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The elusive search for a biomarker of dissociative amnesia: an overstated response to understated findings?

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Huntjens et al. (Huntjens, Otgaar, Pijnenborg, & Wessel, 2022) overstate that we claim to have found a biomarker for dissociative amnesia in DID (Dimitrova et al., 2021) as we made no such claim. Actually, we propose that reduced cornu ammonis 1 (CA1) volume might be a biomarker for dissociative amnesia in DID and emphasise the need for future studies to confirm our results. As in other publications of our pioneering research, we carefully chose words like 'propose', 'indicate' and 'might'.

Huntjens et al. (2022) first concern is that we used a subjective rather than objective measure of dissociative amnesia, i.e. the subjective amnesia subscore of the DES a widely used and well-validated questionnaire. We consider subjectively reported debilitating symptoms to be at the core of any psychiatric disorder, therefore key to investigate. Absence of inter-identity amnesia in DID according to 'objective measures' in some experimental studies (see Table 1) does not mean that the subjective experience of amnesia is less debilitating and incapacitating; therefore, specialised treatment and research on how to relieve it remains needed (Corrigan & Hull, 2022; Reinders, Young, & Veltman, 2022). Furthermore, it is unclear what constitutes an 'objective cognitive measure'. Objective measures should be free of internal and external influences. Regarding the latter, data should have been obtained in a controlled environment where no other factors can influence the data collected. It is unclear whether the data Huntjens et al., referred to meet these requirements, because it was not reported that researchers present during data acquisition were blind for the experimental tasks. Regarding internal influences, 'the term objectivity typically refers to a mental state wherein one is uninfluenced by personal feelings or prejudices' (Bornstein, 1999). This condition typically cannot be ascertained for cognitive/psychological data, and therefore 'objective cognitive measures' arguably do not exist, unlike for example biochemical and structural brain measures.

As a second comment Huntjens et al., wonder if our results are specific to DID. We disagree, however, with their claim that controlling for specific co-morbid disorders leaves us without significant findings. Firstly, as for each comorbid disorder only few cases were present, we considered that disorder-specific effects could not be reliably assessed, hence we used the 'all comorbidity' option. Nevertheless, when accounting for individual comorbid disorders (see online Supplementary Table S4 of Dimitrova et al., 2021) some significant or trend level significant findings for left and right CA1 remained. Considering the trauma-related aetiology of DID (Chalavi et al., 2015b; Dalenberg et al., 2012) it is not surprising that co-morbid PTSD is frequently observed in individuals with DID. However, we do not agree that our 'results equally favour the interpretation that PTSD and CA1 volume reduction are linked'. The sample we studied had a primary diagnosis of DID and in general not all individuals with PTSD report symptoms of dissociative amnesia; a study in PTSD with and without dissociative features is recommended to investigate if the association between CA1 volume and dissociative amnesia still holds.

As a third comment Huntjens et al., state that multiple testing is a problematic feature of our study. Here, we agree. We chose to provide comprehensive analyses and information based on experiences with reviewers who commonly ask for additional online supplementary materials; for example, for the current paper a reviewer requested the analyses correcting for co-morbidity. To allow for standard and strict literature driven a priori region of interest analyses we revisited the data analyses using the newest scientific information available for this



Table 1. Studies examining inter-identity amnesia in individuals with dissociative identity disorder^a

			Comorbidity				Similarities
Authors	Title	Participants	(1) = Specified (2) = Analysed	Stimulus type	Task	Results	(1) = Participants (2) = Task/Stimuli (content)
Allen et al. (2000). IJoP. 38. pp. 21–41	The objective assessment of amnesia in dissociative identity disorder using event-related potentials	DID=4 Controls=60	(1) No (2) No	Non self-relevant, unrelated words	Recognition/recall of learned words between different identities	DID produced event-related potentials and behavioural evidence consistent with evidence of memory transfer between identities	(1) – (2) –
Eich et al. (1997) ^b . Recollections of Trauma. PP. NY. pp. 469–474	Implicit memory, inter-personality amnesia, and dissociative identity disorder: comparing patients with simulators	DID=7 Simulators=9	(1) No (2) No	Non self-relevant, random arrangement of picture sets	An implicit test of picture fragment completion, first completed in DID then reproduced in 9 simulators	Successful repetition priming, which was as strong between different identity states as it was within the same state, evidence of memory transfer	(1) - (2) -
Elzinga et al. (2003). JoAP. 112(2). pp. 237– 243	Directed forgetting between, but not within, dissociative personality states	DID=12	(1) Yes (2) No	Non self-relevant, negative and neutral words and unrelated pictures	Directed forgetting task of 96 Dutch words and picture-fragment completion task	Results show that memories in DID may be state dependent, but with a partial preservation of explicit memory between states not supporting inter-identity amnesia. Implicit memory was fully preserved across states. Independent of state, patients recalled more emotional than neutral information.	(1) - (2) -
Huntjens et al. (2002). M&C. 30 (7). pp. 1033– 1043	Perceptual and conceptual priming in patients with dissociative identity disorder	DID=31 Controls=25 Simulators=25	(1) No (2) No	Non self-relevant, determining priming of novel, visual objects.	Implicit memory task examining implicit memory performance	Priming for DID patients comparable to that of controls on a data-driven task (perceptual encoding task) and on a task allowing for only a single response on each trial (word stem completion task), evidence of memory transfer	(1) Participants performed the priming tasks as part of a larger study on reported memory impairments in DID (Huntjens et al., 2003). (2) Priming (none)
Huntjens et al. (2003). JoAP. 112(2). pp. 290– 297	Inter-identity amnesia for neutral, episodic information in dissociative identity disorder	DID=31 Controls=25 Simulators=25	(1) No (2) No	Non self-relevant, determining priming of novel, visual objects.	Recognition/recall of word lists presented to different identities	Neither recall nor recognition scores of patients were different from those of normal controls, patients did not use qualitatively different ways of retrieval of material learned in one identity versus the same identity, evidence of memory transfer	(1) Participant numbers identical to Huntjens et al. (2002, 2003) (2) Priming (none)

Huntjens et al. (2005). C&C. 14. pp. 377–389	Procedural memory in dissociative identity disorder: when can inter-identity amnesia be truly established?	DID=31 Controls=25 Simulators=25	(1) No (2) No	Non self-relevant, determining priming of novel, visual objects.	Serial reaction time task using a learned repeated sequence	Results of DID indicated a pattern of inter-identity amnesia, however simulators were able to successfully mimic patterns of inter-identity amnesia, rendering the results impossible to interpret	(1) Participants identical to Huntjens et al. (2002, 2003) (2) –
Huntjens et al. (2005). BRaT. 43. pp. 243–255	Transfer of newly acquired stimulus valence between identities in dissociative identity disorder (DID)	DID=22 Controls=25 Simulators=25	(1) Yes, in n = 7 (2) No	Non self-relevant trauma words and positive words	An evaluative conditioning procedure and an affective priming procedure of words	There was no difference between DID, controls and simulators in the congruence effect, evidence of memory transfer	(1) 9 out of 22 DID patients also participated in another (not mentioned) study on inter-identity amnesia (2) Priming (none)
Huntjens et al. (2006). PM. 36. pp. 857–863	Inter-identity amnesia in dissociative identity disorder: a simulated memory impairment?	DID=22 Controls=25 Simulators=25 Guessors=25	(1) Yes, in n = 7 (2) No	Non self-relevant, determining priming of novel, visual objects.	Session 1: logical memory - story A (LM), the visual reproduction (VR), immediate recall tests from the Wechsler memory scale Session 2: asked to recall from session 1 in a different identity and the LM and VR delayed recall tests	Patients recall scores indicated no knowledge of the material learned in the other identity state, but on the critical recognition test, patients behaved like simulators, i.e. they relatively often provided incorrect answers, more often than the guessors who were really unfamiliar with the material, indicating that patients used their knowledge of the correct answers in determining their incorrect answers. It is therefore suggested that DID may be more accurately considered a disorder characterised by meta-memory problems, holding incorrect beliefs about their own memory functioning	(1) 9 out of 22 DID patients also participated in another inter-identity amnesia study (Huntjens et al., 2002, 2003)
Huntjens et al. (2007). BRaT. 45. pp. 775–789	Memory transfer for emotionally valenced words between identities in dissociative identity disorder	DID=22 Controls=25 Simulators=25	(1) No (2) No	Non self-relevant negative, positive and neutral words	An evaluative conditioning procedure and an affective priming procedure of words	DID showed intrusions, with the number of patients recalling negative word intrusions equal to the number of controls recalling negative word intrusions, and recognising negative words from a list learned in the other identity, evidence of memory transfer	(1) 9 out of 22 DID patients also participated in another study (Huntjens et al., 2002, 2003) (2) The implicit memory tasks performed were reported elsewhere (Huntjens et al., 2005); the "remembering vs. knowing"

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Table 1. (Continued.)

			Comorbidity				Similarities
Authors	Title	Participants	(1) = Specified (2) = Analysed	Stimulus type	Task	Results	(1) = Participants (2) = Task/Stimuli (content)
							awareness paradigm used in Huntjens et al. (2003); Priming (none)
Huntjens et al. (2012). PLoS ONE. 7(7). e40580	Inter-identity autobiographical amnesia inpatients with dissociative identity disorder	DID=11 Controls=27 Simulators=24	(1) No (2) No	Self-relevant ^c non trauma-related memories	Testing concealed information - recognising autobiographical memories in DID across identities	Results showed evidence of memory transfer between identities	(1) Participants also included in Huntjens et al. (2014, 2016) and van Heugten-van der Kloet et al., 2014) ^d (2) –
Huntjens et al. (2014). JoAP. 123(2). pp. 419– 428	Autobiographical memory specificity in dissociative identity disorder	DID=12 Controls=31 Simulators=26 PTSD=27	(1) No (2) No	Self-relevant ^c trauma-related memories and words	Autobiographical memory test including 5 positive and 5 negative words from specific memories of participants	No significant differences in memory specificity were found between different identity states in DID. Irrespective of identity states, DID patients were characterised by a lack of memory specificity, which was similar to PTSD	(1) Participants also included in Huntjens et al. (2012, 2016), and van Heugten-van der Kloet et al., 2014) ^d (2) Priming (none)
Huntjens et al. (2016). BRaT. 87. pp. 216–224	Trauma-related self-defining memories and future goals in dissociative identity disorder	DID=12 Controls=31 Simulators=26 PTSD=27	(1) No (2) No	Self-relevant ^c trauma-related memories	Self-defining memory and goals retrieval while in trauma identity state with an avoidant (not aware of trauma) identity state	DID patients in trauma identities retrieved more negative and trauma-related self-defining memories than DID patients in avoidant identities. DID patients reported higher proportion of avoidance goals compared to PTSD. DID did not seem to be "shut off" from their trauma while in their avoidant identity, evidence of memory transfer	(1) Most participant joined in a larger study (Huntjens et al., 2012, 2014 and van Heugten-van der Kloet et al., 2014 ^d) (2) –
Kong et al. (2008). JoAP. 117(3). pp. 686– 692	Inter-identity memory transfer in dissociative identity disorder	DID=7 Simulators=45	(1) No (2) No	Non self-relevant neutral words	Word remembering task using wordlists for explicit memory transfer between two identities	DID showed no superior ability to compartmentalise information. Memory for experimental stimuli showed evidence of memory transfer between identities	(1) – (2) Priming (none)
Marsh et al. (2018). JoAP. 127(8). pp. 751– 757	Transfer of episodic self-referential memory across amnesic identities in dissociative	DID=12 Controls=41 Simulators=16	(1) No (2) No	Self-experimental ^e trauma vignettes	Memory recall by means of the autobiographical implicit association	DID patients were similar to the nonamnestic comparison and simulator groups, and different from	(1) Participants overlap with Marsh et al. (2021) (2) (Vignettes

	identity disorder using the autobiographical implicit association test				test of vignettes between identities	the amnestic comparison group, showing evidence of memory transfer	material identical to Dorahy et al., 2017 ^f)
Marsh et al. (2021). PLoS ONE. 16(2). e0245849	Inter-identity amnesia for neutral episodic self-referential and autobiographical memory in dissociative identity disorder: an assessment of recall and recognition	DID=12 Controls=41 Simulators=14	(1) No (2) No	Self-experimental ^e trauma vignettes	Study 1: recall and recognition tests of episodic self-experimental autobiographical memories Study 2: retrieval behavioural tasks to determine impairment in memory transfer of self-experimental autobiographical experiences across identities	Recall and recognition tasks: DID showed a memory profile of amnesia similar to simulators. On tests of recognition: DID recognised significantly more of an event that occurred in another identity than did simulators and partial information comparisons, showing evidence of memory transfer. DID scored significantly lower of recognition sensitivity and showed a more conservative response bias for episodic self-referential and autobiographic stimuli encoded in another identity compared to the same identity. The performance was largely comparable to members of the general population who were exposed to only one set of stimuli (partial information comparisons)	(1) Participants overlap with Marsh et al. (2018) (2) Study 1 used the "remember" or "know" prompts/ paradigm from previous Huntjens et al. (2003, 2007) (Vignettes material identical to Dorahy et al., 2017 ^f)
Morton (2017). CN. 22(4). pp. 315–330	Inter-identity amnesia in dissociative identity disorder	DID=3 Controls=24 (randomised into simulators and directed forgetting)	(1) No (2) No	Non self-relevant, determining priming of novel, visual objects.	Recognition/recall of word lists presented to different identities	Two out of three individuals with DID showed inter-identity amnesia, showing that individuals with DID are not homogeneous with respect to the depth of blocking of episodic material between identity states.	(1) – (2) Replication of Huntjens et al. (2003)
Reinders et al. (2003). Nl. 20 (4). pp. 2119– 2125	One brain, two selves	DID=11	(1) No (2) No	Self-relevant neutral and trauma-related scripts. The neutral identity state was amnestic for the events described in the trauma-related script or did not recognise these as events that happened to them personally	Script-driven imagery	Identity state-dependent brain activating patterns were found. In response to the trauma-related script, the neutral identity state showed, among others, increased rCBF in bilateral middle and right superior and medial (pre-)frontal gyrus, and bilateral intra-parietal sulcus and precuneus, whereas the trauma-related identity state showed increased rCBF in left parietal operculum and insular gyrus	(1) Participants also included in Reinders et al. (2006, 2012, 2014, 2016) (2) Script driven imagery (identical)

Table 1. (Continued.)

			Comorbidity (1) = Specified (2) = Analysed				Similarities (1) = Participants (2) = Task/Stimuli
Authors	Title	Participants	(Z) – Anatyseu	Stimulus type	Task	Results	(content)
Reinders et al. (2006). BP. 60. pp. 730–740	Psychobiological characteristics of dissociative identity disorder: a symptom provocation study	DID=11	(1) No (2) No	Self-relevant neutral and trauma-related scripts. The neutral identity state was amnestic for the events described in the trauma-related script or did not recognise these as events that happened to them personally	Script-driven imagery	Psychobiological differences were found for the different identity states. RCBF data revealed different neural networks to be associated with different processing of the neutral and trauma-related memory script by neutral versus trauma identity state	(1) Participants also included in Reinders et al. (2003, 2012, 2014, 2016) (2) Script driven imagery (identical)
Reinders, Willemsen, Vos, den Boer, and Nijenhuis (2012). PLOS ONE. 7(6). e39279	Fact or factitious? A psychobiological study of authentic and simulated dissociative identity states	DID=11 Simulators=18 (10 high, 8 low fantasy prone controls)	(1) No (2) No	Self-relevant neutral and trauma-related scripts. The neutral identity state was amnestic for the events described in the trauma-related script or did not recognise these as events that happened to them personally	Script-driven imagery	Differences in psychophysiological and neural activation patterns were found between the DID patients and both high and low simulating controls, showing that simulation of DID was not successful	(1) Participants also included in Reinders et al. (2003, 2006, 2014, 2016) (2) Script driven imagery (identical)
Reinders et al. (2014). PR:l. 223. pp. 236– 243	Opposite brain emotion-regulation patterns in identity states of dissociative identity disorder: a PET study and neurobiological model	DID=11 Controls=16	(1) No (2) No	Self-relevant neutral and trauma-related scripts. The neutral identity state was amnestic for the events described in the trauma-related script or did not recognise these as events that happened to them personally	Script-driven imagery	DID patients' neutral and trauma-related identity state show opposite rCBF activation patterns. The neutral identity state activates the prefrontal cortex, cingulate, posterior association areas and parahippocampal gyri, thereby overmodulating emotion regulation; the trauma-related identity state activates the amygdala and insula as well as the dorsal striatum, thereby undermodulating emotion regulation	(1) Participants also included in Reinders et al. (2003, 2006, 2012, 2016) (2) Script driven imagery (identical)
Reinders & Willemsen (2014) ^b . PET and SPECT in Psychiatry. pp. 411–431	Dissociative identity disorder and fantasy proneness: a PET study of authentic and enacted dissociative identity states	DID=11 Simulators=18 (10 high, 8 low fantasy prone controls)	(1) No (2) No	Self-relevant neutral and trauma-related scripts. The neutral identity state was amnestic for the events described in the trauma-related script or did not recognise these as events that happened to them personally	Script-driven imagery	Differences in neural activation patterns were found between the DID patients and both high- and low-fantasy-prone controls. That is, the identity states in DID were not convincingly enacted by DID simulating controls	(1) Participants also included in Reinders et al. (2003, 2006, 2014, 2016) (2) Script driven imagery (identical)

Reinders et al. (2016). JoNaMD. 204 (6). pp. 445–457	The Psychobiology of authentic and simulated dissociative personality states	DID=11 Simulators=18 (10 high, 8 low fantasy prone controls)	(1) No (2) No	Self-relevant neutral and trauma-related scripts. The neutral identity state was amnestic for the events described in the trauma-related script or did not recognise these as events that happened to them personally	Script-driven imagery	In the DID group, as compared to simulators, bilateral activation of the superior frontal gyrus was found in the neutral identity state in response to the trauma-related text and of the caudate nucleus in the trauma identity state as compared with neutral identity state when processing the neutral text. The results of the new conjunction analyses confirm previous findings that DID is not due to high levels of fantasy proneness	(1) Participants also included in Reinders et al. (2003, 2006, 2012, 2014) (2) Script driven imagery (identical)
Silberman et al. (1985). PR. 15. pp. 253–260	Dissociative states in multiple personality disorder: a quantitative study	MPD=9 Simulators=10	(1) No (2) No	Non self-relevant non trauma words	Recognition/recall of learned related words from the same category (e.g., animals)	MPD not found to differ from controls in overall memory level. Learning information in different states did not result in greater compartmentalisation than controls. There was considerable "leakage" of information across states therefore there is no evidence of highly dissociated memory operations, but evidence of memory transfer	(1) – (2) Priming (none)

BP, Biological Psychiatry; BRaT, Behaviour Research and Therapy; C&C, Consciousness and Cognition; CN, Cognitive neuropsychiatry; DID, dissociative identity disorder; IJOP, International Journal of Psychophysiology; JoAP, Journal of Abnormal Psychology; JoNaMD, Journal of nervous and mental disease; MPD, multiple personality disorder; M&C, Memory and Cognition; NI, NeuroImage; NY, New York; PET, positron emission tomography; PM, Psychological Medicine; PP, Plenum Press; PR, Psychiatry Research; PR:I, Psychiatry research: Neuroimaging; PTSD, post-traumatic stress disorder; rCBF, regional cerebral blood flow.

^aCase studies were excluded, these are reviewed in: Mangiulli, I., Otgaar, H., Jelicic, M., & Merckelbach, H. (2022). A critical review of case studies on dissociative amnesia. ClinicalPsychological Science, 10(2), 191–211. https://doi.org/10.1177/21677026211018194.

^bThis is a book chapter.

^cSelf-relevance is defined as a past autobiographical event, not experimentally related.

^dVan Heugten-van der Kloet, D., Huntjens, R., Giesbrecht, T., & Merckelbach, H. (2014). Self-reported sleep disturbances in patients with dissociative identity disorder and post-traumatic stressdisorder and how they relate to cognitive failures and fantasy proneness. Frontiers in Psychiatry, 5, 19. https://doi.org/10.3389/fpsyt.2014.00019.

eSelf-experimental is defined as an experimentally learned/induced autobiographical event, a self-relevance primed autobiographical event that is independent of the traumatic personal past.

Dorahy MJ, McKendry H, Scott A, Yogeeswaran K, Martens A, Hanna D. Reactive dissociative experiences in response to acute increases in shame feelings. Behaviour Research and Therapy. 2017; 89:75–85. https://doi. org/10.1016/j.brat.2016.11.007

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rejoinder. Of the significant hippocampal subfields reported in Chalavi et al. (2015b) only the subiculum and CA regions 1 and 3 were considered relevant because they have been related to memory retrieval and to memory encoding/retrieval, respectively (Seok & Cheong, 2020); the presubiculum has only been linked to parasubiculum visuospatial processing (Dalton & Maguire, 2017). No evidence has been found for lateralisation of reduced hippocampal volume in relation to adverse childhood events (Hakamata, Suzuki, Kobashikawa, & Hori, 2022) guiding the analyses of total regional volumes. For the reanalysis we used independent sample t tests and report 1-tailed significance findings to test for decreased regional volumes only. Bonferroni multiple comparison correction for the three regions analysed was applied resulting in a significant finding of decreased volume of the CA1 (t(72) = 2.320, p = 0.035), but not for CA3 or the subiculum. A correlation analysis of CA1, the only significantly reduced hippocampal subfield volume, with dissociative amnesia was performed because this was the main clinical measure of interest. A significant correlation of r = -0.398, p = 0.015 was found. Regarding the comment of reusing the same dataset to test different hypotheses: this is not uncommon and is a practice followed by Huntjens et al., themselves (see Table 1). The volumetric data, brain regions, clinical variables and data analyses techniques were different in Dimitrova et al. (2021) than in previous publications (Chalavi et al. 2015a, 2015b; Reinders et al. 2018) and therefore a correction for multiple testing was not warranted. Taken together, when only testing the core hypothesis under consideration that 'Smaller hippocampal subfield volumes will negatively correlate with higher severity of dissociative amnesia in individuals with DID', our proposal that the CA1 is of interest for consideration as a biomarker for dissociative amnesia in DID holds. The remark by Huntjens et al., concerning causality is confusing because we have neither stated nor believe that dissociative amnesia is caused by reduced CA1 volume. Correlation does not imply causality.

A wealth of imaging data shows early childhood traumatisation associations with decreased hippocampal volume. For example, a systematic review of 27 previous meta-analyses found a 100% significant association between decreased hippocampal volume and adverse childhood experiences (Hakamata et al., 2022). Because the current study provides in-depth analyses of hippocampal volume using data analyses techniques not available previously while doubling participants numbers, we assume that the absence of significant associations in Chalavi et al. (2015a, 2015b) is due to lower statistical power and/or less refined data analysis techniques (see also Reinders et al., 2022). In Chalavi et al. (2015b) the merged volumes of CA2/CA3 and CA4/DG significantly differed between groups. In our paper (Dimitrova et al., 2021) these regions were split and did not reach statistical significance. However, the hippocampal CA1 subregion in Chalavi et al. (2015b) and Dimitrova et al. (2021) can be compared directly. We propose that the reason for CA1 becoming significant is due to improved data processing techniques and increased statistical power. Consequently, we disagree that our current results are inconsistent with our previously published results.

A smaller hippocampus does not necessarily mean reduced functionality, as functionality might be compensated by increased or specialised dendrite sprouting. Therefore, our findings need not be incompatible with the ability of individuals with DID to rapidly change access to neutral or trauma-related experiences. A recent study using 7 Tesla fMRI indicated that CA1-3 are involved in both memory encoding and retrieval (Seok &

Cheong, 2020). How individuals with DID are able to achieve this highly specialised functioning of the CA1-3 while its volume is reduced remains unknown and could be a topic for future research. We realise that the sentence 'propose that traumatisation, specifically emotional neglect, is interlinked with dissociative amnesia in having a detrimental effect on hippocampal volume' was possibly interpreted differently by Huntjens et al.. We did not intend to imply that dissociative amnesia causes a smaller hippocampus. On the contrary, dissociation is more likely to be neuroprotective instead of neurotoxic due to less stress hormones being released. A clarified rephrasing of this sentence is: 'propose that dissociative amnesia is interlinked with traumatisation, specifically emotional neglect, which may have a detrimental effect on hippocampal CA1 subvolume.'

In sum, we consider that our proposal that CA1 may be a biomarker for dissociative amnesia is justified and merits further investigation. Regarding the paper by Marek et al. (2022), other experts in the field have expressed fears that 'this paper may be overestimating unreliability' (Stephen Smith in Callaway (2022)) and have stated that with careful selection of participants and sophisticated data analyses methods it might be possible to find stronger associations between brain scans and behaviour than reported by Marek et al. (2022); our study fits these requirements. Additionally, we are particularly confused that Huntjens et al., '... question the need for assuming the existence of a special mechanism like dissociation that is supposed to banish traumatic memories from conscious awareness'. They offer 'dysfunctional beliefs' as an alternative explanation, hence another 'special mechanism'. The idea is far from new, as Janet (1904) proposed that dissociative identities committed to daily life functioning may develop a phobia of traumatic memories. Patients may recollect a trauma as an event but believe it does not pertain to them and inhibit emotional reactivity. Phobia of traumatic memory is furthermore incorporated in the theory of structural dissociation (Steele, Van der Hart, & Nijenhuis, 2005; Van der Hart, Nijenhuis, & Steele, 2006). We thus do not claim that traumatic memories are 'banished' from conscious awareness but hold and have demonstrated that different prototypical dissociative identities may recollect traumatic experiences to different degrees and in different ways (Reinders et al., 2006, 2012). As such, 'conceptualizing reports of dissociative amnesia as the result of dysfunctional beliefs about the self and one's memory functioning' is indeed 'a way forward out of the controversy surrounding this disorder' because it seems that Huntjens et al., join our way of thinking about dissociative amnesia in DID, which we wholeheartedly welcome.

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