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Intrusive Memories

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Abstract

Intrusive memories are characteristic of post-traumatic stress disorder (PTSD), and occur in other mental-health disorders. Their features suggest a potentially important, under-explored, class of memories. I consider a classification puzzle arising from intrusive memories, which is generated by tensions between features of "standard" forms of remembering and features of intrusive memories. I argue that widely accepted features of episodic memory—a plausible form of memory on which to focus when classifying these memories—cannot easily figure in a satisfactory explanation of intrusive memories. This raises the possibility either of deviant forms of episodic memory, or of substantive revisions to standard memory taxonomies. I develop an alternative solution—an explanation of the features of intrusive memories in terms of recognition memory, which avoids the explanatory deficits of focusing on episodic remembering and affords additional explanatory benefits.

1. INTRODUCTION

Intrusive memories are characteristic of mental health conditions such as post-traumatic stress disorder (PTSD), and memories with similar cognitive and phenomenological profiles occur other mental-health disorders, such as depression. Their features suggest a potentially important, and under-explored, class of memories. In the context of trauma, intrusive memories are considered a *distinctive*, and even *peculiar*, kind of memory. Influential remarks to the effect date at least to the 19th century, sometimes positing unusual encoding, storage, or retrieval. Since understanding this distinctiveness is thought crucial for aiding recovery, so-called "trauma memory" has received attention in psychotherapy, psychiatry, and clinical-cognitive psychology. Forms of specialness, or peculiarity, are also implied in diagnostic

manuals—such as DSM-5 and ICD-11—which mention more-or-less plausible candidates for distinctiveness and cast intrusive memory symptoms as directly related to an etiological event.

In addition to the disciplines above, trauma memory is a central topic in political/cultural memory studies (regarding, e.g., the Holocaust, genocide, and apartheid). However, besides some important analyses, and increasing broader attention,[1] the topic has received less thoroughgoing treatment in analytic philosophy, especially as it relates to individuals. This is despite claims about traumatic intrusions which conflict with well-established views about what memory *is for* and how *it works*.

Besides unusual forms of encoding, etc., candidates for distinctiveness include a range of cognitive, phenomenological, and epistemic characteristics. Some—e.g., distortions of temporal experience, or of personal past–present relations—are ostensibly at odds with defining features of memory for personally experienced events; in particular, those associated with episodic memory. Call this the *classification puzzle*. It's a puzzle generated by tensions between characteristic features of remembering for personally experienced events and characteristics of intrusive memories. It raises questions about whether intrusive memories satisfactorily fit "standard" memory taxonomies (e.g., those including episodic, semantic, and procedural memory) including: (i) Do intrusive memories imply the existence of deviant (or mutated) forms of standard memory types? (ii) Are intrusive memories a fundamentally different kind of memory (as trauma research sometimes suggests)? Positive answers to these questions would represent surprising developments in philosophy of memory, and are thus worthy of consideration.

Given the supposedly direct connection between intrusive memory symptoms and an etiological event, and other factors, a plausible memory ability on which to focus is *episodic* remembering. I consider a range of claims about the distinctiveness of intrusive memories and identify those which appear to generate genuine classification problems. I then consider whether our best explanations of these phenomena can be accommodated within standard memory taxonomies. I argue that some features cannot satisfactorily be accommodated. I then consider whether our best explanations of these phenomena can be accommodated with

[1] E.g., a special issue on the topic in *Revista de Humanidades de Valparaíso* (2024).

moderate revisions to the standard model—e.g., by positing deviant forms of episodic memory—or whether it requires substantive revisions to traditional hierarchies.

Finally, I consider an alternative solution to the puzzle: I propose that important classification problems dissipate if we reject the assumption that intrusive memories fit the profile of *episodic memory* and focus on *recognition memory*. After outlining the view, I conclude by pointing to two benefits: (i) the "recognition view" is a better explanatory fit than the "episodic view" (intrusive memories have features which are a mismatch for episodic memories, but not for recognition memory); and (ii) the recognition view generates additional explanatory resources: it explains features of intrusive-memory-related conditions which are not explained by the episodic view.

2. CLASSIFICATION AND FUNCTION

It can seem that the classification of memory into types is settled. Although the terms "memory" and "remember" cover a diverse range of phenomena (see, e.g., Malcolm, 1977; Byrne, 2010; Sutton, 2012; Michaelian & Sutton, 2017; De Brigard, 2023), discussion of memory phenomena is predominantly divided between three broad types of (long-term) memory: memory for personally experienced events; memory for facts, beliefs, and propositions; and memory for skills, habits, and procedures.

The term "episodic memory" (Tulving, 1972) is widely used for the ability to remember personally experienced events. Alternatives include "recollection" (e.g., Ryle, 1949; Debus, 2008); "perceptual memory" (e.g., Broad, 1925; Malcolm, 1963); "experiential memory" (Byrne, 2010); and "sensuous memory" (Noordhof, 2022). Some take episodic memory to be a distinctive memory system (see, e.g., Tulving, 2002) with characteristics enabling subjects to "re-experience" (*Ibid.*) or "relive" past events. The ability is also called "mental time travel", a description sometimes considered poetic (Byrne, 2010), or designed to aid explanation (Hoerl & McCormack, 2024). The terms "re-experiencing" and "reliving" may also be poetic or didactic—at least for quotidian cases of remembering,

and especially when compared to *re-experiencing* and *reliving* as reported in canonical cases of intrusive memories.

Episodic remembering is a prime candidate to explain what needs explaining about intrusive memories and it's the obvious choice among abilities featured in standard taxonomies. It is memory for *personally experienced events*, and PTSD symptoms are directly linked to an etiological event (Vasterling & Brewin, 2005).[2] It's also associated with rich phenomenology. So, if we agree that trauma serves as a central case for intrusive memories, then episodic memory looks promising. Conversely, its counterparts—semantic and procedural memory—look *un*promising. Semantic memory isn't strongly associated with rich phenomenology: there isn't much it's like to recall that *Satie had a British mother*. This is not true of intrusive memories. Procedural memory isn't associated with conscious experience: textbook examples—riding a bicycle and typing (Baddeley, 1999; Michaelian & Sutton, 2017)—are movement-based and typically don't require a subject to "recall" specific events or information.[3] But explicit, conscious elements are closely associated with intrusive memories.

Alongside standard divisions, memory appears to have—and may be separable by—specific functions. Fundamentally, memory makes previously acquired information available for subsequent use (Teroni, 2017; cf. Byrne, 2010). That is what it *does*, and it's not unreasonable to suppose that's what it's *for*—at least for the categories mentioned.[4] And this is a plausible *epistemic* function for "declarative" memory (i.e., episodic, semantic) (see, e.g., Schacter & Tulving, 1994). Other formulations of this function have been explored (e.g., De Brigard, 2013),[5] and other putative functions may be mooted, e.g., on the basis that memory generates justification (e.g., Fernández, 2015), or protects a coherent picture of the self (Conway, 2005).

[2] They claim PTSD is unique in this respect, but Complex-PTSD (C-PTSD), now recognised (WHO, 2018), meets all diagnostic requirements of PTSD.

[3] Najenson (2024) argues one distinction in the literature fails sufficiently to distinguish procedural memory from other forms.

[4] Henke (2010) claims it's unlikely memory serves a single function (p. 523).

[5] De Brigard (2013) discusses a function "to remember the past", though the formulation may be particularly vulnerable to counter-example (e.g., Munsat, 1966; Locke, 2071; Malcolm, 1977; §9).

The puzzle I address arises because the features of a class of memories—as posited in relevant literatures—do not easily fit the standard model, nor standard assumptions about function. They defy categorization insofar as there is disagreement over which, if any, standard type of memory is a good explanatory fit. They are deeply disruptive—epistemically, emotionally, etc.—so the possession of functions ordinarily supposed of memory is questionable.[6]

Other hypothesised forms of memory aren't easily classified. For example, Mark Rowlands's (2015, 2016) "Rilkean memories" resist classification along standard lines,[7] but they don't provide a promising model for the memories I investigate here.[8] I use the term "intrusive memories": a term relatively commonplace in clinical-cognitive psychology,[9] but less frequently used in philosophy. In diagnostic literature, the term is reserved for trauma-related conditions such as PTSD (see WHO, 2018). Descriptions of other conditions mention, "pre-occupation", "rumination", "distressing thoughts",[10] etc. (I turn to psychotherapeutic views below.)

I have suggested these differences might be informative about memory classification and function. They are also ethically relevant: interactions which demand the recollection of traumatic narrative may result in non-negligible harm (Davies & Stoneham, 2025). And are clinically relevant: misunderstanding the phenomena can lead to the "misapplication of therapeutic techniques".[11] Advancing our understanding of intrusive memories is of interest philosophically, and more broadly.

2.1 The standard model of memory

[6] One might contend disruptive memories can have functions if they are produced by a specific memory system. Thanks *[]*.

[7] They're "not Freudian, neither implicit nor explicit, neither procedural nor declarative and neither episodic nor semantic" (Rowlands, 2016, Ch. 3).

[8] Rowlands (2015) contrasts Rilkean memories with those whose "function is to transform memories of traumatic experiences into another form" (p. 149).

[9] E.g., Hackman et al. (2005), Brewin (e.g., 2007, 2011, 2015), among others.

[10] These are adjustment disorder descriptors (ICD-11), and don't refer to memory phenomena.

[11] See Levine (2015, p. xx).

What is sometimes called the "standard model of memory"[12] is the predominant way to classify different types of memory. It distinguishes explicit (conscious) memory from implicit (non-conscious) memory. Explicit memory is further divided into episodic memory (personally experienced events) and semantic memory (propositions and concepts). And implicit memory is concerned with habits and procedures, although some versions of the taxonomy highlight its role in *priming* or *emotional conditioning*. Despite being the predominant taxonomy, it's not uncontentious. Widely accepted descriptors aren't sufficiently exclusive (cf. Byrne, 2010).[13] Empirical support for the model's distinctions (e.g., the episodic–semantic distinction) has been challenged, with concerns around counterevidence and experimental design (De Brigard, 2023, pp. 22f.). The phenomenological basis for distinctions (e.g., "consciousness" for the explicit–implicit distinction) has likewise been challenged (e.g., Henke, 2010).

Nevertheless, the taxonomy, and particularly the notion of episodic memory, play a key role in the investigation of intrusive memory phenomena both for reasons outlined above and because discussions of episodic memory dominate the literature in the philosophy and psychology. Other recognised views of memory, such as Ryle's (1949), have not been widely investigated,[14] while the implications of other notable developments—such as Noordhof's (2022) "sensuous memory"—are yet unknown. Reflecting on other models of memory in relation to intrusive memories is helpful, but isn't the focus here.

3. TRAUMATIC INTRUSION AS PARADIGMATIC INTRUSION

Philosophers sometimes state or imply that memory as it characteristically occurs in trauma is distinctive or requires special explanation (e.g., Merleau-Ponty, 1962; Brison, 2002;

[12] Following De Brigard (2023); cf. Squire (1992).

[13] E.g., In remembering what I later learned I was doing while tipsy last night … "I remember 'a personally experienced event'… but this is semantic memory, not episodic". (Byrne, 2010)

[14] Von Leyden compares Ryle's views with Russell's (1961, Ch. 2, Ch. 4; cf. Malcolm, 1963; Locke, 1971), but more contemporary analyses are few. (A 2017 special issue on Ryle addresses neither his views on memory nor, relatedly, those on self-knowledge.)

Ratcliffe, 2017). Others acknowledge specific forms of distinctiveness (e.g., Fernandez, 2015; Frise, 2024).

More commonly, remarks are found in neurology, cognitive psychology, psychiatry, and psychotherapy. Claims relating to distinctiveness date at least to the mid-1800s. Jean-Martin Charcot noticed that "hysteria" is accompanied by bodily symptoms (e.g., limb contractures, paroxysms, crying) in the same way that "physical" lesions are (Charcot, 1991, pp. 33-43). These are, it's said, "the physical imprints of trauma" (van der Kolk, 2015). Pierre Janet realised the central importance of memory for what we now call trauma and argued it is "held in procedural memory—in automatic actions and reactions, sensations, and attitudes, and … trauma is replayed and re-enacted as visceral sensations (anxiety and panic), body movements or visual images (nightmares and flashbacks)" (*Ibid*. p. xi).

Freud too was struck by the phenomena. World War 1 veterans with "war neurosis" (Freud, 1920) reported dreams which were neither "symbols" not "wishes": they returned veterans to events themselves and possessed a "literality" (Caruth, 1995; Brison, 2002) not easily accommodated by Freud's theory of dreams. He observed distinctive temporal features in traumatic intrusions: patients are "obliged to repeat the repressed material as a contemporary experience, instead of … something belonging to the past" (Freud, 1990).

Contemporary psychotherapists also make striking claims about trauma memory. Some say trauma memory differs "fundamentally from other types of memory" (Levine, 2015, p. xx); or that it "lacks verbal narrative and context, and exist[s] only as static unverbalizable but vivid sensations and images" (Herman, 1992); others that it "evokes coping mechanisms that block awareness" (Freyd, 1996). These views imply trauma involves a peculiar amnesia (Section 5.2). On other views, the problem isn't deficit, but surplus: intrusions can be frequent and are disturbing. Still others remark that recollection of traumatic content can be "distressing" and potentially "debilitating" (see, e.g., Mailloux, 2013, p. 51): recollection is possible, then, but potentially harmful.

Despite disagreements, allusion to trauma memory's distinctiveness persist in the literature and reflected in diagnostic manuals (e.g., ICD-11; DSM-5). For example:

> DSM-5: Presence of (1) Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s). (2) Recurrent distressing dreams … related to the traumatic event(s). (APA 2013, p. 271)
>
> ICD-11: Re-experiencing the traumatic event … in the present in … vivid intrusive memories, flashbacks, or nightmares … via one or multiple sensory modalities … accompanied by strong or overwhelming emotions … and strong physical sensations (WHO, 2018)

The operative terms above are sometimes used to differentiate memory in trauma-related conditions (e.g., PTSD), from intrusions in other mental health conditions (e.g. diagnosable forms of grief and depression). So, while candidates for distinctiveness vary, there's a rich history acknowledging the distinctiveness of memory intrusions, across disciplines. This, I think, is enough to take the matter seriously.[15]

How then might we investigate whether these purportedly distinctive features represent a form of memory that's not satisfactorily captured in familiar taxonomies?

4. INTRUSIVE MEMORIES AND THE STANDARD MODEL

Although several interesting questions arise from intrusive memory phenomena, I focus here primarily on one: Where do they fit in our broader understanding of memory? One way to approach this question is to ask how best to classify them. Below I list three options. (I have prefixed terms with "hierarchical" to avoid confusion with active debates in the philosophy of memory.):

(1) **Hierarchical continuity**

[15] A comprehensive list of claims about traumatic intrusions cannot be accommodated here.

Our best understanding of intrusive memory phenomena can be accommodated within standard memory hierarchies. (e.g., intrusive memory is episodic memory)

(2) **Hierarchical revision**

Our best understanding of intrusive memory phenomena can be accommodated by moderate revisions to standard hierarchies. (e.g., intrusive memory is a deviant form of episodic memory)

(3) **Hierarchical discontinuity**

Our best understanding of intrusive memory phenomena requires substantive changes to standard memory hierarchies. (e.g., intrusive memory is its own kind of memory).

The diversity of views on "intrusivenesss" makes identifying an appropriate method to select between them challenging. We should accept that intrusive memories are *disruptive* and *unwelcome*: being disruptive and unwelcome is what it is for something to be intrusive. We might accept too that they're visceral and can be distressing or debilitating (e.g., Mailloux, 2013). But then what?

Attempts to classify memory are usually made along conceptual, linguistic, empirical, cognitive, and phenomenological lines.[16] This apparent fact doesn't answer broader questions about the purpose of classifications in understanding *cognition* (e.g., Anderson, 2015); nor those about the role philosophy plays—or should play—in such endeavours; nor indeed when data from specific areas of research (e.g., neuroscience), warrants revision of categories (see Andonovski, 2018). The classification of *memory* more specifically has been explored through debates including whether memory—or episodic memory—is a *natural kind* (see, e.g., Michaelian, 2010, 2016 against; Cheng & Werning, 2016 for); and whether it's a *cognitive kind* (see, e.g., Khalidi, 2023 for; Robins, 2024 discusses). I don't aim to resolve these issues here.

The distinctions I'm concerned with are commonly maintained along phenomenological and cognitive lines. Phenomenologically speaking, types of memory are meant to be "discernible by the nature of the consciousness they are associated with" (De

[16] De Brigard (2023) lists all but "cognitive". Most or all methods prove contentious (p. 25).

Brigard, 2023, p. 25; cf. Hoerl & McCormack, 2024). Cognition isn't always conscious and doesn't always map easily onto experience when it is,[17] but it's clearly a relevant category when investigating memory.[18] Perhaps these factors are not the optimal foundation for taxonomising memory. (I leave open this possibility.) Nevertheless, distinctions made along such lines are answerable to relevant data. And where tensions between phenomena and systems which attempt to classify them arise, it can be prudent to inquire whether a system requires revision. Such tensions don't immediately warrant revision, of course.[19] (My proposal offers an alternative to immediate revision.)

To decide which position to endorse, then, we might consider the phenomenological and cognitive profile of intrusive memories and compare it to an appropriate *standard* type of memory. I've suggested episodic remembering is a reasonable ability on which to focus. Because widely accepted cases of intrusive memory occur in trauma, traumatic intrusions are a reasonable focus too.

Recall the diagnostic criteria above. When these criteria for PTSD refer to memory, they use the terms "recurrent", "involuntary", and "distressing" in DSM-5 (APA, 2013); and, "vivid", "overwhelming", and "re-experiencing" in ICD-11 (WHO, 2018; Section 3). So, we might think of intrusive memories—in diagnosable trauma—as possessing some or all of these characteristics. To begin, we can address the classification puzzle by examining associated terms:

i. Involuntariness
ii. Recurrence
iii. Vividness
iv. Overwhelming (emotionally)
v. Distress

[17] Consider confabulation and post-hoc rationalization.

[18] Separating the *cognitive* and *phenomenological* isn't always straightforward: phenomenological terms such as "sense" or "feeling" are sometimes deployed when "judgement" would play an equal explanatory role. It's less easy to confuse phenomenological descriptions with neuroscientific descriptions of the same phenomena.

[19] See Colaço (2020) on when recharacterizing scientific phenomena is warranted.

vi. Physical sensations

vii. Re-experiencing (as present)

It is evident, however, that most won't facilitate great advances in understanding the phenomena. In one sense, *involuntariness* is a feature of all memory: we can initiate attempts to recall, but have little say in the outcome. *Feelings of knowing*, and *tip-of-the-tongue* phenomena (e.g., Koriat et al., 2001) are frequently inconvenient reminders of this. Even granting that memory is standardly voluntary, involuntariness wouldn't be remarkable. Ebbinghaus (1885/2013)[20] lists involuntary autobiographical memories as one of three basic memory kinds. (Involuntary memories are largely ignored in psychology, perhaps because they're subsumed in discussions of episodic memory, see Berntsen, 2010.)

Recurrence, and repetitiveness, are equally unremarkable. We frequently recall locations, dates, numbers, and passwords. If these examples are controversial, "earworms"—or "stuck song syndrome"—are both involuntary and recurrent, but not plausibly intrusive. They're experienced by up to 98% of the "Western population" (Euser et al., 2016), with 92% of people experiencing earworms at least once a week (Williamson et al., 2011). They're disturbing for a few, but plausibly due to pre-existing conditions (Euser, 2016).

Vividness is also unpromising. Highly vivid involuntary memories are not limited to trauma—nor to emotionally negative events (Berntsen, 2001). They occur for overwhelmingly happy or momentous experiences (*Ibid*), and emotional memories—positive and negative—which can share "important phenomenological characteristics" (Porter & Birt, 2001).

Even complicated conjunctions of these characteristics are uninformative. Examples can be found in romantic love, [21] and perhaps love of other kinds (e.g., parental). For Proust, madeleine cakes "prompted a whole host of memories, that were unbidden, lifelike, delayed … But *pleasant*" (Brison, 2002; my emphasis).

So far, classification looks *un*puzzling. Either the characteristics of intrusive memories occur in ordinary recollection, or features of intrusive memories traverse multiple memory

[20] "[M]ental states … [return] with apparent spontaneity … they are reproduced *involuntarily*" (Ebbinghaus, 1885/2013).

[21] Thanks to *Vilius Dranseika* for emphasising the importance of this case.

experiences making the prospects of analysis in isolation slim. Either way, based on these considerations we should endorse *hierarchical continuity*: intrusive memories should be seen as *ordinary*—largely unremarkable—cases of episodic-style remembering.

Of the three initial characteristics remaining, "distress" (v) will not elucidate *intrusiveness* a great deal, so I put it aside. Physical sensations (vi), however, are initially promising marks of distinctiveness; not being widely associated with episodic remembering.

Physical elements of intrusions have long fascinated those investigating trauma. Discussions of memory involving bodily sensations or emotions date back at least to Augustine's *Confessions*.[22] Pioneering contemporary research into "body memory" (see, e.g., Fuchs, 2011; Koch, Fuchs, Summa, & Muller, 2012)[23] draws on the work of Merleau-Ponty. But the "body" element of bodily memory resists straightforward explication. Koch et al. (2012) list six forms of body memory (including traumatic memory). But the list omits plausible candidates including genetic and immunological memory (see Colaço, 2025). All "conventional" memory—sometimes described as "biological" (e.g., Mekler, 1967)—is arguably bodily because it belongs to material structures of individual organisms. And this suggests a delimiting problem for bodily memory: there's a simple, non-trivial sense in which all memory is *bodily* and how we distinguish "bodily memory" from other kinds remains an open question.

The concept "bodily memory" is sometimes associated with "implicit" or "procedural" memory. The association has intuitive appeal, especially for cases where emotional conditioning is classified as implicit memory. However, the association is scarcely beneficial: implicit memory characteristically involves no conscious element,[24] whereas intrusive memories have relatively specific cognitive and phenomenological profiles. Thus, whatever

[22] See Book X; De Brigard (2023).

[23] Characterisations of traumatic memory in Koch et al. (2012) owe much to psychotherapy (e.g., van der Kolk, 1996; Ogden et al., 2006). However, *that* literature assumes answers to our questions about classification, and claims in psychotherapy literature are sometimes contested elsewhere.

[24] E.g., "one may … remember how to do something without consciously entertaining … content and without being able, even in principle, to consciously entertain any such content" (Michaelian & Sutton, 2017). Complicating matters, different literatures use the term "implicit" differently.

intrusive memories are, they are not plausibly implicit memory alone.[25] Notably, physical sensations are a "typical", rather than criterial, characteristic of traumatic intrusions,[26] and thus may not suffice as a *distinguishing* criterion.

Finally, there is *re-experiencing* (vii). Recall that "re-experiencing" and "re-living" are used to describe episodic remembering (Section 2). If these terms accurately reflect the phenomena in diagnostic manuals, nothing more than episodic memory would be needed to explain (i.e., account for the features of) intrusive memories. But the similarity in phrasing is profoundly misleading: if quotidian recollections were like traumatic recollections, life would be intolerable.

Understanding the nature of *re-experiencing* in intrusive memories is fundamental to understanding why these memories might spell trouble for traditional classifications of memory. Before exploring why, I turn briefly to other features of traumatic recollection which have been proposed as marks of distinctiveness.

5. MEMORY PERSPECTIVE & TRAUMATIC AMNESIA

Several views are relevant to the classification puzzle but are not suggested in diagnostic manuals. Claims related to memory perspective and traumatic amnesia are among them.

5.1 Trauma and memory perspective

Trauma, so it's claimed, "is importantly related to memory perspective" (Frise, 2024). A relatively weak specification of this relation would acknowledge correlations between the reported presence, frequency, and arrangement of reported memory images and emotional experience. Stronger specifications claim that, for example, that "memory for a traumatic experience tends to be from the observer rather than field perspective" (Frise, 2024).[27]

[25] Thanks to an anonymous reviewer. There's much to say on implicit memory and its relation to bodily memory and intrusive memories, but full discussion is beyond scope here.

[26] See ICD-11 (WHO, 2018). (DSM-5 doesn't refer to the feature.)

[27] See also Fernandez (2015), Porter and Birt (2001), and Schacter (2001, p. 174).

The stronger relation would be a fine candidate for distinctiveness, but is controversial. First, it relies on foundational empirical research (Porter & Birt, 2001; Schacter, 2001), which found significant but marginal differences between groups, which may be explained by other factors.[28] Thus, the empirical tendency claim may be difficult to maintain without further support. Second, to distinguish between perspectives, participants were asked whether they could see themselves "in the memory image" (Porter & Birt, 2001, p. S116), with observer memories defined as those in which the subject can "see him/herself acting in the memory image" (p. S116).[29] Putting aside other concerns, this kind of locution is insufficient to distinguish reports of memories in first-person (field) perspective from those in third-person (observer) perspective.

To illustrate: As I type, I see my hands and wrists moving, my hat, my phone, my coffee cup, parts of furniture, and small clouds against a blue sky. As I move my eyes, my shirt (thereby my trunk), my trousers (thereby lower limbs) fall in and out of vision. As I move my head, a panorama becomes available which includes my hands at the centre, with other parts moving in and out of view depending on the pitch and angle of my gaze.

This perceptual experience is in field perspective and my claims to *seeing myself* (and seeing myself *acting*) are legitimate because seeing the *proper parts* of an object (in this case, *myself)*, is a way of seeing that object: we can see an iceberg by seeing its tip (Krueger & Overgaard, 2012); and fossils by seeing the parts which are exposed (McNeill, 2012).

It's also legitimate in that a past-tense version of the report would provide a more-or-less faithful account of a recollection of an experience as I enjoyed it in first-person (field) perspective. Notice, however, that it could be interpreted in third-person (observer) perspective. Herein lies a difficulty for distinguishing memory reports: the same ordinary language descriptions of memories involving oneself can often be taken either to be in field perspective or to be in observer perspective. "Seeing oneself" is ambiguous between the two.

[28] Some therapeutic interventions encourage remembering in observer mode. Studies suggest "using an observer perspective when recalling negative memories can lead to … experiencing closure, having more understanding … and reductions in recounting (i.e., recalling the specific chain of events)" (Warne & Rice, 2021).

[29] Contrast alternatives, e.g., "from the perspective of a detached spectator" (McIsaac & Eich, 2004).

None of this suggests observer memory isn't a genuine memory phenomenon (see Sutton, 2010; McCarroll, 2018, for discussion), nor that it's impossible reliably to distinguish between perspectives in ordinary language reports (see Dranseika, McCarroll, & Michaelian, 2021). A convincing case for the stronger relation, however, remains to be made.

The weaker relation looks initially plausible. Memories in field perspective have been found to result in "higher negative mood, state-anxiety, and a higher number of short-term intrusions" compared to observer perspectives and controls (Mooren et al. 2018). More generally, the "frequency and content of maladaptive imagery are often defining features of mental illness" (Zeman, 2015). However, there remain reasons for caution, especially if the specification of the relation requires the presence of memory images for traumatic intrusion: (i) sometimes people ("aphantasics") report having no mental imagery (e.g. Dawes et al. 2020; Zemen et al., 2020)[30]—and this doesn't immunise them from or substantially diminish PTSD symptoms (see Dawes et al. 2020); (ii), in children, PTSD manifests in "trauma-specific reenactments" (ICD-11) rather than in episodic remembering. These challenges suggest that imagery is neither essential for PTSD diagnoses, nor for the condition.[31] As things stand, there's little reason to suppose the posited relation will be particularly revealing of the nature or distinctiveness of intrusive memories.

5.2 Traumatic amnesia

Trauma is sometimes characterised in terms of a *deficit*: the traumatic memory is, perhaps temporarily, recollectively inaccessible. Candidate mechanisms for inaccessibility include repression and amnesia. However, "repression" is a contested concept (e.g., De Brigard, 2023b), and amnesia explanations sometimes posit extravagant encoding or storage mechanisms. One "amnesia view" suggests traumatic memory content is stored (or *trapped*) in procedural memory, but since there's nothing *special* about procedural memory, this cannot easily be what makes such memories distinctive or intrusive. The claim—attributed to Janet

[30] Cf. Charcot (1878/1991) and Galton (1880).

[31] For discussion of mental imagery see, e.g., Nanay (2023); relating to aphantasia, Scholtz (2025); and for deflationary views Ryle (1949), Malcolm (1963).

(e.g., van de Kolk, 2015)—is sometimes accompanied by the clinical doctrine that resolving these deficits requires therapeutic intervention.[32]

Opponents of *deficit views* emphasise both a lack of empirical support for a trauma-induced amnesia, and research indicating that stress enhances, not impairs, recollection (Shobe & Kihlstrom, 1997). It's thereby difficult to see how traumatic events could be "hidden from awareness" or require treatment for "recovery" (*Ibid*.). Responses posit two kinds of trauma: *Type 1* trauma, consisting of single well-defined events; and *Type 2* trauma, consisting of repeated traumas that invoke denial, dissociation, and poor memory. But evidence makes use of participants from different age groups (e.g., *Type 1* using 5 to 14-year-olds and *Type 2* using those under 5), and differences may be attributable to childhood amnesia (Shobe & KIhlstrom, 1997).

"Information processing" accounts accommodate both intuitions by explaining deficit and surfeit phenomena through a "shift in information processing styles". "Routine" information processing involves "contextual integration" (Steel, 2015). Reduced contextual integration makes voluntary recollection difficult and occurs in situations which require quick behavioural responses. However, the information can be "triggered" involuntarily by stimuli which have a perceptual match to the traumatic event—e.g., the "smell of an attacker's aftershave on someone else" (Steel, 2015).

The information processing account over-predicts trauma because other instances requiring quick behavioural responses—e.g., driving and sporting events—don't systematically result either in reduced voluntary recall or increased involuntary recall. (Sports personnel articulate split-second actions and decisions,[33] and intrusive memories don't ordinarily ensue from daily commutes.) The idea that "context" is encoded is also contested: it might not be defined until recall (Easton et al. 2024).[34]

[32] Sometimes called "recovered memory theory" (Shobe & Kihlstrom, 1997).

[33] Perhaps reports of split-second decision-making are confabulated, not reports of the original processes. I won't address this here.

[34] Alternative explanations might focus on systematic warping effects on self-ascriptions from effects such as *event centrality* (see Berntsen & Rubin, 2006; *[]*).

Debates around *deficit* explanations of intrusive memories are unlikely to provide explanations of what, if anything, is distinctive about this class of memories. Thus, they offer no compelling reason to reject hierarchical continuity.

6. TEMPORAL EXPERIENCE AND PAST–PRESENT RELATIONS

Alternative approaches to exploring intrusive offer promising ways to account for distinctiveness. The "TIME^2" framework[35] suggests four "dimensions" fundamental to understanding "traumatic and intrusive memory experiences". These are temporality, intentionality, modality, emotionality (hence, "TIME^2"). Two—temporality and modality—play important roles in resolving the classification puzzle. I turn to the first now.

Fundamental to understanding intrusive memories is their relation to temporal experience and personal past–present relations. However, the nature of these disturbances are a locus of disagreement. Merleau-Ponty (1962) sees trauma as *pausing* or *halting* "personal" time while the rest of the world moves on: "Impersonal time continues its course, but personal time is arrested". The implication isn't merely that personal time *stops*, of course, but that its stopping affects the present: it is "a former present which cannot … recede into the past" (Merleau-Ponty,1945/2004, p. 97).

Other views explicit on the point see the past as *intruding*, *returning,* or *happening again.* Freud (1990) remarks the experience is "contemporary" rather than "belonging to the past" (Section 3). van der Kolk suggests trauma "may return, triggered by reminders, with a vividness as if the experience were happening all over again" (van der Kolk, 2002). Contemporaneously, Brison (2002), suggests an "undoing of the self" associated with trauma which "involves a radical disruption of memory, a severing of past from present, and, typically, an inability to envision a future" (2002). Alford (2016) remarks that trauma is "a disorder of time, in which the past is never past but is constantly intruding upon the present",

[35] See Davies and Stoneham (2023)

and Ratcliffe (2017) suggests that trauma can involve "a pervasive alteration in the sense of time, something that can be construed … in terms of an overall style of anticipation".[36]

The remarks by Freud, van der Kolk, and Alford relate to specific instances of recollection, rather than the general effects of trauma. They indicate a remarkable characteristic of trauma-related memory intrusions: the past is not experienced *as past*, but as present; it is a *re-experiencing* in the sense of "happening again" rather than of *reviewing* of one's personal past. This feature is reflected in the language of ICD-11 (WHO, 2018): "re-experiencing the traumatic event in the present".

The characteristic appears to contradict standard accounts of episodic remembering. Ali Boyle (2020), e.g., summarises five essential phenomenological features of episodic memory:[37]

1. Mental imagery representing the event
2. An apparent temporal structure.
3. A sense of pastness.
4. Representation as self-involving.
5. A sense of ownership.

Remarks in ICD-11, Freud (1990), Merleau-Ponty (1945), van der Kolk (2002), and Alford (2016) suggest that intrusive memories lack a *sense of pastness* ("pastness" for short). If we take these remarks at face value, the existence of intrusive memories would appear to require moderate revisions to standard taxonomies (i.e., hierarchical revision).

Let us consider strategies which might avoid such a conclusion. First, there is straightforward denial that such memories lack pastness, but this may appear ad hoc. One might, instead, claim (a) that intrusive memories possess a sense of *presentness* (a claim silent

[36] Some remarks concern *what trauma is*, and others *what it does*. The latter suggests a potential explanation of distinctiveness whereupon intrusive memories have a causal power which explains their unusual features. This might explain why some memories behave unusually, but wouldn't obviously explain why some have the power and some don't. This is a potential avenue for further research. Thanks *[]*.

[37] Boyle offers a convincing review of the literature. Other lists of characteristics include Conway's (2009), proposing nine.

on *pastness*); or (b) that they possess *pastness* which is temporarily eclipsed (or overshadowed) by other factors (a claim silent on *presentness*). Alternatively, one might claim (c) that intrusive memories simultaneously possess both *pastness* and *presentness*. Since humans are complicated, these possibilities seem initially reasonable, but none seems likely to overturn the conclusion.

The proposal is that intrusive memories lack phenomenological pastness. If pastness is an essential phenomenological feature of episodic memory, then intrusive memories, *ex hypothesi*, lack that essential feature. Alternative (a) doesn't deny the proposal, and so it's either dialectically neutral or it should be construed along the lines of (c). The proposal (b), that pastness is temporarily eclipsed, might be appealing *ontologically*, but not *phenomenologically*: if I enjoy red phenomenology, significantly altered by the addition of another colour, I no longer enjoy red phenomenology; rather whatever colour ensues. Saying my *red* phenomenology was temporarily eclipsed is shorthand for saying it went away, only to return. But lacking *x* temporarily is still lacking *x*. And so (b) isn't an initially promising alternative. Finally, perhaps humans are so complex that we sometimes experience (c) both at the same time, but this suggestion must overturn the appealing intuition that humans can't represent something simultaneously as being in the past and the present in a single act of cognition[38] (at least with other intellectual capacities spared), and overturning that intuition would require further argument.

So, the proposal that intrusive memories are distinctive whenever they lack pastness is worthy of consideration.[39] If correct, intrusive memories might be best thought of as deviant or mutated forms of episodic memory: possessing the majority of essential characteristics but lacking at least one. (Earlier, I encouraged caution around memory images too, but I put this debate aside for now.)

I take the existence of a stable deviant form of episodic memory—one lacking at least one essential characteristic—to be a noteworthy development in the philosophy of memory which may require moderate revisions to familiar taxonomies of memory which don't account

[38] I believe the formulation is due to Matthew Soteriou.

[39] I haven't demonstrated that intrusive memories lack *pastness*, nor that no strategy could overturn that conclusion. I've shown the claim survives initially plausible responses, and is thus worthy of consideration.

for such forms. But this conclusion is reached from a restricted class of examples: intrusive memories occurring in trauma.

7. THE NON-PECULIARITY OF INTRUSIVE MEMORIES

I have focused on intrusive memories in trauma because they're characteristic of PTSD, and are well-investigated in that context. However, research suggests that intrusive memories occur—and are sometimes prevalent—in other conditions. This finding is in tension with diagnostic descriptors which see intrusive memories as peculiar to trauma: specific characteristics of intrusive memories in trauma are used to differentiate PTSD, e.g., from diagnosable grief, depression, and psychosis. But, in each case, it's either unclear the distinctions are sustainable, or that the memory experiences are of a qualitatively different kind. I briefly address each case.

7.1 Grief

Grief involves "profound emotional upheaval", and has "wide-reaching implications for other aspects of human experience" (Millar, 2023). There are multiple supposed theoretical differences between diagnosable grief and trauma but, despite these, they share significant cognitive, phenomenological, and epistemological, characteristics; also similarities in symptomatology.[40] Both grief and trauma involve a shattering of one's *assumptive world* (Parkes, 1988; Janoff-Bulman, 1989); violate our assumptions about its safety (Janoff-Bulman, 1989); and disrupt our relations to ourselves. Self-narratives are importantly connected to our *senses of self*. They allow us to make sense of human action and the passage of time (Pellauer & Dauenhauer, 2016; cf. Davies et al., 2021). But traumatic experiences can't easily be incorporated into self-narratives and doing so can be damaging: they can be disruptive to our senses of self, and have implications both for how we know our minds, and for our interactions with others. They can induce us into making false self-ascriptions (Davies & Miller, 2022), and victims' accounts of events can be "disjointed or poorly organised"

[40] Following Davies and Millar (2022)

(Kleim et al. 2013, p.999). Grief can be similarly disruptive: it can be difficult to integrate losses into one's self-narratives. DSM-5-TR lists "identity disruption" for prolonged grief disorder (PGD), and ordinary grief can resist integration into narrative (Ratcliffe, 2017; Westlund, 2018). These distorting effects can be seen in *event centrality*, which is "the degree to which people see a stressful life event as central to their narrative or identity" (Berntsen & Rubin 2006). Event centrality occurs both in trauma and in grief, where it can affect bereavement outcomes (Bellet et al. 2018).

Grief can affect memory,[41]then, in similar ways to trauma. Perhaps unsurprisingly, features of diagnostic descriptions of grief and trauma are shared by both.[42] Nevertheless, the memory-related phenomena supposedly differ in each case. In PTSD, e.g., the individual *re-experiences* the *event or situation* surrounding a death, whereas in PGD she becomes pre-occupied with *the circumstances surrounding* death: unlike in PTSD, she does not "re-experience them as occurring again in the here and now" (WHO, 2018). Davies and Millar (2022) argue that none of the natural ways of maintaining this distinction are sustainable. The most salient one for the present discussion is the temporal distinction: re-experiencing in the "here and now" (PTSD) versus "pre-occupation" (PGD). But this is an oversimplification which ignores grief-related phenomena such as "bereavement hallucinations",[43] whose content is *mnemic* insofar as it's prior learning manifested later, even if such "hallucinations" wouldn't be classed as "memories" on some accounts of what memories are.[44]

These experiences can be perception-like and involve "here and now" experiences of the dead. A full comparison of bereavement hallucinations and intrusive memories in trauma is beyond scope here, but intrusions of the past which present in the "here and now" are

[41] Debus and Richardson (2022) also discuss memory and grief.

[42] E.g., "significant impairment in personal, family, social, educational, occupational or other important areas of functioning" occurs both for PGD and Complex PTSD in ICD-11 (WHO, 2018).

[43] Millar's (2023) discussion is insightful.

[44] "Mnemic" indicates relation to memory, or ability to retain, not classification "*as a memory*", which may require further argument. *Content* is a salient category. An anonymous referee correctly suggests one might choose *etiology* or *phenomenology*. However, such views might delegitimise permissible talk of "semantic *memories*".

experienced in both grief and trauma.[45] (I return to the hallucination–memory boundary below.)

7.2 Depression

Descriptors for depression avoid the term intrusive memories in favour of "ruminations", "recurrent thoughts", or "other anxiety provoking conditions" (WHO, 2018). But there are multiple ambiguities around these terms (see Speckens et al. 2007; cf. Eisma et al. 2020) and the term "recurrent thoughts" in cognitive psychology sometimes *includes* memories (e.g., Whitaker et al., 2008). Williams and Moulds (2007) report a paucity of research into intrusive memories in depression, although Payne et al. (2019) claim 76% of adults with depression report intrusive memories; comparable to numbers in PTSD. Quantitative and qualitative measures revealed few differences between groups with PTSD and those with depression. For example, intrusive memories in depression include "High levels of sensory experience" and can be marked by a sense of "nowness" (Williams & Moulds, 2007) which diagnostic manuals imply is peculiar to trauma. In short, intrusive memories "represent a shared phenomenological feature" of trauma and depression (Williams & Moulds, 2008). They are not only present in depression but play a maintaining role (Brewin et al. 2009).

7.3 Psychosis

For psychosis, diagnostic manuals refer to "obsessive ruminations" (e.g., Schizotypal disorder), hallucinations, and delusions, rather than intrusive memories. However, there are notable points of connection between psychotic intrusions and intrusive memories: intrusive memories can be memories of hallucinations or delusions; auditory and visual hallucinations can be directly to traumatic events; and there are "traumatogenic" aspects of psychosis and its treatment. There's active speculation about the relationship between trauma and psychosis

[45] An anonymous referee asks whether bereavement hallucinations may be neutral or positive. Grief itself is not plausibly a positive or neutral experience, and since grief is a complex process, we'd need good reason to separate bereavement hallucinations from grief (see Millar, 2023, fn.1). It might be thought that the "presence" of someone lost could bring comfort, but it will likely "clash jarringly" with knowledge of their death, or swiftly be replaced by feelings of absence (p. 450). The referee suggests my view has the resources to explain potential differences in valence purely with respect to the misrecognised object (see 9.1). I won't address the matter in detail here though I'm grateful for the thought-provoking comment.

(Steel, 2005), and increased awareness of the prevalence of traumatic life events in individuals with schizophrenia (Grubaugh et al., 2011).

In a sample of patients with post-intensive care trauma, between 70% and 88% of patients had hallucinatory/delusional "intrusive memories" of intensive care (12% had factual memories). For the most part, the content of the memories merged realistic events (e.g., medical procedures) with delusions and frightening hallucinations (Wade et al., 2014). If a widespread assumption about memory—that recollection is phenomenologically similar to its perceptual experience[46]—is correct, memories of hallucinations may inherit cognitive and phenomenological features of these hallucinations, or have an inhibiting effect on supposed features of ordinary episodic memory.

More pertinently, the distinction between hallucinatory experiences and intrusive memories—in diagnostic manuals and surrounding literature—may be based upon a methodological bias. Hearing voices may be classified both as hallucination and the *re-experiencing of a traumatic event* (Steel, 2015). In PTSD, the "hallmark symptom" is intrusive memory. However, this is often assumed to take the form of a visual image. In schizophrenia, the "intrusive sensory phenomena" receiving most attention is in the auditory modality (hearing voices) (*Ibid.*). Research aimed at understanding psychotic phenomena has thus focused on hearing voices, where theory around intrusive experiences in trauma has focused predominantly on (visual) images.

There is empirical evidence supporting the claim that a methodological bias may have obscured the extent to which "hallucinations" in psychosis and intrusive "memories" in trauma, are closely related phenomena.

First, "voice" experiences can be either "identical replays" of previous conversations or similar to them (McCarthy-Jones et al. 2014), and according to Hardy et al. (2005) 50% of hallucinatory content was either directly or indirectly related to a traumatic event. Reported intrusions in psychosis sometimes contain a content match for traumatic events and some are recognised as memories by the patient (Steel et al. 2008). So, a significant proportion of "hallucinatory" content is *remembered* content.

[46] The assumption as related to perception is commonplace (see, e.g., Noordhof, 2022; cf., Sant'Anna, 2018; Boyle, 2021).

Second, given "schizotypal dispositions", extracts of remembered speech may be interpreted as a voice-hearing experience or "visual memory" interpreted as a "vision" (Steel, 2015): patients scoring high on hallucinatory proneness are more likely to make source monitoring errors (Larøi et al., 2005). So, there's a mechanism through which patients can confuse memory content for current experience.

Finally, despite a focus on hearing voices, "visual" intrusions are common in psychosis, e.g., 73% of those suffering persecutory delusions experienced them (Schulze et al., 2013). Focus on intrusions in the auditory modality is potentially unwarranted.

7.4 Intrusive memories as a broader class

The presence and role of intrusive memories in other disorders suggests a broader class of cases need to be considered when analysing intrusive memories. This complicates the classification puzzle. It also highlights the extent to which intrusive memories are underexplored in the philosophy literature: in some cases, it hasn't been clear that the relevant phenomena are mnemic in character; in others the cognitive and phenomenological profile of memory phenomena is far closer than previously assumed.

Accepting that grief, depression, and psychosis involve intrusions of memory might be thought to imply a closer relationship between memory and hallucination than many would accept. This matter deserves greater attention than can be afforded here, but first, *de facto* misclassifications of specific cognitive experiences, in the context of clinical research, and plausibly due to methodological design, are a potentially valuable source of data, but carry no immediate implications for debates about the hallucination–memory boundary. Second, accepting for the sake of argument that some cases of (clinical) "hallucinations" might legitimately be classified[47] as *memories* has a striking effect on the classification puzzle.

In addition to doubts about mental imagery, and pastness, there would be considerable doubt around essential episodic features such as *self-involving* and *ownership*, which appear to be absent in the (hallucination-like) memory experiences occurring in grief and psychosis.

[47] Considerations in §2.1 speak in favour entertaining possibilities that aren't a perfect fit for established views of memory.

Table 1: Compatibility of intrusive memories with the features of episodic memory

Feature	Compatible	Incompatible
Mental image		(X)
Temporal structure	X	
Sense of pastness		X
Self-involving		X
Ownership		X

Table 1 shows the extent to which the features of intrusive memories as a putative class would deviate from the purportedly essential features of episodic memory. This, I take it, would push tolerance of moderate deviations beyond reasonable limits. Thus, accepting intrusive memories as a unitary class would lead us to posit a form of memory largely incompatible with episodic remembering. But even if we insist that there are different varieties of intrusive memories, there's reason to suppose that at least one variety lacks the essential features detailed above and is thereby incompatible. Either way, it would no longer be satisfactory to posit deviant or mutated forms of episodic memory as an explanation for discrepancies, and *hierarchical discontinuity* is an appropriate position to endorse.

To summarise, assuming intrusive memories are peculiar to trauma appears to require that we posit a deviant form of episodic memory—one which plausibly lacks at least one essential phenomenological feature—and thus to endorse *hierarchical revision*. However, empirical research offers little reason to suppose that intrusive memories are peculiar to trauma; instead it suggests they are prevalent, and play important roles, in other mental-health conditions. Two possibilities are, first, that intrusive memories are a unitary class, or second, that there are different varieties. Either possibility presents a challenge for standard classifications. In the first case, intrusive memories are almost wholly incompatible with the features of intrusive memories, suggesting that *hierarchical discontinuity* is a reasonable position to endorse. The second may demand multiple—and perhaps increasingly—deviant forms of episodic memory, at least one of which may ultimately suggest that *hierarchical discontinuity* is a reasonable position to endorse.

It is natural to assume that episodic remembering is the correct ability to focus on when explaining intrusive memories. We have now seen there are reasons to resist this

assumption. In light of these considerations, we either need to amend or substantively revise our classifications in light of intrusive memories.

It is notable that the features of episodic remembering are uninformative regarding other mnemic features of conditions involving intrusive memories. Returning briefly to trauma, above I noted a marked increase in sensitivity to stimuli (popularly called "triggers"), such that, e.g., "the smell of an attacker's aftershave on someone else" provokes a trauma response (see Steel, 2015; §6). The episodic view of intrusive memories has nothing to say about this sensitivity. Although silence on these matters is not a direct objection to the episodic view, it contributes to the sense that the view fails adequately to capture the character of trauma-related memory experiences.

At this point, it is legitimate not only to question whether episodic remembering is the right kind of ability on which to focus, but whether standard distinctions can be helpful in cases when the past "threatens who we are" (Ratcliffe, 2024). Perhaps the right thing to do when faced with such cases is to abandon the classification project as incapable of capturing the complexity of human experience. In the next section, I offer an alternative both to the episodic view and to views which recommend we abandon classification as unhelpful.

8. THE RECOGNITION VIEW

Pastness plays a fundamental role in generating classification problems: At least since Aristotle's *De Memoria* memory is thought to be "of the past",[48] yet intrusive memories characteristically lack "pastness" as widely understood. Importantly, memory is not always of the past in a direct sense. I can remember "timeless" facts, such as the atomic numbers of elements (De Brigard, 2023), and "facts, names, numbers, formulae, how to make a good soup, where the flashlight is kept, when to water the garden" can't be said to be past, present, or future (Malcolm, 1977,

[48] "Of the past" is a standard translation (e.g., Castagnoli, 2019), contra "relates to the past" (e.g., Beare: https://classics.mit.edu/Aristotle/memory.html).

p. 15).[49] I can remember that "today is Tuesday" (Locke, 1971). We also use "remember" to refer to events that haven't happened yet, such as future meetings (Munsat, 1966). Most revealingly, "I remember this town" (while driving through it); and "I remember that man" (when I see him at a party).

Cognitions of the variety, "Oh, I remember this" (Malcolm,1977), reveal at least two widespread uses of the verb "to remember" which are not about the past. First is factual memory as exemplified in judgements of the form "I remember that *p*" (where "*p*" is, e.g., "today is Tuesday").[50] Second is recognition exemplified in judgements of the form "a = F" or "This is F"[51] (e.g., where "F" picks out "*the* man", "*the* town", "*the* toy clock" with which one is acquainted).[52]

I have already dismissed semantic memory as a plausible classification for intrusive memories: while it has potential to capture certain temporal (or atemporal) characteristics, it would explain little else about these disruptive and distressing experiences.[53] We have yet to consider recognition as a candidate memory ability. Like intrusive memories, *recognition memory* has escaped the notice of many philosophers and the term is used variously in psychology; sometimes deployed interchangeably with "remembering" (see, e.g., Kihlstrom, 2019). Don Locke (1971) suggests that recognition—"being reminded of something or recognizing someone" is "connected with" but not the same as "remembering", since one can "recognise someone I have never met before from description, and that is not remembering him" (p. 49). Another difference is that recognition appears to possess both *perceptual* and *memory* elements:

[49] Malcolm (1977) claims that "which is expressed by a propositional phrase of the form "that *p*", cannot be assigned any temporal location" (p. 14).

[50] This example is explicitly recollective and autobiographical (following Bermudez, 2013) but there's little reason to suppose this exhausts the category.

[51] From Evans's (1982).

[52] I use "acquainted" in the general rather than technical sense.

[53] I don't deny an account of intrusive memories based on factual memory is possible, but exploring the possibility is beyond scope.

> [Recognition] means that a present fact, usually a *perceptual* one, makes contact with a corresponding fact in *memory*, a trace, a contact which gives the present perception the character of being known. (Köhler; in Malcolm, 1977, p. 192; my emphasis)[54]

Evans (1982) describes recognitional capacities in different terms: recognition "depends upon a capacity to pick out an object as the object of [one's] thought upon being presented with it, as a consequence of having been presented with it in the past" (p. 271). This sense of recognition sets it apart from traditional long-term memory classifications such as episodic, semantic, and procedural. On this view, recognition is a fundamental memory ability which relates to remembering of other kinds, but is plausibly prior to them. In common with episodic memory, it has the property of prior contact[55] or *acquaintance*. This rules out (Locke-style) cases of *recognition-by-description* although the contact may be with objects—including persons—or places, rather than events.[56]

Recognition is explanatorily helpful when compared to episodic memory's essential features (Section 7; Table 1). There is no *memory image* to explain because, "We do not summon up an image … and compare it with what we see" (Evans, 1982, p. 288; cf., Wittgenstein, PI, §604). Canonical examples (see above) do not require *pastness*. A sense of *familiarity* may occur in recognition, but it is insufficient for recognition and may be irrelevant: A judgement of the form "a = F" is the requirement. And that requirement implies no need for explicitly recollective autobiographical judgements, so *self-involving* cognition is not necessary for recognition either. Successful cases of recognition, then, can be more-or-less sparse which emphasises an important difference from recollection:

> We are not restricted, in recognising something, to observe whether or not it possesses features we [can] recall; and the gap between features we can recall and those we are able to recognise can be quite wide (Evans, 1982, p. 287).

[54] Malcolm (1977) is reporting not endorsing.

[55] Byrne (2010) sees "cognitive contact" as a feature of recollection. It is a contended thesis.

[56] See Openshaw (2022) on remembering objects.

This difference can be illustrated empirically: If "I am given a list of forty words … and asked to name as many words on the list as I can remember … I am obliged to recall words on the list". Recognition memory is tested another way: "The forty words will be mixed with 'distractor items' and I shall be presented with … the extended set, and asked to say whether or not it was on the original list. If I correctly answer 'Yes' to one … I shall be said to recognise the word" (p. 285). Both common experience and "psychological experiment" confirm that words "which could not be recalled will be recognized", and in this sense, that recognition memory can be "better" than recollection (*Ibid*.).[57] So much for "good" cases of recognition. The view of intrusive memories I wish to propose relates to "bad" cases of recognition.

9.1 Misrecognition

An Evans-style account of recognition not only explains how we *recognise* but also how we *misrecognise*. As we encounter objects, and so forth, we acquire a "dossier of information" (p. 277). But sometimes that dossier survives the loss of the recognitional capacity, the recognitional capacity becomes detached from the dossier (perhaps temporarily), or the dossier decays to nothing (p. 277), leaving only a feeling of familiarity. Recognitional capacities can be undermined in other ways, e.g., when "duplicates" are introduced to the relevant area (p. 282) or context, and when ego-centric elements (e.g., "my home") or spatial elements (e.g., "that hill") are removed. Thus, there are a multitude of ways in which recognitional capacities can be undermined, disrupted, or even destroyed. In such cases, one might get false negatives or false positives.

Return to an example above: the smell of an attacker's aftershave on someone else (Steel, 2015). On the recognition view, this is a false positive caused by the undermining of recognitional capacity resulting in a stimulus initiating a recognition response regardless of its inadequacy. The stimulus—in this case the smell of the aftershave—"triggers" recognitional capacities for the attacker such that the person wearing the aftershave (a) is mistaken for the attacker (F) or, perhaps, an equivalent source of danger. Here the relevant capacity—to pick out the attacker as a consequence of having come into contact with them before—is plausibly

[57] Evans (1982) lists differences in test scores: up to 40% of words can be *recalled* "some hours later" whereas *recognition* scores "can be up to" 90% (p. 285). There's no citation but see Baddeley (1976).

undermined in multiple ways: (i) duplicates are likely because aftershaves are worn by more than one person; (ii) egocentric elements such as spatial and other contextual information, have been removed; and (iii) the *dossier of information* has become partly detached from the recognitional capacity, such that a single element of its appearance can initiate the response.

On the recognition view, intrusive memories don't require the positing of increasingly deviant forms of episodic memory, nor do they require that we posit a fundamentally different kind of memory. The kinds of characteristics which bring intrusive memories into conflict with episodic memory are already accommodated (see Table 2).

Table 2: Features of intrusive memories explained by view

Intrusive Memories	Episodic View	Recognition View
No mental image	✗	✓
Temporal structure	✓	✓
No sense of pastness	✗	✓
No self-involving	✗	✓
No ownership	✗	✓

Table 2 lists features of intrusive memories apparently in need of explanation. Note that the features are not intended to present in all cases of intrusive memories. So, e.g., some cases of intrusive memories appear to lack imagery and this is enough to bring the class of memories into tension with accounts of episodic memory which require an image. I don't claim to have demonstrated that all features are in conflict. I have only made an initial case that they are. I have not discussed "temporal structure", which—broadly construed—would be common to much human experience.

Despite these limitations, intrusive memories are better characterised as disrupted recognitional capacities than as episodic memories. On the recognition view, recognitional capacities are incorrectly activated (too easily "triggered") in response to a stimulus (object, person, situation, etc.) due to "perceived" similarities with that person (etc.) initially encountered. Recognition memory explains several features alien to episodic remembering and may help to explain other phenomena (e.g., over-sensitivity to stimuli, such as the smell

of an aftershave). A clear benefit of the view is that we don't need to posit increasingly deviant forms of episodic memory to account for intrusive memory phenomena. Nor do we need to accept our existing classifications of memory are woefully incomplete. Nor indeed do we need to abandon the classification project as inadequate to account for the complexities of human experience. A full development of the recognition view hasn't been attempted here, but I hope to have shown that it is worthy of exploration.

9. Conclusion

I've highlighted a puzzle arising due to intrusive memories. The puzzle is generated by tensions between features of remembering for personally experienced events (and for standard taxonomies of memory more broadly) and purported features of intrusive memories. After considering claims about the cognitive and phenomenological features of intrusive memories and I rejected the view that our best explanations of these phenomena can be modelled on widely accepted accounts of episodic remembering—the *episodic view*. On this view, intrusive memory phenomena require either that we posit deviant forms of standard memory types, or that we substantively revise to our memory classifications.

I then outlined an alternative solution to the puzzle. Classification problems dissipate if we reject the assumption that intrusive memories are cases of episodic remembering and consider them cases of recognition memory. After outlining the *recognition view*, I concluded by pointing to two benefits. The recognition view is superior, explanatorily speaking, in two respects: it is a better fit than the episodic view, and it provides additional explanatory resources. The recognition view is, therefore, worthy of exploration.

Acknowledgements

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