

Phenomenology of Dissolution Experiences: An Exploratory Study

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ABSTRACT

We report on an exploratory empirical phenomenological study investigating the so-called *dissolution experiences* (DEs), characterized by the subject experiencing a) a dissolution of her psychological or sensory boundaries and/or a fading of the sense of the self as a separate entity, and/or b) a feeling of unity or identification with (elements of) the surrounding environment. We conducted nine phenomenological interviews investigating seven DEs. The qualitative analysis of collected descriptions of experience elucidated the temporal unfolding of each DE episode, identified typical experiential elements characterizing (specific phases of) DEs, and inquired into the differences and similarities of DEs across different contexts. This study is considered a pilot for a more extensive investigation of DEs. Our findings provide grounds for making the first step towards the phenomenological and conceptual clarification of DEs, which have recently become an object of growing interest in the scientific community, consequently enabling further research.

KEYWORDS

Empirical phenomenology, Dissolution of the sense of boundaries, Sense of self, Altered states of consciousness

1 INTRODUCTION

Various strands of scientific [e.g., 1–11] and non-scientific [e.g., 12–19] literature report on experiential episodes during which “the subjective sense of one’s self as an isolated entity can temporarily fade into an experience of unity with other people or one’s surroundings, involving the dissolution of boundaries between the sense of self and ‘other’” [1:1]. In autobiographical accounts, experiences of this kind are typically (albeit not always; see for instance [20]) described as “positively transformative moments that rank among the most meaningful of one’s life” [1:6]. Most frequently, they are reported in association with religious and mystical traditions (e.g., *Atman Brahman* union in the traditional Indian philosophy of *Advaita Vedanta* [13], the meditative state of *Samadhi* in Classical Yoga and Buddhist meditation systems [14], the phenomenon of *unio mystica* in the Christian Tradition [15]; for an overview, see [1, 2]).

The sciences of the mind have lately shown an increased interest in this kind of experiences. The loss or decrease of the sense of boundaries between the ‘self’ and ‘world’ (also described as ‘other’ or ‘nonself’, cf. [1, 4]), brought about in the context of meditative practice, has been recently explored in studies using both third-person [3] and first-person [4] approaches. Apart from meditation, similar experiential phenomena have long been associated with the use of psychedelic substances such as LSD and psilocybin [5], and have been, in this context, observed and investigated in several recent studies [e.g., 6–8]. Changes in the habitual sense of being a separated entity have also been reported in contexts related to the engagement with art [9] or nature (cf. [10]). Finally, one can find a myriad of descriptions of similar experiences in prose and poetry, for instance in the literary and philosophical movement of transcendentalism [16], in Walt Whitman’s poetry [17], in the cultural and literary movement of the Beats [18], and in the poetic tradition of *haiku* [19]; these sources frequently describe such experiences as arising from contact with nature.

Despite their apparent abundance, experiences of this kind seem to lack a common phenomenological and conceptual description, with reports frequently expressed in language specific to the particular context in which they occurred, or in which they are described. This makes it difficult to compare instances of potentially similar experiences reported in different traditions and situations, or by different subjects. Depending on the particular text, these might be described under a variety of names, including *dissolution of the sense of boundaries* (see for example [3–4]), *self-transcendent experiences* (e.g., [1]), *ego death* (e.g., [2]), *ego dissolution* [6–8], and *oceanic feelings* [11]. In one of the few available overviews of such phenomena, the article titled *The varieties of self-transcendent experiences* [1], such experiences are characterized by “transient mental states marked by decreased self-salience and increased feelings of connectedness” [1:1] (cf. also [19]).

We refer to these and similar phenomena as *dissolution experiences* (DEs). In line with the above-mentioned characterizations [1, 11], we define DEs as experiential episodes marked by (a) a feeling of a dissolution of one’s psychological and/or sensory boundaries or a fading of one’s sense of self as an isolated entity, separated from ‘world’, ‘other’ or ‘nonself’, and/or (b) a feeling of one’s unity and/or identification with the surrounding environment, with other people or objects, or with something perceived as larger than oneself.

In this contribution, we present the method and results of an exploratory empirical phenomenological study in which we investigated seven experiential episodes that, according to the above-specified criteria, qualify as DEs. The findings of this study will serve as guidelines for specifying the focus and methodology to be adopted in a more extensive study, currently in its early stages of development, whose final aim will be to provide a detailed phenomenological description of DEs.

The research questions we attempted to answer were: (1) What is it like to experience DEs; what are the typical experiential elements that can be found in DEs? (2) What are the potential similarities and differences between DEs occurring in different contexts?

2 METHOD

Between October 2019 and January 2020, six co-researchers (three females) participated in the study. Their average age was 31 (SD = 13) and they had, on average, 18 years of education (SD = 3). Five of our co-researchers were current postgraduate students of cognitive science; three among them had basic experience in phenomenological reporting and one of them was trained in the micro-phenomenological method. One co-researcher was not familiar with either cognitive science or phenomenological inquiry prior to the interview.

We conducted nine interviews about seven experiential episodes (two episodes being an object of an interview twice) satisfying the above-specified criteria of DEs. We selected co-researchers who reported having experienced a (candidate) DE at any point in their life, and expressed interest in its phenomenological exploration. The to-be-explored DEs were identified by the co-researchers themselves in a conversation with the principal investigator prior to the interview.

In line with the breadth of our definition of DEs, the investigated episodes varied with regard to their approximate duration (ranging from a few moments to several minutes), the time since their occurrence (ranging from five days to 25 years prior to the interview), as well as the context and activity within which they arose. All investigated DEs occurred in an ecological setting: three in the course of meditative practice, three during the use of psychedelic substances, and one in the course of engaging with art.

To assist co-researchers in producing phenomenologically rich descriptions of their experience, rather than (as appears to often be the case in describing DEs) relying on experientially ungrounded conceptualizations, we chose to base our interviewing approach on the guidelines of the micro-phenomenological interview method [21]. When the generated description was phenomenologically too coarse, or when co-researchers resorted to explaining, judging, or conceptualizing their experience, the interviewer re-directed their focus back to describing experience as it was concretely and actually lived.

For illustration, consider the following excerpt from the interview about DE6 (i.e., the sixth investigated experience), showing a back-and-forth exchange between the interviewer and the co-researcher Marco, aiming to describe his experience without falling back on phenomenologically imprecise notions and metaphors:

Marco: It's kind of impersonal and like not being in a body [...] Like part of something that's a lot bigger than yourself. [...] Like I'm not aware of a body anymore. The sense of my body, like being here at a certain point in the world, is gone.

Interviewer: Okay. And *how do you know* that the sense of being in your body is gone?

Marco: Hm. It feels like I'm the universe. [Laughs.] I feel like I'm the universe. I feel like I'm the void. [...] It's a void feeling.

Interviewer: Okay, and *how does it feel* like to be the void?

Marco: At first, it's cool! I think there is a first aspect of awe, like a positive aspect of awe...

Interviewer: Okay, but how do you feel, how do you know that you are the void?

The interviews were conducted in English and Italian; they lasted from 56 to 78 minutes. Each interview focused on detailing the diachronic and synchronic dimension of the selected DE. We started each interview by first asking the co-researcher to describe the selected experience in its full temporal unfolding; we then inquired in more detail into the structure – rather than the content – of the experience within specific temporal phases (of variable duration) that were characterized by the same experiential elements; we also focused on the transitions between different phases. The *peak phase*, i.e., the phase during which the elements characterizing DEs – a dissolved sense boundaries and/or a feeling of unity or identification with (elements of) the surrounding environment – were present to the largest extent, was identified already during the interview; the synchronic structure of this phase was investigated in more detail.

All interviews were recorded on audio or video and transcribed verbatim. Our analysis process was informed by general guidelines of qualitative analysis [22]. Transcripts were chronologically ordered, eliminating or marking the so-called “satellite dimensions” [23], so that further analysis focused on the parts containing phenomenological descriptions. Descriptions of experience were divided into temporally distinct phases (extraction of the diachronic structure), with this process being guided by the prior identification of the peak phase. For each phase, we identified and described different experiential elements present (extraction of the synchronic structure). Interview excerpts used in the present contribution have been edited for clarity by removing the interviewer's interventions and less relevant parts of the transcripts.

3 RESULTS

In accordance with the exploratory character of the study, its findings are not conclusive, but present preliminary insights

that will guide our further research into DEs. Due to the nature of our results and the space limitations of the present contribution, we decided to refrain from laying out an exhaustive list of constructed experiential categories. Instead, this section presents a limited selection of identified experiential elements and characteristics that we find particularly interesting and/or illustrative of the investigated DEs.

Specific aspects of DEs are presented in subsections 3.1–3.3. We would, however, like to start this section by first giving the reader a general impression of the studied experiences by presenting a typical description of a peak phase, taken from the interview about DE7. Co-researcher Lev experienced DE7 while attending a concert, standing in a crowd of people in front of the stage, with the band playing a specific song. The initial phases of the experience, in line with the unfolding of the song, were characterized by a crescendo of feelings of connectedness, while Lev's sense of self, sense of time, and sense of space were gradually diminishing. At a certain point, however, there was a sudden "break in the song" in which only the singer was performing, with the rest of the band remaining silent; during this phase, Lev reported having briefly regained the type of awareness (of himself, his body, and the surrounding space) that he described as similar to that which he habitually experiences in the context of his everyday life. When the band suddenly started playing again, Lev rapidly entered the peak phase of the experience:

This contrast [between the "break" and the band playing again] really made me lose all my sense of self [...] it's like the feeling where it feels like it is exploding and it's just big, all the borders are gone [...] it's like a huge euphoria. But it feels like it's everywhere. It doesn't feel that it's in my body or... It just feels that *everything* is very euphoric.

This feeling was accompanied by a decrease of the sense of being a separate self:

It feels like everything is one, so like I'm aware that [the other people] are there but it feels like they are the same as me and we are the same as the music, and [...] just everything appears to be one, everything. So before, it seems like we're connected, we're two different things that are connected, but in the end [i.e., when the peak phase begins] it doesn't seem like [we] are two different things anymore. [...] This sense of connection changes into a sense of unity. [This sense of unity] cannot really tie to my experience, it just seems like a big experience, *one big experience*. Not like me feeling these things, just like [...] this kind of feelings [that] float in the room, it's not like me feeling it in my chest or in my whatever, but it just seems to be there, everywhere. [...] It's not something that I do or that I perceive [...] it's just... *I'm part of everything else* [...] If it's my behavior or someone else's, it doesn't really make a difference [...] I'm out there somewhere. I don't really know [where], but I also don't really care.

Before presenting specific experiential aspects of DEs, it is important to stress that the investigated DEs presented high variability with regard to their diachronic as well as synchronic structure.

Variability in the diachronic structure. While the above excerpt from DE7 serves as a good illustration of the peak phase, its diachronic unfolding differed from that of the

majority of investigated experiences. Namely, DE7 started with a gradual diminishment of Lev's sense of boundaries, which was then regained during the "break" in the song, only to be abruptly lost again with the beginning of the peak phase. By contrast, all other experiences (6/7) were characterized by a continuous, uninterrupted climax of defining elements of DEs towards the peak phase; in the phases following the peak phase, these elements would then gradually or abruptly disappear.

In line with this more typical temporal unfolding is, for example, DE2, during which co-researcher Claire perceived a progressive lessening of – as she called them during the interview – the "lines of her body". In the initial phase of the experience, Claire was feeling the freshness of the air touching her skin, and a straight "line" between the skin and the space around it; then, starting from the lower left part of her face and gradually encompassing all of her body, all the "lines" of her face and body began feeling "wobbly" at first and then altogether absent from experience. In the last phase of the experience, the "lines" separating her body from the outside world "entered into focus" again.

Variability in the synchronic structure. The seven investigated DEs highly varied with respect to the particular experiential elements present in (specific phases of) the described experience. The most notable difference refers to which of two above-specified criteria for DEs – (a) and/or (b) – were satisfied during their peak phase, and in what way.

Co-researcher Nadja, for example, described an experience (DE1) she had while meditating with her eyes closed, sitting with her legs crossed on the floor of her room. As she was focusing on her breathing (visualizing wood while exhaling, and imagining being part of this wood while inhaling), she started experiencing a gradual dissolution of the boundaries separating her body from her surroundings. Just before the peak phase, Nadja reported feeling a "hole" in the middle of her chest; in the peak phase, she described a sense of not having a frontal part of her torso at all. Here, a dissolution of bodily boundaries (criterion a) was reported without any sense of identification or unity with (elements of) the surrounding environment (criterion b).

In DE3, on the contrary, co-researcher Andrea was experiencing strong identification with objects present in her physical surroundings (criterion b); however, she did not report on any sense of boundary dissolution (criterion a). The experience arose after Andrea consumed LSD and inhaled laughing gas, starting then to recognize the reflection of her own face in various objects in her surroundings that she would look at. She reported feeling that the reflections she was seeing were "also part of who [she was]", and while she described "extend[ing] a little bit outwards, into what [she was seeing] and touching", she stressed she never stopped feeling "in [her] body".

When involving a sense of boundary dissolution, the investigated DEs also varied with regard to the described mode of experiencing this dissolution: while in some cases, the dissolution was described as an emphatically bodily experience or even had a very specific bodily location (as in

the above-described DE1), in other cases (for example in DE7), the co-researcher described the dissolution largely without referring to the bodily feelings.

In what follows, we list a subset of some interesting or illustrative experiential elements and characteristics that featured in particular temporal stages of the investigated DEs: (1) the peak phase, (2) the phases preceding the peak phase, and (3) the phases following the peak phase.

3.1 Elements present during the peak phase

Identification of the action of feeling and the object felt. Peak phases of four investigated DEs (in particular, three from the context of using psychedelic substances, and one from engaging with art) were characterized by instances where the co-researcher could not distinguish between the *action* of feeling and the *object* of feeling, or was experiencing the two as identical. For example, co-researcher Andrea, who experienced DE3 while she was sitting on a couch, reported:

There was a certain awe. With the insight of everything being me [...] It was not like there was a world out there... There's just my perceptions of the world, which are part of *me* because they are *my perceptions*, and this extended to tactile feelings [as well as visual]. So, when I was feeling the couch, the feeling of the couch was part of me. [...] It's difficult to distinguish my perceptions of things from the actual things. [...] I could feel the softness of the couch, that softness was part of me, or just the pressure against me was part of me.

Lev, in describing DE7, similarly remarked:

I cannot really tell what's the difference between me feeling something and me seeing something, or like... what the rest of the world does, it's like it's the same for me [...] what is going on on the stage and what is going on in my head, I cannot really tell the difference.

Transmodality. Two DE descriptions (one from the context of using psychedelics, and one from engaging with art) reported on the unification of different sensory modalities. Marco, who experienced DE6 while being in the forest under the influence of mescaline, thus described the merging of senses accompanying the onset of his sense of boundary dissolution:

... it might be hard to separate different aspects of the visual and the feeling and the thinking because it might have all been into one. Like the visual part was also the feeling, like my sense of self was encompassed by this visual aspect, like this broad universal view, and then the feeling, like it might have all been wrapped into one.

Similarly, in describing the beginning of the peak phase in DE7, Lev reported:

Then, when everything else comes in again, it just loses the separation between the sound and colors and different sensory perceptions.

3.2 Elements present before the peak phase

"Feeling" that passes through the bodily boundaries. In four investigated DEs (two from the meditation context, one from the psychedelics context, and one from engaging with art), co-researchers reported a *feeling* (a term all four spontaneously used in all four occasions to refer to different sensations, e.g., a pulsating or a movement) that they

perceived as "passing through their bodily boundaries", usually without encountering obstacles in doing so (or encountering them less and less). This feeling was felt as moving either from the outside inwards or from the inside outwards, and was sometimes experientially related to the loosening of the sense of boundaries. For example, Claire described an experience (DE2) that she had while lying on her bed and following a guided meditation. Throughout the experience, she felt a pulsating sensation spreading from her chest that was loosening the "lines of her body":

[A]s this pulsates, I don't feel any... block in a way. [...] Nothing slows the feeling down in this area. [...] It goes everywhere, sort of just spreads over the body and then goes out into space. [...] Makes my, like this separation of my body, it makes it sort of thinner and lessens it.

Another example can be found in DE1, in which the peak phase (already mentioned above) was preceded by Nadja experiencing the movement of air freely passing between the space in front of her chest and the inside of her chest:

I inhaled, and I was surprised by this stream of air entering clearly and directly into my chest. As if the air passes directly from here [pointing to space in front of her chest] towards the inside, and there is nothing that it has to go through. [...] I just observe this sensation, I continue inhaling and exhaling, until I really [...] notice that this air is not stopped by anything. [...] At a certain point I really feel like there is a hole in my body that makes the air going through it. At the beginning, just a hole. Then, after a while, I just feel there's no frontal area [...] So the frontal part is really just this exchange of air, there's nothing else [...] and in this way there's no separation between what is actually the area inside my body and what is outside, because the exchange of air is happening in the same space. I'm just a shape in which this exchange of air can take place, but nothing else.

3.3 Elements present after the peak phase

Need to go back to the habitual way of experiencing. In two of the investigated DEs (one from the meditation context and the other from the psychedelics context), the end of the peak phase was accompanied by a need to go back to the "habitual" way of experiencing. In describing DE2, Claire described it as

a wish, like this nag or a need to come back, to not stay in this because it's really pleasant [...], something that urges to come back and then colors the entire space.

Marco reported on the need to "pull away" from what he was experiencing in DE6 (i.e., losing of sense of time and space, accompanied by visual hallucinations of "weird creatures"):

And then there's a sense that I don't want to, I don't want that, it's too scary. (...) Well, I don't know if I can control it or not, but when I get scared [...] then I pull out of it.

Returning to the body/moment/location. In several analyzed DEs, we noted changes, throughout the experience, of the sense of body (5/7), time (4/7), space/location (4/7), or of what the co-researcher was doing (2/7). Usually, the awareness of these aspects was at its lowest during the peak phase, and returned towards the end of the DE. For example, Claire reported that at the end of her DE,

[t]here is a sense of coming back to the body. [...] The body comes into focus again and the room [...] the sense of the

room, where I am positioned, that there is a bed underneath my legs and my body and then there is a drawer next to me and stuff like that, all that sort of comes back, [...] it brings to focus the body and where I am and what I'm doing. [...] So it's like *making* the room and the world in a way.

4 FUTURE DIRECTIONS

Despite most co-researchers being familiar with the basic guidelines for phenomenological reporting, the generated descriptions of experience have often failed to reach the desired phenomenological depth and precision, instead frequently staying at the level of general remarks and conceptualizations. It might well be that at least some aspects of DEs are particularly difficult – or perhaps impossible – to be put into words. Marco, for instance, emphasizes that a part of his experience of boundary dissolution (DE6) is better describable as an “*absence* ... of what you thought was always there, rather than a *presence*”. Our co-researchers often mentioned that their experience was difficult to describe, and further sometimes expressed concern that any words they could find were too metaphoric or esoteric to do justice to the DE as it was actually lived. For example, Jan, describing DE5 experienced while meditating on a hill with other meditators, commented:

But what can I say, “ah what a good vibration” – I don't mean to say this as those “ah I've been to India”! I mean, you were really feeling it, you were feeling that there was... That something was vibrating, no?

In describing the peak phase of DE7, Lev similarly remarked:

Everything is just really like on the same, I don't know – that sounds esoteric – but like everything is on the same frequency, everything is like coherent, everything shakes together.

Setting aside the question of whether the defiance to verbal description might present an inherent feature of DEs, we believe that the quality of phenomenological reports could be nevertheless substantially improved by (a) increasing the number of interviews dedicated to the exploration of a particular DE; (b) training co-researchers in phenomenological reporting in the context of everyday lives.

The results found in this study will enable us to refine the research design to be implemented in our further inquiry into DEs. In the course of the larger study based on this pilot, we are planning to collect a sample of approximately thirty DEs, experienced in different context; however, each co-researcher will, prior to exploring their DE, undergo a period of training in a technique similar to *descriptive experience sampling* [24]. This will enable co-researchers to learn to better observe and describe their experience, as well as provide descriptions of aspects of co-researchers' everyday experience that can be later on compared to characteristic experiential aspects of their DEs.

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