'Personal Memories and Generic Mental Representations'

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Abstract:

The paper focuses on the particular structure of the content of so-called generic memories, specifically of those of recurring events from one's past. This way of remembering has two central features that are in tension to each other: what is mentally represented is both rather specific as one is typically simulating a scene and sufficiently abstract as the represented scene stands for a series of similar former events. It will be argued that the phenomenon can be adequately described as a mental state representing personal event prototypes. This description further allows to account for the dynamic process of remembering, in which, depending on the context, different forms of personal remembering may come to the fore.

Keywords: generic memory; episodic memory; prototype; event schema; exemplar.

1. Introduction

Interdisciplinary memory research has so far mainly focused on episodic memory (EM), i.e. on memories of particular personally experienced past events such as meeting my friend Luke at the restaurant around the corner last Wednesday. However, a large number of our everyday personal memories is far less specific.[1] They represent, for instance, recurring personally experienced events such as my weekly tennis training during school days, my frequent participations in climate demonstrations or my going to a friend's annual birthday party. Compared to EM, such memories seem to be independent of narrow temporal and spatial restrictions: I can remember my friend's annual birthday party regardless of the fact that it was usually celebrated at her flat, but sometimes also in a bar, usually in winter, but sometimes belatedly in spring and that the mood was sometimes exuberant and sometimes less so.

[1] Andonovski (2020) cites Barsalou (1988) who has conducted studies, which reveal that our everyday personal memories are to a large extent generic memories of recurring events. When subjects were asked what they did last summer, only 21% of the answers reflected memories of particular past events (EMs) in contrast to 32% of the answers, which referred to memories of "summarized events".

Compared to paradigmatic cases of EM, then, the representational content of such memories seems to be less specific, which is why they will be referred to as *generic memories* (GMs) in the following.

GMs raise a number of philosophical questions. The focus until now has mainly been on the metaphysical question, e.g., whether or how GMs fit into a causalist framework of memory (Andonovski 2020; Langland-Hassan 2022). An answer to this question is also important for connecting epistemological questions. For example, if GMs lack a specific causally traceable reference to a former event, it seems unclear how to distinguish genuine from false memories. The present considerations are in a certain sense preliminary to these questions: I will focus on the nature of the content of GMs and will suggest a clarification of its particular representational structure. An appropriate description, however, faces the following challenge: on the one hand, remembering recurring events such as my friend's annual birthday means (or can mean) to form a quite vivid and rich representation of these past events. On the other hand, while remembering, I am not bringing every single past birthday party to my mind, but presumably a more abstract representation of the recurring episodes.[2] These two features are in tension to each other. In the following, I will argue for the view that the content of GMs is structured such that it leaves room for episodic enrichment. This description not only reconciles the properties of specificity and abstractness. It also suggests a dynamic understanding of personal memories in general, which makes it possible for more abstract or more concrete features to come to the fore when remembering, depending on the context of recall. My argument will be structured as follows: (2) In the first part, after preliminary clarifications, I will introduce two adequacy conditions which will constrain the analysis of GM's content. I will then (3) look at cognitive structures that are effective in processes of categorization and ask - in the light of the adequacy conditions - which of these provide an adequate description of GM's content. In the concluding section (4), I will present some advantages of the approach and outline implications for future research.

2. Preliminary clarifications and adequacy conditions for a content analysis

As mentioned above, interdisciplinary and philosophical research has to date mainly focused on episodic memory (EM) (just to name a few: Tulving 1972; 1983; Bernecker 2010; Debus 2014;

[2] The term "episode" is sometimes used to refer to a past experienced temporal sequence composed of "events" (e.g., Cheng et al. 2016). For the sake of simplicity, I won't distinguish between "episode" and "event" in the following.

Cheng & Werning 2016 etc.). According to the pioneer in this field, Endel Tulving (1972; 1983), EM - conceived of as a memory system - stores past personally experienced events or episodes. What is represented in episodic recall, then, is an event or episode one has experienced and that has happened at a particular place and at a particular time. This description reflects the received view of EM, which Andonovski (2020) calls "singularism": the view that EMs are singular mental states about specific and unique personally experienced past events.[3] However, many personal memories are episodic-like without representing one specific past event that has happened at one particular time in one particular location. This applies to memories of recurring personally experienced episodes like of my friend's annual birthday party, but also to memories of habits and routines like of making oatmeal for breakfast or of being politically active during my college days. Compared to paradigmatic cases of EM, the content of such memories is less specific, which is why I will call them *generic memories* (GMs).[4] Importantly, I will restrict my considerations to GMs of recurring events from one's past and leave out GMs of (former) habits or routines - although there might be some overlap between the two forms of GM. I will further assume that the retrieval of GMs of recurring personally experienced events typically involves mental imagery, that is, one simulates a scene with perceptual properties.[5] With this focus I do not want to claim that there are no other possible representational formats when remembering recurring events from one's past. For instance, it may well be the case that - especially if the experienced events date back a long time ago - one mentally represents recurring past events in a more propositional way that is poor of mental imagery. However, my contention here is that most often GMs involve mental imagery, and this is the format I will focus on in the following.

What do we mentally represent when we remember recurring events from our past? Take the example of remembering the annual birthday party of a friend (let's call her Hannah): during retrieval I maybe visualize myself standing in Hannah's kitchen near the buffet surrounded by familiar people (Hannah's friends), the light is dim, music is playing, and I am in a good mood.

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[3] A growing number of philosophical contributions criticizes the standard account of EM for being too narrow and under-complex: Andonovski (2020) raises several challenges against approaches to EM, in particular against relationist and causalist approaches, which each presuppose a form of singularism (see above). Openshaw (2022) challenges the widespread assumption that remembering objects requires to remember an event in which the object features. Mac Cumhaill (2020) explores the way in which re-encountering artworks may prompt recollections of how it felt to be oneself in former phases of on's life.

[4] This term is so far not systematically established in the discussions, although it is occasionally used (see, e.g., Williams et al. 2008; MacCumhaill 2020).

[5] See Hopkins (2018) for a detailed account of the role of mental imagery in EM.

This description suggests a close resemblance to paradigmatic cases of EM: what is represented is something I have personally experienced, I simulate a scene of the past from a first-person perspective in a quasi-perceptual way with audiovisual properties, and the simulation is accompanied by a sense of reliving (due to particular phenomenal properties of remembering).[6] However, the difference is that the representational content of the mental state - despite its potentially being vivid - is yet relatively abstract: I am presumably not representing one specific past birthday party of Hannah, say, the one three years ago where I arrived late and had an argument with Mike. In this respect, GM seems to be similar to so-called semantic memory, which is functionally distinct from EM: it stores general facts, concepts and word meaning, and the content is not constrained by a particular time and place of encoding like in the case of EM (Tulving 1972). GM, then, seems to be somewhere in between episodic and semantic memory. How can this be specified more precisely?

Ulric Neisser coined the term "repisodic memories" in reference to GMs of recurring personally experienced past events: "What *seems* to be a remembered episode *actually* represents a repeated series of events" (Neisser 1981; my italics). This remark brings to the fore two interesting features of GMs: On the face of it, ("..seems..") such memories are like paradigmatic cases of EM of one specific personally experienced episode; this suggests the representational content to be quite specific. However, in reality ("..actually..") they represent a series of events, that is, not one specific personally experienced event; this suggests that the representational content cannot be too specific for it represents a sequence of events.

Based on these two properties I will specify adequacy conditions for an appropriate description of the content of GMs. These will constrain the analysis I will suggest in the following:

(AC 1) *Specificity condition*: generic remembering requires the representation of a scene (involving mental imagery; phenomenal experience).[7]

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[6] These properties of EM are commonly mentioned in memory research (e.g., Tulving 1983; Cheng & Werning 2016, Hopkins 2018 etc.). The perspective from which the episodic simulation is effected is generally a personal perspective, which is mostly a first-person, the so-called "field" perspective, but which can also be a third-person, the so-called "observer" perspective (Williams et al. 2008). The phenomenal property of remembering episodically is often cashed out differently, for instance, in terms of a self-related feeling (Tulving 1985; Klein & Nichols 2012), a feeling of pastness (Russell 2009), or an episodic feeling (e.g., Dokic 2014).

[7] It would be possible to further specify (AC 1) and require a causal link to the formerly experienced episodes such that what is mentally represented is grounded in relevant episodic information. While I think this to be plausible, I would like to leave the analysis at this stage of the argument open for competing metaphysical accounts such as simulationism (e.g., De Brigard 2014; Michaelian 2016).

(AC 2) *Non-specificity condition*: the represented scene is a "proxy" for a series of episodes forming a class.

The two conditions are obviously in tension to each other, they seem to be even incompatible: it seems that a (the content of GMs) cannot at the same time have the properties F and − F. However, I will show in the following how the conditions can be reconciled and how an adequate description of GM's content is possible by taking both constraints into account.

3. Content analysis of GM

Before I start with the more detailed structural description of the content of GM, it is useful to illustrate the two adequacy conditions specified above by applying them to the example of remembering Hannah's annual birthday party:

(AC 1*) *Specificity condition*: one brings to mind a birthday party scene from a sequence, e.g., one enters Hannah's apartment; one hears music playing and loud voices; one says 'Happy Birthday' to Hannah.
(AC 2*) *Non-specificity condition*: the represented birthday party scene functions as a proxy for similar birthday parties of Hannah forming a class.

The application raises the question of how exactly the representational content must be structured in order to fulfill the proxy function mentioned in (AC 2*). Even at first glance it doesn't seem plausible that the represented scene is such that it stands out of the past events forming a class, e.g., having exceptional features compared to other members of the class. Take, for instance, Hannah's birthday party four years ago, when, rather surprisingly to the guests, the party took place outside, and due to bad weather, only a few people came, and everybody's mood was rather bad. What speaks against taking GM of recurring events in this way? Clearly, remembering Hannah's birthday party in this way is nothing but a paradigmatic case of episodic remembering: one mentally represents a personally experienced singular event, which took place at a particular place at a particular time, and the retrieval has phenomenal properties which allows a sense of reliving. So this way of remembering won't provide the target property specified in (AC 2*).

By contrast, it seems more plausible, that by remembering Hannah's annual birthday party one represents a *typical* event, which possibly has less specific or average properties. But what does it mean to represent such a typical event? For a specification it suggests itself to look at mental structures that exhibit the property of typicality, e.g., event schemas (or scripts), prototypes and exemplars. Importantly, these mental structures vary with respect to specificity: event schemas (or scripts) are the most abstract representations; prototype representations are more specific than event schemas, and exemplar representations are more specific than prototypes. In the next sections, I will subsequently focus on each of the mentioned types of representation, explain them in more detail, and discuss them in the light of the two adequacy conditions.[8]

3.1 Event schemas and GM

I will first turn to so-called event schemas, which are sometimes also referred to as 'cognitive scripts'.[9] The question (to be further specified) I will discuss is: can the content of GMs be adequately described as a mental state referring to an event schema?

Event schemas are cognitive structures whose function is to guide the organization and interpretation of incoming information (Bartlett 1995). Schemas, generally, are generic mental representations of interconnected concepts, beliefs and expectations related to a specific domain (Anderson & Pearson 1984). When the specific domain is a common social situation, they are often called "event schemas" or "scripts" (Schank & Abelson 1977). The example often cited is the event schema for a restaurant visit, which is formed and stored as a consequence of many previous visits of restaurants. Such a schema includes concepts and expectations about the physical environment of a restaurant (e.g., tables, chairs), persons (e.g., other guests, waiters), and a sequence of events (taking a seat, ordering from a menu, paying the bill). These stored typical regularities of a complex sequence help to interpret incoming stimuli, to classify similar situations and to make flexible adjustments in unusual situations, for instance, when one enters a Japanese restaurant for the first time where guests don't sit on chairs but on the floor. According to schema theory, incoming information is being processed in part bottom-up (without impact by prior knowledge), and in part top-down, which means that the interpretation

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[8] Note that these generic mental structures - at least schemas and prototypes - are in the psychological literature standardly conceived of as being stored by semantic memory (e.g., Schank & Abelson 1977; Maguire & Frith 2004). The present considerations thus can also contribute to the broader question of how episodic and semantic memory interact.

[9] The terminology is not always uniform, sometimes the terms 'schema' and 'script' are used interchangeably (see, e.g., the overview by Whitney 2001).

of stimuli is guided by prior knowledge, i.e. by event schemas. Crucially, an event schema does not represent a specific situation; the event schema for a restaurant visit does not represent a particular restaurant. It is rather an abstract representation of the structure of a complex event.

Now, coming back to the content of GMs of recurring events: is it plausible to conceive of the content of GMs in terms of an event schema? More precisely, is the content of a memory of recurring events generic in virtue of its referring to an event schema? It is important, first, to distinguish between two ways in which event schemas may play a role: (1) an event schema being operative in the cognitive process of remembering; and (2) an event schema being itself the intentional object of the mental state. Concerning the first (1), event schemas have indeed been shown to be operative in memory processes. They impact, for instance, how individuals encode new information and how this information thereby becomes memorable and meaningful (Brewer & Treyens 1981). Event schemas also influence the retrieval process by guiding one's attention to schema-relevant details (Anderson & Pearson 1984). However, this function of event schemas is obviously not restricted to GM but is also effective in paradigmatic cases of EM, for instance, remembering going to an Italian restaurant with my uncle last October, when the waiter spilled red wine. If this is correct, then this view on event schemas does not provide any informative account of the particular structure of GM's content; event schemas are likely to be equally effective in GM and EM.

The second way (2), in which event schemas may play a role, is to assume that in remembering recurring events from one's past one refers to an event schema of these recurring events. In contrast to the former case (1), it is assumed here that the intentional object of the mental state is an event schema. In such a case, one mentally refers to certain regularities of common social situations such as that restaurant visits typically involve taking a seat ordering from a menu, paying the bill etc. This likely means to form relevant propositionally structured thoughts about these regularities given that the schema does not refer to any particular restaurant. How could this be applied to the example of remembering Hannah's annual birthday party? In analogy to the event schema for a restaurant visit, it must be assumed here an event schema for a birthday party in general, since it does not refer to a particular birthday party and therefore not to Hannah's. Such an event schema will presumably include regularities, i.e. typical events from a complex sequence such as arrival, greeting people, presenting a gift, singing a birthday song, eating cake etc., about which one would form propositionally structured thoughts.

It should be obvious, however, that to think of the content of GM in this way would be misconceived. This becomes clear when looking at the two adequacy conditions explained above. While (AC 2*) can be fulfilled - to mentally represent an event schema for birthday parties is sufficiently abstract to be able to function as a proxy for a series of birthday parties (including Hannah's) forming a class - (AC 1*) is not fulfilled: the condition requires that one mentally simulates more specific scenes from a complex past sequence. This means that the content of the mental state is at least constrained by a particular place (e.g., Hannah's apartment in Berlin Tiergarten or a bar nearby) and the presence of particular people (e.g., Hannah and her guests). For functional reasons (see above), the event schema of a birthday party does not feature such details. And since (AC 1*) is not met, event schemas, then, won't provide an adequate understanding of how the content of GMs is structured. In the next part, I will turn thus to the most concrete cognitive structure exhibiting typicality and will discuss it as a potential candidate to ensure (AC 2): so-called exemplars.

3.2 Exemplars and GM

The question I will address in the following is: does the content of GMs have an exemplar-like structure? Like in the previous discussion of schemas, I will first introduce the main idea of exemplar theory and then apply it to the content of GMs.

Exemplar theory attempts to explain how individuals categorize things (broadly construed) they encounter in the world, and how semantic categories are established and structured. The main assumption of the approach is that things (e.g., objects and events) are assigned to semantic categories based on the similarity to stored representations of previously encountered objects or events, called "exemplars" (Medin & Schaffer 1978; Nosofsky 1988; Minda & Smith 2001). According to exemplar theory, a given category is represented by a typical exemplar, which is the one that shares the largest number of properties with other exemplars of the category. The theory predicts that a new stimulus is more quickly attributed to a category when compared to an exemplar considered typical. For example, whether the object one sees in the park is categorized as a bird depends on its similarity to stored exemplars of the category, i.e., to birds one has previously seen, for instance, robins, chickens and herons etc. And the process of categorization is especially quick when the object one sees has a particular large number of properties in common with the typical exemplar, say, a robin one has formerly encountered and stored.

What is important for the present context is the exemplar-like structure some mental states exhibit. This structure is present when one mentally represents a typical event token (exemplar) as a representative of a category. Based on this description the above question can now be specified further: does remembering recurrent events from one's past mean to represent a typical token event (exemplar)? More precisely, does one represent a particular episode E (exemplar) that is considered typical due to a high degree of similarity to other stored former exemplars X, Y, Z?

Applied to the example of remembering Hannah's annual birthday party this would mean to mentally represent a party event token, which shares most properties with other former event tokens. For instance, I would mentally represent a scene from Hannah's birthday party two years ago: standing in the kitchen of Hannah's apartment, talking to John and Katie about politics, a Talking Heads song playing in the background, and I am in a good mood. This would, by hypothesis, be a scene I consider particularly representative of others of Hannah's birthday party scenes I have previously experienced. The represented scene would share the greatest number of properties with other former scenes of Hannah's birthday party that are equally available to my memory.

Considering the two adequacy conditions it becomes clear that the description meets the specificity condition (AC 1) very well: in remembering the birthday party scene I am using mental imagery, I am representing a scene with audiovisual properties, and the retrieval is accompanied by phenomenal properties. The challenge here is, however, that remembering a past event as an exemplar doesn't seem to be any different from remembering a past event in paradigmatic EM. In both cases I would remember being at Hannah's birthday party two years ago, standing in the kitchen talking to John and Katie etc. So GM and EM would be indistinguishable. If this is correct, then it seems that the remembered scene cannot have the proxy function required by (AC 2): the remembered scene would be nothing other than a remembered scene and as such would refer to nothing other than itself. Thus, if the description cannot do justice to (AC 2), then exemplar theory is not the right approach to account for the content of GMs.

However, the following objection could be raised: someone might argue that it may well be the case that - on the level of what is mentally represented - GM and EM are indistinguishable. What makes the difference is yet the attitude one adopts towards the represented scene: in the case of GM I remember the scene as one of a series of similar past episodes, and in the case of EM I

remember the same scene as a particular past episode. The scene is in each case presented differently, i.e. each under a different description. So (AC 2) would be met by locating it outside the representational content, namely in the attitude of the remembering subject. It would then follow that exemplar theory is indeed the right approach to account for the content of GM.

While I think this is an interesting way to reframe the whole problem, I am not entirely convinced. The reason is that the suggested picture is both not sufficiently accurate and too restricted. For one thing, it seems that I do indeed remember and thus mentally represent more than one particular episode in GM. Even if we can correctly assume that the property of being a proxy for a class of events is not something that is explicit or foregrounded in the representational content, it is nevertheless present in the representation itself: very often, when remembering recurring events, we easily switch from GM to EM and back again. The context of remembering Hannah's annual birthday party (GM) may trigger recalling a particular past birthday party of Hannah (EM). This could be, for example, a party where something extraordinary happened, such as when a famous DJ suddenly appeared at the party. It seems to be quite common in GM that the remembering subject can zoom into episodic details and thereby bring up an EM in the paradigmatic sense, which can even differ considerably from what is represented in GM recall. The simplest and most plausible explanation for this dynamic is, in my view, that GM's content is relatively abstract and does not represent a particular episode (exemplar) so that such a filling in of episodic details is smoothly possible. If this is correct, then the view that the difference between GM and EM is just a question of different attitudes towards the same exemplar content is not the right way to understand GMs for it does not accurately capture the phenomenon of GM.

I will therefore leave exemplar theory aside and next focus on prototype structures to get a more adequate understanding of the structure of GM's content.

3.3 Prototypes and GM

The question I will in the following discuss is whether it is plausible to assume that the content of GM has the structure of a prototype. As in the two previous sections, I will first briefly present the approach in general terms and then apply it to GMs.

Prototype theory is similar to exemplar theory in various respects. Its target is also to explain the nature of how objects or events are assigned to semantic categories, how category representations work and how categories are established. Prototype theory like exemplar theory

assumes that objects or events are attributed to categories based on a similarity comparison with a typical representative of the category (Rosch & Mervis 1975; Rosch 1978). The difference is, however, that, according to prototype theory, what is representative of the category is not a formerly encountered particular instance (exemplar) but a default case with average properties associated with the category, and this default case is called "prototype" (Hampton 2006). What exactly is such a prototype as a default case? Empirical studies show that some members of a given semantic category are considered to be more central than others. For instance, in the category BIRD, robins are considered more central than chickens, since robins are judged to have many of the properties that other birds are also taken to have (Smith 1995). This impacts how quickly an object is assigned to a category; if the object shares a particularly high number of properties with the central member of the category, categorization is very fast, and it is correspondingly slower if the object has fewer properties in common with the central member.[10]
A prototype, then, is the central or typical member of a category, which represents statistically prominent properties of the category and which first comes to mind when a given category is mentioned. It is "a cognitive representation that captures regularities and communalities among category members" (Minda & Smith 2001). This description reveals a key difference to exemplars: prototypes are clusters of statistically salient properties of a given category while exemplars are, as pointed out above, stored representations of previously encountered instances.[11]
Again, what is important for the present topic is the particular prototypical structure some mental states possess. This structure obtains when, for instance, someone mentally represents a category, say FRUIT, by referring to a standard representative, that exhibits a cluster of statistically relevant properties of the category members, for instance, apples.
Now, how can this be applied to the content of GM? Is it correct to assume that remembering recurring events from one's past has a prototypical structure? Applied to the example this would mean, first, that the label "Hannah's annual birthday party" refers to a class of past events encompassing all former of Hannah's birthday parties. In mentally representing it one then

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[10] This reveals the way - according to prototype theory - everyday categories are structured. Figuratively speaking, categories are vague at the edges (this is, for instance, where penguins are located in the BIRD category) (see Laurence & Margolis 1999).

[11] For an empirically accurate explanation of categorization of everyday objects, exemplar and prototype view are not necessarily mutually exclusive. They rather highlight different aspects of conceptual abilities and can explain different phenomena of categorization. For instance, exemplar theory is more powerful in explaining categorization in context-dependent ways. See also Machery 2009 for a pluralistic approach of concepts.

would bring to one's mind a clustered event that exhibits statistically prominent properties, i.e. a default birthday party event with average properties such as: arriving at Hannah's apartment at winter time (as most of the times); seeing guests X, Y, Z (one almost always meets there); having the same kind of food at the buffet in the kitchen (as always); being in a good mood (as almost always). Prototype theory would presumably predict that, roughly, this content comes to mind when remembering Hannah's annual birthday party.

But is this also in line with the two adequacy conditions? Recall that (AC 1) requires the content of GM to be rather specific involving mental imagery and a simulation with perceptual properties, and one could suspect that prototypical structure provides contents that are too abstract. However, prototypical event representation in the above sense does not speak against the required perceptual-like format. Remembering Hannah's annual birthday party as a clustered event with statistically relevant properties is indeed a simulation of a scene with spatial and audiovisual properties, as described above: I visualize myself being in Hannah's apartment, familiar people are around me etc. (AC 1) is therefore taken into account. The non-specificity condition (AC 2) is also fulfilled by the description: the representational content being sufficiently abstract can easily function as a proxy for further events of the respective class "Hannah's annual birthday party", including those that are less similar to the average representation. The target properties of GM's content are thus captured by conceiving of it in terms of prototypical structure, in contrast to both event schema and exemplar structure as has been argued above. Prototype theory, then, seems to provide an adequate description of the representational content of GM.

However, to this someone might object that the above description is not accurate on the whole: it sometimes or even frequently happens that in remembering recurring events from one's past one brings to mind a very rich and detailed representation of former episodes. In such a case one would simulate a richer picture than just a default event with average properties in the prototypical sense. In recalling Hannah's annual birthday, I can, for instance, include Hannah wearing a flashy pink dress she once had on into my simulation, as well as the particular style of music playing in the background to an advanced stage of one party; these properties don't fit the description of being statistically relevant or average. If this way of representing is possible in GM, then prototypical structure cannot be the appropriate account, so the possible objection goes.

I think this is an important observation, and I will try to respond to it in two ways, one in the negative and one in the positive: for one thing, the objection seems to refer to something that, strictly speaking, is not part of the target phenomenon. It is of course true that in certain situations one comes up with a rich and detailed representation of a past event in the process of remembering recurring events. However, this should be more precisely described as alternating between generic remembering and episodic remembering a particular past event. As has already been pointed out in the last section, it seems quite plausible and to be a common phenomenon that - depending on the context - remembering recurring events from one's past may trigger a paradigmatic EM of one particular event of the respective class. And such a dynamic can easily be explained if one assumes a prototypical structure of GM's content, which can be filled with episodic details such that it becomes a paradigmatic case of EM. The above objection would therefore miss its target: for it misconceives the phenomenon in question by blurring GM and EM.

However, the observation on which the objection is based brings something fundamentally important into focus, which has to be addressed in future research: the complexity of the process of remembering personally experienced events. The described dynamics of shifting from GM to EM, the zooming into some episodic detail of one particular episode of the respective class of events and back again into generic remembering suggests a close connection between GM and EM. But what is the nature of this connection? That GMs of recurring events are anchored in EMs of at least some particular past experienced events of the respective class seems trivially true. To remember Hannah's annual birthday party presupposes to have remembered at least some of Hannah's particular birthday parties. This description, however, leaves space for the view that once GM is in place, its episodic origins are no longer relevant.[12] The dynamics of remembering sketched above clearly contradicts this view. It should have become evident that the nature of the interconnection between EM and GM needs to be further explored, including its underlying mechanisms and brain networks.

4. Conclusion

It has been argued that an adequate understanding of the content of GM of recurring events from one's past has to take at least two adequacy conditions into account: the representational

[12] McClelland et al. (1995) advocate the view that semantic memories are in this way connected to EM, namely that due to a learning effect the originally EM is transformed into semantic memory.

content of GMs is for the most part rather specific and it typically involves mental imagery, i.e. a simulation with perceptual properties; at the same time, the content is sufficiently abstract so that it can function as a proxy for mostly similar events forming a class. This latter function is potentially realized by mental states that exhibit the cognitive structure of typicality: event schemas, exemplars, and prototypes. Applied to GMs and examined in the light of the two adequacy conditions I argued that the content of GMs is adequately described as a mental state representing a personal event prototype. However, as has been pointed out at the end of the discussion, GMs are often part of a complex and dynamic process of remembering personally experienced events such that one may shift between generic prototype-style remembering (GM) and rich and detailed remembering (EM). This observation has implications for future research, some directions of which I here only briefly mention: GM and EM do not seem to be neatly separated, suggesting that these are not different in kind but rather on a continuum (which can possibly be characterized in terms of, among other things, the degree of specificity of content). For empirical causalist frameworks, which have so far narrowly focused on EM only, this means to broaden the perspective. A plausible explanation would have to be found, for instance, for how episodic memory traces of particular past events either bundled together or else individually (e.g., being promiscuous or "prop-like" as suggested by Langland-Hassan 2022) give rise to GM of recurring events.

Furthermore, elaborating on the relationship between GM and EM suggested above may be fruitful in explaining the reference of GMs of recurring events as representing personal event prototypes. In my view, the close intertwining of GM and EM can provide an answer to this problem: plausibly, the reference of GM is determined by relevant episodic information, which affords EMs in a given situation. This means that the reference of my remembering Hannah's annual birthday party is fixed by my ability to bring up EMs of particular evenings when Hannah celebrated her birthday.[13] Again, further philosophical discussion and empirical work is needed for a fuller picture of the nature of GMs and its position in the broader landscape of memory. The suggested description of the content of GM in terms of mental states representing personal event prototypes is intended to be a first step towards this.

[13] The reference of EM in the paradigmatic sense could then be further cashed out, for instance, in terms of a relationalist view (e.g., Debus 2008), representationalist view (e.g., Perrin 2018) or a reliabilist view (Openshaw & Michaelian 2024).

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