

Vissia and co-workers claim that DID is trauma-based. But how strong is their evidence?

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In one study of many enfolded in the long-running controversy regarding the genesis of dissociative identity disorder (DID), Vissia et al. (1) administered self-report measures of trauma and fantasy to small subsamples (all n 's < 18) of patients with DID, DID simulating actors, healthy comparison participants, and patients with PTSD. Using Bonferroni corrections, which further diminished their already low statistical power, they concluded that their data 'consistently' support the Trauma Model of DID rather than the Sociocognitive Model (2), which holds that conspicuous dissociative symptoms (e.g., identity alterations) typically seen in DID are the by-products of socio-cultural expectations, often induced by iatrogenic psychotherapy, interacting with patients' imaginative capabilities.

Vissia et al.'s conclusion is less than compelling. First, the authors seriously misrepresent the Sociocognitive Model. Like many others, they erroneously equate role enactment, which is largely unconscious, with 'simulation', which is not. The Sociocognitive Model does not imply that people who consciously mimic the features of DID and attempt to role-play different personality states will resemble DID patients in most, let alone all, important respects, as this model acknowledges that DID patients genuinely believe that they harbor multiple indwelling identities and act accordingly. Still, researchers have found few or no differences between persons diagnosed with DID and healthy individuals simulating DID with respect to measures of memory, event-related potentials, self-reported dissociative experiences, and, importantly, interidentity transfer of information. This latter finding, which indicates that amnesia across identities is incomplete, casts doubt on the true, rather than the illusory or imagined, separation of identities in persons diagnosed with DID.

Although Vissia et al. are mistaken in their exaggerated claim that the 'primary thesis' of the Sociocognitive Model is 'that individuals with DID are highly suggestible' (p. 14), they are correct that the Sociocognitive Model emphasizes the role of sleep disturbances, suggestive psychotherapy, iconic media portrayals of DID, and fantasy proneness in the etiology of DID (2). But this model also stipulates that these factors are often or usually superimposed on genuine psychological problems, especially those marked by instability in mood and identity. For example, the overlap between borderline personality disorder and DID is high, typically in the range of 60–80%. Thus, if DID patients resemble those in other diagnostic categories, such as patients with PTSD, this finding cannot be construed as evidence against the Sociocognitive Model, because this model implies that people with certain disorders are at dramatically elevated risk of DID. Relatedly, contrary to the authors' claim, it is not evident how the finding of high scores for depression in the DID group compared with simulators, patients with PTSD, or healthy comparison participants provides differential support for the Trauma Model versus the Sociocognitive Model.

Replicating earlier research (3), Vissia et al. observed that their DID patients and their only clinical comparison group (i.e., patients with PTSD) attained similarly high scores on

measures of general sleep problems and fantasy proneness. This finding is at best ambiguous. DID patients scored almost two scale points higher on the fantasy proneness index than did patients with PTSD and the lack of statistical significance of this difference might be due to the low statistical power; indeed, although Vissia et al. did not report effect sizes for the comparisons in Table 2, a calculation demonstrates that the Cohen's d for this difference was 0.39, which is small to medium (although closer to medium) in magnitude. It would have been more informative had the authors collapsed the two clinical groups and then tested whether trauma self-reports are better (independent) predictors of dissociative symptoms than are fantasy proneness. Finding such pattern would have provided evidence for the Trauma Model.

Second, some of Vissia et al.'s findings seem to contradict the Sociocognitive Model. For example, DID patients were not more sensitive to misinformation on Gudjonsson's Suggestibility Scale (GSS) and did not produce more pseudomemories on a Deese–Roediger–McDermott (DRM) memory illusions task in comparison with patients with PTSD. However, to evaluate the meaning of these null findings, it is essential to know how DID and PTSD patients were selected and instructed. If, for example, DID patients were forewarned by informing them that this study was intended to test a false memory account of DID, or if they correctly discerned that scoring high on a measure of fantasy proneness would invalidate or undermine their role enactments consistent with DID, they might have been especially motivated to produce accurate memory responses or to not endorse certain fantasy-related items. Indeed, literature shows that it is easy to lower suggestibility scores on the GSS by creating specific expectations in participants (4). Another potentially troubling point, not noted by the authors, is the low number of correct responses on the DRM (range 6.37–8.99) and the corresponding low levels of critical lure endorsements (range: 0.40–0.59). These aberrant results suggest floor effects for pseudomemories, possibly stemming from instructions.

Third, Vissia et al. observed one effect that clearly favors the Sociocognitive Model over the Trauma Model: DID patients endorsed significantly more symptoms on the Structured Inventory of Malingered Symptomatology (SIMS) than did all other groups. The authors attempt to explain this effect away by arguing post hoc that the SIMS is a cryptomeasure of dissociation. They concluded that the extremely high SIMS scores of DID patients in effect provide 'support for the Trauma Model' (p. 13). There is, indeed, some shared item content between the SIMS and measures of dissociative symptoms. For example, the SIMS contains item such as 'Recently, I've noticed that my memory is getting so bad that there have been entire days that I cannot recall', which can be interpreted as an experience alluding to dissociative amnesia. However, the majority of SIMS items refer to bizarre and atypical symptoms such as 'Sometimes, when writing a phone number, I notice that the numbers come out backwards even though I don't mean to do it'. Endorsing several of these extremely implausible items implies that the respondent is over-reporting symptoms (5). This, in turn, implies that other self-report

Letters to the editor

information provided by the respondent should not be taken at face value. One way of dealing with this uncertainty is to exclude participants from the analyses who exceed the cut-point of the SIMS. Another would be to treat SIMS scores as covariates. It is unclear how the results of Vissia et al. would have looked had they adopted these analytic approaches.

In sum, Vissia et al.'s findings do not offer convincing support for the Trauma Model. The authors overlooked the meaning of their null findings, overstated the value of their positive findings, and underestimated the falsificatory potential of their negative findings, thereby yielding a scientifically imbalanced appraisal of the evidence for the two major competing etiological models of DID.

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DID is trauma based: further evidence supporting the trauma model of DID

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We welcome the opportunity to respond to Merckelbach, Lynn and Lilienfeld (2016)'s commentary concerning our study (1). Results of our study support the Trauma Model of dissociative identity disorder (DID), but Merckelbach, Lynn and Lilienfeld (2016) raised some concerns, which we will address point-by-point.

Despite specific recognition of our modest sample sizes being a limitation, Merckelbach et al. twice criticize our sample sizes. Interestingly, in the only study, they cite in which patients with DID were included (2) as evidence of the Fantasy Model, which they prefer to call the socio-cognitive model (SCM), they relied on an even smaller sample ($N = 12$ vs. our $N = 17$ patients with DID). In addition, a major concern with their study is that patients with DID were not assessed by a clinical expert but only by an experimental psychologist, increasing the risk of including false-positive DID cases (fictitious or imitated DID) (3). As a matter of fact, in our study, we went to great lengths to prevent inclusion of imitated DID using two clinical experts to do the SCID-D^a assessments; they verified the other's diagnoses to determine exclusion. Five false-positive cases were excluded from this study. Based on our experience that one in five patients presenting with DID is a false positive, the study cited by Merckelbach et al. (2) could possibly include two to three false positives, making their

publication and its results questionable while our study would have double their sample of patients with genuine DID (DID-G). Further challenging our statistical power, Merckelbach et al. (2016) propose that we should collapse the two clinical groups [DID and post-traumatic stress disorder (PTSD)] and test whether trauma self-reports are better (independent) predictors of dissociative symptoms than is fantasy proneness. Results of these new analyses show that trauma measures are indeed more predictive of dissociative symptoms than fantasy proneness measures: the TEC^a-total correlated significantly with all measures of dissociation, that is the DES^a, SDQ-20^a and the CDS^a, whereas the CEQ^a did not. Detailed results are presented in Table 1 and Appendix S1.

Merckelbach et al. (2016) point out that according to SCM, DID does not involve conscious simulation of dissociative personality states, but largely unconscious role enactments, implying that actors as DID simulators (DID-S) represent a poor comparison condition because simulation is based on conscious role enactment. However, SCM theorists are inconsistent in their recommendations about role enactments. In fact, in 2015, Lilienfeld and Lynn acknowledged that the different states shown by patients with DID are 'in some ways similar to the sense of imaginative involvement that some actors report when playing a part' (4) (p. 124). Furthermore, Nicholas Spanos, one of the earliest SCM theorists, relied on role enactment research designs using methodology similar to ours. As acknowledged in the original publication, our simulation protocol was based on the instructions and protocol used in the studies of Huntjens et al. (5–7), which have not been criticized by SCM theorists. It would therefore be helpful if SCM theorists could specify a design and experiment that they would find compelling instead of inconsistently commenting and complementing across publications on DID-simulating protocols.

^aInstruments' abbreviations: SCID-D = Structured Clinical Interview for DSM-IV Dissociative Disorders; TEC = Traumatic Experiences Checklist; DES = Dissociative Experiences Scale; SDQ-20 = Somatoform Dissociation Questionnaire; CDS = Cambridge Depersonalization Scale; CEQ = Creative Experiences Questionnaire; ISES = Iowa Sleep Experiences Survey; GSS = Gudjonsson's Suggestibility Scale; DRM = Deese-Roediger-McDermott; SIMS = Structured Inventory of Malingered Symptoms; PBI = Parental Bonding Instrument.