that memory for a very long time (Brewer, 1986; Conway, 2005) and some authors have suggested that specific memories of recent time belong to a different memory system than long term specific memories (Nelson, 1993) and only some recent specific memories may become consolidated into long term specific memories (Rubin & Kozin, 1984). Regarding this distinction, it has been suggested that our recent specific memories are likely to be more accurate and subjected to less shaping and bias

than our long term specific memories, which may have been influenced by schemata-driven reconstruction processes for a longer time (Brewer, 1986; Linton, 1986). Long term specific memories are thought to be organised hierarchically in narrative-like structures, with mini-narratives, like “collecting date for the aging project” at the lower level, extended time-lines, like “when I worked at the psycho-oncology research unit” at the next level and at the highest level the life story. Mini-narratives are thought to be nested within extended time-lines, which again are considered to be nested within the life story (Barsalou, 1988; Conway, 2005)[3]. These narrative-like structures are created by forming links between specific memories by a process of autobiographical reasoning emphasizing temporal, causal and thematic connections as well as cultural models of the life course (Bluck & Habermas, 2000). These processes make specific memories from different time points appear as larger gestalts of experience, although they may not be understood this way, while they are happening.

Accuracy of Specific Memories

As an interviewer you may listen to your interviewee tell a story with vivid details and strong emotions, and you might get a feeling that this experience really captures the essence of what the interview is about. But the interviewee is not telling you about an experience, she or he is telling you about a specific memory of an experience and as I will attempt to show below, specific memories may not correspond to the original experience.

Specific memories have previously been thought to reflect the activation of an underlying trace and be viewed as a direct re-presentation of the original experiences, thus neglecting the possibility of construction processes in recall of specific memories (see Brewer, 1986 for a brief historical review). However, most researchers now agree that specific memories are reconstructions (see for example Brewer, 1986; Conway, 2005; Neisser, 1982; Winograd, 1994), where several factors may influence what is recalled and reported, i.e. the recall context, the type of memory search etc[4]. On the other hand the evolutionary argument – that it would be maladaptive to have wildly inaccurate memories – is often invoked to explain why memories need to be at least reasonably accurate reconstructions of the original experience. In autobiographical memory accuracy is hard to study empirically, as it really concerns the degree of correspondence between subjective experience and memory[5]. Hence accuracy is often operationalized as consistency between a recent memory description and a later memory description, assuming that the recent memory description is fairly close to the original

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[3] It may be argued that these are not only organisational structures for specific memories but actually new types of autobiographical memory derived from abstracting information of specific memories linked over time. In any case, the distinction between generic and schematic autobiographical memory and the narrative-like structures in autobiographical memory constitute two central ways of structuring autobiographical knowledge, one that blurs sequences across time by “stacking” similar experiences (generic and schematic knowledge) and one that explicitly represents sequences across time (narratives).

[4] Although some kind of trace must exist otherwise there would be no correspondence at all between the original experience and the specific memory (see later section on What is Recalled and Reported during the Interview).

[5] In experimental research on memory this difficulty is circumvented by knowing the real world (i.e. lists of words, pictures and so on) and then assuming that this corresponds to subjective experience.

experience. Empirically, the question of the accuracy of specific memories has been one of the main research questions in the flashbulb memory literature (an often used example of a flashbulb memory is that most people remember when they heard about Kennedy's death or more recently the 9/11 terror actions in the U.S.). Since flashbulb memories are also conceived to be an example of specific memories (Brewer, 1992) research within the area may be utilized to gain knowledge on specific memories. Flashbulb memories were first termed and investigated by Brown and Kulik in 1977 who suggested that flashbulb memories were: "memories for the circumstances in which one first learned of a very surprising and consequential (or emotionally arousing) event" (p. 73) and that they had a live quality, were accurate and stored permanently. Although they also highlighted that flashbulb memories need not be complete records of the events (or experience), many researchers have taken the claim of accuracy as their starting point and challenged Brown and Kulik's original conception of flashbulb memories as unchanging memory traces (see Neisser, 1982 for the start of the debate). While some studies do, indeed, find a very low degree of consistency between the first and the second memory report or between known fact and a later memory report (Christianson et al., 1988; McCloskey et al., 1988; Neisser & Harch, 1992) other studies find relatively high consistency indicating a high degree of accuracy in flashbulb memories (Conway et al., 1994) even over as long as 50 years of retention (Berntsen & Thomsen, 2005). One suggestion is that the high degree of reliving in flashbulb memories may induce the remembering person (and researchers) to more strongly *believe* in the accuracy of the memory (Talerico & Rubin, 2003). Studies using diary methods have also reported differing result (Barclay & DeCooke, 1988; Brewer, 1988; Linton, 1986; Larsen, 1992). Interestingly, studies have also found that mental content is more likely to be forgotten than for example activity (Brewer, 1988), suggesting that interview questions addressing this type of content should be asked and interpreted with care. Thus, although individuals may have false memories (Berntsen, 1998) and our specific memories are reconstructed which may introduce some variance between the experience and the memory (as it is recalled and reported in the interview), at present there is general agreement that the gist of the experience is recalled reasonably accurately[6] or as expressed by Barclay & DeCooke (1988): "It is unimportant for one's memories to reproduce the past as long as truth is maintained" (p. 121). However, as you will see below, truth may change over time.

The above indicates that specific memories that interviewees tell during the interview are unlikely to be 100% accurate. A large range of processes in encoding, consolidation, storage and recall of specific memories are likely to shape the construction in a variety of ways, for example the way a memory is related to the individual's ongoing life story and schematic structures, how it has been told before and the message the interviewee wishes to tell (and the interviewer might like to hear). Furthermore information introduced after an experience or other experiences may colour the way the original experience is interpreted and remembered[7]. One vivid example of this is McAdams' (McAdams & Bowman, 2001) concepts of redemption

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[6] There is an ongoing discussion about the influence of emotional intensity on the accuracy of specific memories, which I will not touch upon further, but see for example Christianson (1992) for a review.

[7] Michael Ross has done some interesting studies on self-serving biases in memory (see for example Wilson & Ross, 2003 for a nice overview)

and contamination. Briefly, redemption refers to when a negative experience is turned into something positive and contamination refers to when something positive is turned into something negative. A concrete example of a contamination experience is a woman who moves to a new town, so that her son can have contact with the grandfather who then dies shortly thereafter (McAdams & Bowman, 2001). In this instance it can be seen how an originally positive experience may later be recalled as a negative experience, because the death of the father is experienced as contaminating the good intentions in moving. An example of how an experience can change in significance comes from Linton's (1986) diary study: "…meeting a shy scholar 5 years earlier takes on new importance when I begin to date and decide to marry him" (p. 64). Thus, while most interviewers are probably well aware that experience is subjective, it may also be necessary to be cautious and not interpret memories as reflecting experience *at the time of the experience* since a specific memory is not representative of the original experience nor of the meaning originally ascribed to the experience.

What Makes some Specific Memories Last for a Long Time?

You may have accepted that when your interviewee tells you a story with vivid details and strong emotions it is not necessarily an accurate reflection of how it was experienced at the time. Still, even though it might be somewhat inaccurate, you still feel that it captures the essence of what the interview is about and as such may be representative of relevant experiences. But the interviewee may have had more than one experience that is relevant to your interview questions. What happened to all the other experiences, why are they not recalled and told as a story in your interview? Below, I'll review some of the knowledge about the processes involved in developing experiences into long term memories showing that these processes are highly selective, which indicates that long term memories of experiences are not representative of the individual's "total" of experiences.

As mentioned above we all have specific memories from yesterday, but in a couple of weeks or months we may not all be able to recall those specific memories – they may have been forgotten or melted into other autobiographical memory structures such as generic memories or self-schemata (Conway, 2005; Linton, 1986). So one important question is what causes some specific memories to become long term specific memories? There is general agreement that specific memories are likely to become long term, if the experience was important, emotionally intense and/or unusual (Brewer, 1986; Conway, 1995; Linton, 1986). However, processes after the experience, like new information changing appraisals, and rehearsal – i.e. repetition - which may refer to both thinking, talking and writing about the specific memory also play a role (Linton, 1986). These factors, however, are not independent of each other, experiences that are both important and emotionally intense are likely to be more rehearsed and thus the factors may converge to make the development of long term specific memories more likely (Brewer, 1986, Linton, 1986). On the other hand, each factor alone may not contribute to the development of long term specific memories (Brewer, 1986). Thus, experiences that are emotionally intense may not necessarily lead to long-term memories. If a woman expects her partner home at a given time and appraises his delay as meaning that an accident may have occurred, she is likely to experience strong anxiety. But if she later that evening finds out that the reason for the delay was non-dramatic, like a late ending meeting, the experience may not

be very likely to develop into a long term specific memory. In one influential theory (Conway, 2005, Conway & Pleydell-Pearce, 2000) it is suggested that long term specific memories are those that have relevance to important goals, and important and emotionally intense experiences (also in retrospect) may exactly reflect experiences that are critical to the attainment or abandonment of important goals. Experiences, however, may be unusual without being experienced as important to goals or emotionally intense. Nevertheless, some studies have found that unusualness is a good predictor of long term specific memories (Brewer, 1988). One explanation is that many specific memories are "forgotten" by being melted into more abstract structures as generic memories or self-schemata and unusualness would exactly prevent this type of forgetting, because the experience is not sufficiently similar to other experiences to be included in this process (Brewer, 1986; Linton, 1986).

The functions of specific memories may also play a role in the development of long term specific memories (Pillemer, 1998). Several different functions of specific memories have been suggested, but here I'll focus on directive functions, self-functions and communicative functions (which may overlap in concrete specific memories). Regarding directive functions this concerns whether the specific memory contains information about how to behave in certain circumstances (Pillemer, 1998). Research has for example shown that if an experience is the first in a long sequence of similar experiences it is more likely to develop into a long term memory (Linton, 1982; Robinson, 1992). From the above one may reason that such experiences ought to become generic, even though they may also be accompanied by perceived importance, emotional intensity and rehearsal, but it has been suggested that such specific memories form a prototype for the following experiences and thus are retained as a specific memory (Robinson, 1992). One example is from the Linton diary study, where she reported one experience of going to a conference, which she returned to repeatedly over the years. Nevertheless, she retained a specific memory of that particular first meeting (Linton, 1982)[8]. Regarding the self-functions of specific memories, it has been suggested that some specific memories may distil important themes and conflicts from the individual's life (Singer & Salovey, 1993). Inspired by a large collection of important specific memories, Pillemer (1998) has suggested three categories of self-functions: 1) *originating events* that define the start of a life path, 2) *turning points* that are thought to suddenly redirect a life course and 3) *anchoring events* that provided the basis for important beliefs and values. One example of an originating event comes from the famous cognitive psychologist Endel Tulving, who remembers a conversation with a colleague, who is telling about a promising young researcher, who has not yet "written his book" (Pillemer, 2001). Tulving recounts: "At the time of our conversation I had been in the psychology research business for a long time, had published a number of papers in various journals, had been promoted to full professor…But I too, had not written my book yet. Trying to conceal my embarrassment, I changed the topic of the conversation, but I never quite recovered from the emotional impact of the casual comment of my friend. From that day on I started thinking about writing "my book"" (Tulving, 1983, p. vii referred in Pillemer, 2001, p. 127). Also, specific memories that capture moments of goal progress or lack

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[8] This may also be because the first meeting played an important role in structuring her personal narrative about career developments (see Robinson, 1992 and Thomsen & Berntsen, 2005 for further development of this idea).

thereof may serve as structural units in the individual's self-narrative by establishing chronological and causal order (Robinson, 1992; Thomsen & Berntsen, 2005). In addition specific memories may serve communicative functions (Pillemer, 1998). A memory may for example be a good story in terms of being funny or perhaps dramatic and may therefore be told as a means of entertaining (McLean, 2005) and hence develop into a long time specific memory because of rehearsal processes. A specific memory may also contain messages about wishes, morales and values, that the person consciously or unconsciously would like to convey to listeners, without saying it directly (McLean, 2005). When hearing someone telling about vivid specific memories, the listener may form mental images and these may exert their influence without being questioned or interpreted the same way as more explicit, verbally communicated statements might be. Specific memories are good communication vehicles as they have narrative qualities that easily capture the attention of listeners, i.e. they extend over time, they have actors in a scenario engaged in (goal-directed) action and they are often emotional. Furthermore, they are associated with rich sensory details, which may make the listener form her/his own images of the experience and imagery in turn may be associated with increased belief in the accuracy of the memory (Pillemer, 1992). Hence, telling about specific memories is a powerful means of communication. For the interviewer this means a further obstacle in gaining knowledge on representative experiences, since the interviewee may also consciously or unconsciously elect to tell about (or not tell about) certain specific memories in order to convey certain messages about her- or himself.

What does this Mean to the Interviewer?

Above I have argued that autobiographical memory is not representative of experience and this may be important to two phases of the interview, both when deciding what questions to ask and when interpreting the interview. The knowledge that long term specific memories most likely refer to experiences that in some way were important to the interviewee may be used explicitly as an interview strategy, thereby gaining knowledge on what themes are important to the participants. We utilized this strategy in an interview study on breast cancer patients' experience of their communication with staff, where they were asked to report five specific memories that first came to mind (Thomsen et al., under review). The advantage of this method is that themes derived through content analysis presumably reflects themes that are very important to the interviewees and that very rich descriptions are given, allowing a detailed analysis of communication experiences[9]. The disadvantages may be that the interview style at first may seem rather strange to the interviewees and some of them also found it hard to recall specific memories in this fashion.

The knowledge about specific memories is, however, also important in the interpretation phase. In the study mentioned we may not interpret the memories as reflecting what the interviewees typically experienced in their contact with the staff – indeed if we wanted to know about their typical experiences we should have asked for the other types of autobiographical memory, for

[9] The critical incident technique (Flanagan, 1954) is somewhat similar but focuses on recent experiences and asks explicitly for positive and negative experiences (see Thomsen et al., under review for a further comment on this).

example generic memories of going to chemotherapy or facts about how they interacted with the nurses. Another concern – which is not unique to this strategy - is that the interviewee may be trying to send a message – without saying it explicitly and the interpretation may depend on this. On my way home after doing one of the interviews for the study I was struck with how forcefully the interviewee had conveyed a certain message through her telling me of all five specific memories. The interviewee was a woman who told about specific memories where she in some way did not conform to the typical breast cancer patient role, she was for example ready to leave the hospital relatively fast after the breast removing surgery. Also after finishing the formal interview the interviewee took me to another room in the house and showed me a photo of herself in bikini taken before the surgery. She told me jokingly that she had had the photo taken in order for her husband to have that to look at after the breast removing surgery. And she laughed a bit about her own idea. I think it was probably this part of the interview that really alerted me that the interviewee was very keen on being perceived as someone who coped well and was able to laugh it all off. Thus, this may be one example where specific memories reflect not only important experiences but were selected to convey important self-perceptions and self-presentation. Thus, when using specific memories as an interview strategy or in the interpretation of the interview the interviewer needs to keep the multiple functions of specific memories in mind.

In the following section I'll try to exemplify some reflections one might have to an interview when applying the knowledge described above. I have chosen Kvale's interview with Jean Lave (Lave & Kvale, 1995) as it has been published in its full length and because especially the first part offers good opportunity for reflecting upon the autobiographical memory reported by Jean Lave. SK interviews JL about the anthropological method and asks her: "What do you do before you get out in the field?" (p. 220). The question is general and - it appears to me - makes a request for a generic memory. JL responds by telling something general about what you "should do". She then tells about how she does it a different way by telling about what she did when she went to Liberia the first time. In autobiographical terms she seems to be telling a mini-narrative or extended time-line about a certain instance, not what she generally does. Thus I might wonder whether the Liberia project serves as a prototype for what she normally does or whether she has done it any other ways and what were they like? Also, she seems now to remember all her many study and reading periods extending over several years as a part of a larger gestalt (termed "Liberia"), but I wonder if she experienced it as a gestalt back then and whether she attached the same meaning to it at the time she was travelling between Liberia and her home.

SK then asks: "When you started on that field project, what did you do the first day?" (p. 221). In terms of autobiographical memory he is asking for a specific memory about Liberia. JL responds with a specific memory from a field project in Brazil. One thing that strikes me is first that she changes to a different project and that the memory has a very tight narrative structure: Background (arriving in Brazil), scenario (small, Brazilian town), feelings (exciting), action (rushed out, walked up to the Indians), morale (it took four month to find a way to ask a question). We don't get any details on how the village looked, what she did indeed do after walking up to the Indians in the first place and so on. Maybe she doesn't remember this, maybe

its not important in the present context because it's irrelevant details for the central message – that field projects take time and demands inductive reasoning. Both the changing of project and that the memory has such a tight narrative organisation driving the point home so surely makes me wonder whether there were other meanings that would come out if the specific memory had been elaborated or if other specific memories of first days on field projects had been recalled and reported. In other words: "how typical or representative is this first day and the meaning she attaches to it?".

The above analysis may appear overly suspicious of what the interviewee tells during the interview and may be taken to imply that the interviewer should question every answer the interviewee gives. It might also be taken to indicate that there is a different "truth" somewhere else, if different autobiographical memories are told about. This is not the intention, depending on the goals of the interview it may or may not make sense to ask for more or other types of autobiographical memories[10]. The point is merely that such questions sometimes may yield new information and offer a richer source of themes and possibilities for meaning making (and longer transcripts of course) as well as giving grounds for reflecting about the generalizability of the experiences and meanings told about in the interview.

What is Recalled and Reported during the Interview

Although the above considerations may have worried you a bit, you may still be interested in having interviewees recall specific memories (and for good reasons, I believe) and below I will briefly describe Conway's theory of recall and attempt to draw out some useful information for interviewers (Conway, 2005; Conway & Pleydell-Pearce, 2000). One of the assumptions is that autobiographical memory is organized hierarchically with the life story at the upper level, extended time lines, like "when I worked at the department of psychology" at the second level, extended events and mini-narratives, like "when I did the interview project on life stories" and generic memories, like "lecturing in the auditorium" at the third level and episodic memories, which consist of brief time slices of sensory details of the original experience, like the look of an elderly participant and the way she sounded when telling me about a certain experience (i.e. a memory). Voluntary recall of specific memories – which is often used in interviews – progresses as a cyclic process where a retrieval model is constructed[11] based on currently active goals and an elaboration of the given cues, i.e. the question asked in the interview[12]. The retrieval model then guides recall of a specific memory by assimilating knowledge from the

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[10] I do not think it is a good idea to ask questions directly addressing meta-memory processes, like "why do you remember this?". I do not think people always know. But it might be a good idea to ask questions whether it was important and what was important about it, whether it was unusual or perhaps the first experience in a series of similar experiences. In this way you might be able to get some knowledge about why a specific memory was retained as a long term memory and this might help reflections and interpretations of the interview.

[11] The idea that a retrieval model is constructed to construct specific memories does not appeal very much to me, but the construction process may also be understood in terms of constraints and allowances.

[12] Another type of retrieval is direct retrieval, which may be experienced as involuntary memories (Conway, 2005). This may happen in interviews when a specific memory comes to the mind of the interviewee while she/he is telling about something else. The process assumed to be involved is that something in the context serves as a cue that leads directly to recall of a specific memory.

upper levels of the hierarchical organization and the episodic memories, which give the specific memory it's characteristic sense of reliving. If the first construction does not fit the description, the search is continued until a satisfying construction is reached. Conway (2005) also suggests that the retrieval model may be under the influence of socialization processes, as it has been suggested that children learn to recall specific memories through interacting with their parents who provide them with linguistic scaffolding when recalling specific memories, like "do you remember who was in the circus? And what did he do?" (Fivush & Nelson, 2004; Nelson, 1993). The retrieval model may then be viewed as an internalisation of the scaffolding process. Using Conway's (2005) theory to understand the recall of specific memories has several implications for the interviewer. First, as already touched upon, this means that the specific memory is not an accurate representation of the originally experience and that specific memories of the "same" experience recalled at two different circumstances may differ, since the retrieval model may influence what is recalled and reported. Second, the theory explains why it takes relatively long time to recall a specific memory compared to other types of knowledge (Conway, 2005). Studies typically find that it takes on the average 5-15 seconds to recall a specific memory in response to a word cue, e.g. "seaside" (Conway, 2005; Rubin, 1998). There are also large individual variations, reaction times up to 30 seconds are not uncommon, and as mentioned above personality factors may contribute to the accessibility and speed of recall of specific memories. Recent research also indicates that women may recall more specific memories than males and there may also be cultural variations (Fivush & Nelson, 2004; Pillemer, Wink, DiDonato & Sanborn, 2003), but in general individual differences is under-researched in autobiographical memory. My guess is that reaction times may be much longer in interview settings where the interviewees are not prepared for a "memory task" and perhaps more abstract specific memories, e.g. an important learning experience, are asked for. Thus, if the interviewer would like the interviewee to tell about concrete experiences – i.e. specific memories –, it is important to allow the interviewee sufficient time to recall these and in my experience it may also help to ensure the interviewee that it is completely normal that recall takes some time. Third, the context of the interview has implications for what retrieval model the interviewee constructs and hence which specific memories are recalled. The explicit questions from the interviewer may, of course, influence the construction of the retrieval model, i.e. "can you tell me about your *latest* experience of *poor communication with the staff*?", where both content and time series is addressed. However, one may also imagine that less explicit features of the context, such as the quality of the interaction with the interviewer, the scaffolding that is provided early in the interview, the mood of the interviewee etc. influence the retrieval model. There is of course no way to avoid this, but the interviewer should be aware that the explicit questions may make the interviewee construct a retrieval model that will reject specific memories that may actually be relevant or mean that the relevant specific memories may not be constructed at all. If for example the interviewee has a fairly recent experience of poor communication, but has not labelled it as such, then a retrieval model constructed on the basis of such a question may not lead to the recall of this specific memory. In reformulating the question the interviewer may consider what characteristics a recent experience of poor communication could be associated with that would make the construction of a relevant retrieval model more likely. Here it might be helpful to keep the information categories of specific memories in mind, like feelings and activity (which

Brewer (1988) found was generally a good recall cue) and use these – perhaps as supplements to the other questions, i.e. "do you remember the *last time* you felt *anger*, when you were with the staff". The question of course may yield completely different specific memories than the first question, because a different retrieval model is constructed and some of the memories may not actually address poor communication, but allowances for this can be made in the analysis of the interviews.

Conclusion

Whether the interviewee tells about generic memories, self-schemata or specific memories during the interview these may neither be representative of experience as it occurred at the time nor of the individual's "total" of experiences. Thus the interviewer needs to be aware that no matter what type of autobiographical memory the interviewee tells about, it is not a representative selection of experiences – but the issue of *within* individual representativeness may be addressed both during planning and interpretation of the interview. Knowledge from the autobiographical memory literature may be used when asking questions and interpreting interviews, for example by asking for specific memories to attain information on important themes – but not typical experiences. In order to elicit specific memories two pieces of advice are offered: 1) allowing time and perhaps telling the interviewee that this often takes time and 2) considering different types of cues that might help the interviewee to retrieve relevant specific memories. Another strategy may be to be keenly aware of the different levels of autobiographical knowledge and their assumed relation to experience while interpreting the interview or when asking questions. One could for example ask for typical experiences (generic memories and self-schemata), a recent experience (short term specific memories) and a memorable/important experience (long term specific memories). By assimilating these three types of autobiographical memory in interpretation of the interview more knowledge on the typical, the important and the contextual details of experience and meaning may be configured, perhaps allowing more elaboration of themes as well as reflections upon generalizability.

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