



## Schematherapy in DID: treatment length and related studies on dissociative amnesia

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We welcome the opportunity offered by the editor to further explain the details and rationale of our protocol, by responding to Nijenhuis and colleagues' letter to the editor, in which they comment on our paper (Huntjens, Rijkeboer, and Arntz, 2019).

The first remarks of Nijenhuis et al. refer to treatment length, intensity, content, and phasing. The authors suggest that Schema Therapy (ST) and Phase-Oriented Trauma Treatment (POTT) for Dissociative Identity Disorder (DID) may actually be comparable in length (i.e. involving a comparable number of sessions). However, no numbers were provided to backup this statement. Although POTT length statistics are scarcely found, in their review Brand et al. (2009) reported a mean length of 8.4 (SD = 4.8) years of treatment for DID and DDNOS patients who were in the last phase of treatment (i.e. the treatment had not ended). The phrasing of Nijenhuis, van der Hart, Schlumpf, Vissia, and Reinders (2019) that 'treatment proceeds as fast as possible and as slow as needed' suggests an open-ended treatment without a clear endpoint. Case descriptions of POTT have sometimes revealed exceptionally long treatments of 20 years or longer. Regarding POTT intensity, expert guidelines note that the minimum frequency of sessions for most DID patients is once a week, with many experts in the field recommending twice or even three times a week if resources permit (International Society for the Study of Trauma and Dissociation [ISSTD], 2011). POTT could thus encompass on average around 340 sessions in total (i.e. based on one session a week), but could also add up to more than a thousand sessions. Our current ST protocol, on the other hand, encompasses 222 sessions in total. If the effects turn out to be positive, ST may therefore be a more time-limited alternative compared to POTT.

Furthermore, we advocate biweekly sessions, especially in the first half of the treatment, as accumulative evidence indicates that treatment intensity is a significant determinant of outcome, with fewer days between sessions leading to a steeper decline in symptoms, even

when the total number of sessions is kept constant (e.g. Cuijpers, Huibers, Ebert, Koole, & Andersson, 2013; Erekson, Lambert, & Eggett, 2015; Gutner, Suvak, Sloan, & Resick, 2016). Hence, it is conceivable that the mere intensification of treatment in our protocol may foster faster improvement, and that patients can regain adaptive functioning sooner in their lives. Moreover, setting a clear limit to the number of treatment sessions, which we also advocate in our approach, may be beneficial for both patient and therapist as this may increase therapy adherence, active patient participation, and formulation and adherence to clear therapy goals by both patient and therapist, countering experiential, cognitive, and behavioural avoidance, which are characteristic of DID patients (Bamelis, Evers, Spinhoven, & Arntz, 2014; Menninga et al., 2019). How time-limited ST compares to open-ended POTT as treatments for DID, in terms of effectiveness, cost-effectiveness, and acceptability, is an empirical issue. Interestingly, a study by Bamelis et al. (2014, 2015) indicated that time-limited ST was more effective and less costly on a societal level than open-ended Clarification Oriented Psychotherapy. However, this study focused on treatment of personality disorder and not on DID.

Considering the authors' remarks on the *content* of both treatments, we acknowledge that some interventions in the ST and POTT approaches may be similar, but there are also important differences. One is that we explicitly do not adopt a phase-based approach. We realize that phase-based treatment may not always follow a linear path and thus may involve revisiting previous stages (Bailey & Brand, 2017). However, as explained in more detail in the introduction of our protocol paper and our reaction to Brand et al.'s (2019) letter to the editor (Huntjens et al., 2019), many patients receiving POTT do not reach the second phase constituting active trauma memory interventions. In our approach, all patients (i.e. not a selection of patients) receive trauma-focused imagery rescripting. Moreover, trauma processing starts relatively early in

therapy, step by step, starting with mild experiences, and gradually processing more severe traumatic memories.

Secondly, the authors mention that in their view ‘dissociative parts’ are affected, influenced, or guided by particular (constellations of) action systems and supposedly do not involve behavioural states. Their model assumes a ‘structural division’ of the personality with lost access in different parts to memories, including episodic, semantic, and procedural memories (Nijenhuis, van der Hart, & Steele, 2010). In our view, this hypothesized structural division of the personality with assumed amnesic barriers runs the risk of reification. Instead, we do not assume a special mechanism for explaining DID, but explain the disorder from a trans-diagnostic mode model, in which the various identities of a DID patient are regarded as extreme expressions of dysfunctional modes, only differing from the modes of patients suffering from PDs in how the patient experiences the mode, thus in degree of experienced dissociation from the other modes (Johnston, Dorahy, Courtney, Bayles, & O’Kane, 2009; Lobbstaël, van Vreeswijk, & Arntz, 2007; Young, Klosko, & Weishaar, 2003).

Thirdly, Nijenhuis and colleagues dispute that in DID there are intact inter-identity memory pathways. We will address the tenability of this hypothesis using the available empirical data. The DSM-5 defines dissociative amnesia as recurrent gaps in the recall of both everyday events, important personal information, and/or traumatic events inconsistent with ordinary forgetting. With this definition as a reference point, studies examining neutral as well as negatively valenced, and trauma-related stimuli are relevant for investigating inter-identity amnesia in DID. The authors state that the results of previous studies into inter-identity amnesia have not been completely consistent. Also, they indicate that previous studies only considered ‘procedural memory or non-self-relevant adverse, emotional, and neutral stimuli’. The authors did not include any references to studies substantiating their conclusions. Moreover, the authors failed to mention studies employing tasks based on other long-term memory systems than the procedural memory system, that is, episodic memory, semantic memory, and perceptual representation system (e.g. Huntjens et al., 2002; Huntjens, Postma, Peters, Woertman, & van der Hart, 2003). They also failed to mention two studies including emotionally valenced words (Huntjens et al., 2005; Huntjens, Peters, Woertman, van der Hart, & Postma, 2007, with in the latter study DID therapists selecting words as trauma-related), and a study on self-defining memories in which patients themselves as well as independent raters rated the retrieved memories for (personal) trauma-relatedness (Huntjens et al., 2016). Moreover, they failed to mention a study on episodic self-referential memory (Marsh et al., 2018), and two additional studies on autobiographical memory functioning in which the stimulus material was

self-generated by the patients according to identity-dependent personal relevance and, in the second study, rated for trauma-relatedness (Huntjens, Verschuere, & McNally, 2012; Huntjens, Wessel, Hermans, & van Minnen, 2014). We are not aware of a single methodological sophisticated study providing evidence of amnesia in DID. Summarizing these and all other controlled studies so far, the results indicate robust and consistent evidence for inter-identity transfer of information, a finding not accounted for by the authors. Importantly, these results have been replicated in at least six independent labs and patient samples (i.e. besides Huntjens’ lab also in Allen & Movius, 2000; Eich, Macaulay, Loewenstein, & Dihle, 1997; Elzinga, Phaf, Ardon, & van Dyck, 2003; Kong, Allen, & Glisky, 2008; Silberman, 1985).

Interestingly, Nijenhuis et al. mention that samples of patients who are in treatment and can alternate in a controlled way between identities may not be representative of naturally occurring dissociative amnesia. Note that the referred to study by Reinders and colleagues included a comparable sample (Reinders, Willemsen, Vos, Den Boer, & Nijenhuis, 2012; Schlumpf et al., 2013, 2014). We agree with the authors that patients may experience less amnesia before treatment than during later stages of treatment. However, they seemed to have missed a crucial procedural detail of the inter-identity amnesia studies: to be included patients had to report complete inter-identity amnesia between the two participating identities. Moreover, the patients’ subjective reports of amnesia were verified repeatedly during the experiments, and patients who reported any knowledge of the learning phase in the test phase (i.e. if they reported direct access or claimed a third identity had informed them) were not included in the final analyses (e.g. see Huntjens et al., 2003 for a detailed description of the procedure). Lack of reported amnesia can thus not be used as an explanation for the studies reported.

Finally, the authors refer to the symptom provocation studies performed in Reinders’s et al. lab (Reinders et al., 2012). In these well-conducted studies, dissociative identities showed different subjective, physiological, and neurophysiological reactions to audiotaped descriptions of reported personal traumatic events. Moreover, patients showed stronger differences in reactivity between states compared to simulators instructed to consciously simulate DID being exposed to an autobiographical scripts of mild negative personal experience. The studies do call for replication and extension in other labs, other patient samples (e.g. BPD and PTSD patients) and/or healthy comparison samples with comparable reported histories of trauma and/or neglect, and appropriate control conditions (e.g. scripts of non-personal emotional events to test general emotional reactivity). Given this, the results of these studies are very interesting as they substantiate the subjective experience of differential emotional reactivity in different subjective states in DID. These results agree quite well

with our theoretical notion of modes in DID, as patients functioning in different modes would entail differential emotional reactivity.

Importantly, however, an interpretation of the results in terms of the relevance for memory functioning is difficult to make, as the ‘differences’ between identities do not relate directly to memory functioning. The authors claim that the studies indicated that dissociative identities may have different ‘memory dependent’ subjective, physiological, and neurophysiological reactions. However, the paradigm entailed does not constitute a direct test of memory functioning and thus is not directly relevant for the question of reported inter-identity amnesia. Patients were instructed to *listen* to a previously recorded script (i.e. described in the third person singular to prevent the direct evocation of mood changes), they were not instructed to *retrieve* any autobiographical information during testing. Even if they were instructed to do so, there would be no way of verifying whether they actually followed this instruction, as no memory test was included. Inverse inference, that is, backward reasoning from the presence of brain activation to the engagement of a particular cognitive function, is an important issue to consider in the absence of any behavioural memory test (e.g. Poldrack, 2006).

An interesting comparison in this regard is a study entailing a similar setup in participants who believed they were abducted by space aliens (McNally et al., 2004). The results indicated that abductees exhibited greater psychophysiological reactivity to abduction and stressful life event scripts than to scripts referring to positive and neutral personal events. In fact, the abductees’ responses were comparable to those of post-traumatic stress disorder (PTSD) patients who listened to scripts of their actual traumatic experiences. It would be a far stretch to conclude from these data that the participants were actually abducted or subjected to painful medical procedures by aliens in their space ships. Rather, these results underscore the power of *belief* to drive physiological responses. Similarly, in the case of DID, differential identity reactivity on (neuro)physiological measures may be driven by their self-understanding of harbouring multiple identities. This explanation may also account for the studies on neurophysiological and behavioural reactions to subliminally presented neutral and angry faces (Schlumpf et al., 2013, 2014; Schlumpf, Nijenhuis, Klein, Jäncke, & Bachmann, 2019) with an equivalent line of reasoning. The explanation also fits perfectly well with our conceptualization of DID in terms of erroneous meta-cognitive understanding of the self as being composed of multiple identities and erroneous meta-memory processes including the belief of amnesic barriers between these identities. This conceptualization relates both to the subjective experience of patients and to the empirical research findings of memory transfer between identities. This leaves no need to assume a ‘structural’

division of the personality, and therefore is, as opposed to the concluding advice of Nijenhuis et al., not taken into account within the ST approach of DID.



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