

City Research Online

City, University of London Institutional Repository

Citation: Otgaar, H., Howe, M. L., Patihis, L., Mangiulli, I., Dodier, O., Huntjens, R., Krackow, E., Jelicic, M. & Lynn, S. J. (2025). Two hits or two misses? A critical comment on a combined psychological and biological origin of dissociative amnesia and repressed memory. Legal and Criminological Psychology, 30(S1), pp. 52-53. doi: 10.1111/lcrp.4_12272

This is the published version of the paper.

This version of the publication may differ from the final published version.

Permanent repository link: https://openaccess.city.ac.uk/id/eprint/35057/

Link to published version: https://doi.org/10.1111/lcrp.4 12272

Copyright: City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

Reuse: Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

City Research Online: http://openaccess.city.ac.uk/ publications@city.ac.uk/

reviewed by the latter) are not. However, this concluding remark sounds more like a mediation between the two groups of reviewers, rather than between those arguing for or against the 'recovered memory hypothesis'.

How to cite this article: Nachson, I. (2025). Comment on Otgaar et al. 'The neuroscience of dissociative amnesia and repressed memory: Premature conclusions and unanswered questions'. Legal and Criminological Psychology, 30(Suppl. 1), 51–52. https://doi.org/10.1111/lcrp.3 12272

DEBATE

Two hits or two misses? A critical comment on a combined psychological and biological origin of dissociative amnesia and repressed memory

```
Henry Otgaar<sup>1,2</sup> | Mark L. Howe<sup>3</sup> | Lawrence Patihis<sup>4</sup> | Ivan Mangiulli<sup>2,5</sup> | Olivier Dodier<sup>6</sup> | Rafaële Huntjens<sup>7</sup> | Elisa Krackow<sup>8</sup> | Marko Jelicic<sup>1</sup> | Steven Jay Lynn<sup>9</sup>
```

Correspondence

Henry Otgaar, Section Forensic Psychology, Faculty of Psychology and Neuroscience, Maastricht University, Maastricht, The Netherlands. Email: henry.otgaar@maastrichtuniversity.nl

¹Maastricht University, Maastricht, The Netherlands

²KU Leuven, Leuven, Belgium

³City, University of London, London, UK

⁴University of Portsmouth, Portsmouth, UK

⁵Universiti of Bari 'Aldo Moro', Bari, Italy

⁶University of Nîmes, Nîmes, France

⁷University of Groningen, Groningen, The Netherlands

⁸West Virgiana University, Morgantown, West Virginia, USA

⁹Binghamton University, Binghamton, New York, USA

Convertino et al. (2025) and Nachson (2025) both stated that biological substrates can be correlated to behaviour. Additionally, Convertino et al. noted that correlation does not imply causation. This issue concerning causation is imperative. Neuroscientific research cannot conclude whether detected neurological substrates have a causal link with dissociative amnesia/repressed memory (e.g. Taïb et al., 2023).

Nonetheless, Markowitsch and Staniloiu (2025) claimed that organic brain damage is not in opposition to dissociative amnesia. They proposed the two-hit hypothesis referring to 'an additive or synergistic interaction between psychological and physical incidents' (Staniloiu & Markowitsch, 2014, p. 231) to explain certain dissociative amnesia cases. According to them, 'physical incidents provide psychological or biological grounds for the development and maintenance of dissociative amnesia' (Staniloiu & Markowitsch, 2014, p. 232). By this view, being hit on the head during a robbery (biological cause) could lead to psychological trauma and combined produce dissociative amnesia.

We are sceptical that the two-hit hypothesis is a sound hypothesis. First, this hypothesis means that whatever the antecedent (physical, psychological), traumatic memory loss can almost always be labelled dissociative amnesia. This renders the concept of dissociative amnesia/repressed memory overgeneral and unfalsifiable. Second, the two-hit hypothesis does not delineate under which conditions such interactions can occur nor what mechanism is involved. Thus, it is not a hypothesis but merely a description of factors potentially underlying traumatic memory loss (Roberts et al., 2013). Proposing that two hits cause traumatic memory loss, while there is no causation, is a miss in this field.

AUTHOR CONTRIBUTIONS

Henry Otgaar: Conceptualization; formal analysis; methodology; project administration; visualization; writing – original draft; writing – review and editing. Mark L. Howe: Writing – original draft; writing – review and editing. Lawrence Patihis: Writing – original draft; writing – review and editing. Ivan Mangiulli: Formal analysis; writing – original draft; writing – review and editing. Olivier Dodier: Writing – review and editing. Rafaële Huntjens: Formal analysis; writing – review and editing. Elisa Krackow: Formal analysis; writing – review and editing. Marko Jelicic: Writing – review and editing. Steven Jay Lynn: Writing – review and editing.

ORCID

Henry Otgaar https://orcid.org/0000-0002-2782-2181

REFERENCES

Convertino, G., Mitaritonna, D., Stockner, M., Marchetti, M., Talbot, J., & Mazzoni, G. (2025). Comment on Otgaar et al.: The neuroscience of dissociative amnesia and repressed memory: Premature conclusions and unanswered questions. *Legal and Criminological Psychology*. https://doi.org/10.1111/lcrp.2_12272

Markowitsch, H., & Staniloiu, A. (2025). Comment on H. Otgaar et al.: The neuroscience of dissociative amnesia and repressed memory: Premature conclusions and unanswered questions. Legal and Criminological Psychology. https://doi.org/10.1111/ lcrp.1_12272

Nachson, I. (2025). Commentary on Otgaar et al.: The neuroscience of dissociative amnesia and repressed memory: Premature conclusions and unanswered questions. Legal and Criminological Psychology. https://doi.org/10.1111/lcrp.3_12272

Roberts, I., Gluck, N., Smith, M. S., & Morrison, M. F. (2013). Postanesthesia persistent amnesia in a patient with a prior history of dissociative fugue state: The case for the two-hit hypothesis. *American Journal of Psychiatry*, 170(12), 1398–1400.

Staniloiu, A., & Markowitsch, H. J. (2014). Dissociative amnesia. The Lancet Psychiatry, 1(3), 226-241.

Taïb, S., Yrondi, A., Lemesle, B., Péran, P., & Pariente, J. (2023). What are the neural correlates of dissociative amnesia? A systematic review of the functional neuroimaging literature. Frontiers in Psychiatry, 14, 1092826.

How to cite this article: Otgaar, H., Howe, M. L., Patihis, L., Mangiulli, I., Dodier, O., Huntjens, R., Krackow, E., Jelicic, M., & Lynn, S. J. (2025). Two hits or two misses? A critical comment on a combined psychological and biological origin of dissociative amnesia and repressed memory. *Legal and Criminological Psychology*, 30(Suppl. 1), 52–53. https://doi.org/10.1111/lcrp.4_12272