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Abstract

Dissolution experiences (DEs) are experiential episodes during which the perceived boundaries between self and world (i.e., non-self) become fainter or less clear. This is usually accompanied by a sense of unity with the world or elements of it. Experiences matching the definition of DEs are reported in different strands of literature, both academic and non-academic, across different traditions and disciplines. They are described as occurring in a multitude of contexts such as art, nature, love and intimacy, psychopathology, the use of psychedelic substances, and meditation. Different lines of inquiry are generally carried out separately, and adopt a different terminology. Further exploration is needed for a unified investigation of DEs. We present an empirical phenomenological investigation of DEs and of the experience of the self in DEs, as DEs offer a unique opportunity to investigate the nature of the self. We conducted a series of 29 in-depth phenomenological interviews with eight co-researchers, investigating eight randomly sampled daily life experiences and 10 DEs selected from the co-researchers' past and that occurred in different contexts. The results, disclosing the diachronic and synchronic structures of DEs, show that the investigated DEs are often accompanied by the experience of letting go and trusting the world. The self, usually experienced as a complex multi-elements entity, is subject to a loss of internal coherence, and most of its elements disappear; often, only the sense of mineness remains. Our study contributes to a conceptual and phenomenological understanding of DEs, and it provides insights useful to the discussion on the metaphysical and experiential nature of the self.

Keywords: dissolution experiences, self, sense of boundaries, qualitative research, empirical phenomenology

Kurzfassung

Entgrenzungserfahrungen sind Erfahrungsabschnitte, in welchen die wahrgenommenen Grenzen zwischen Selbst und Welt schwächer oder weniger deutlich werden. Diese Erfahrungen gehen üblicherweise mit einem Gefühl der Einheit von Selbst und Welt, oder ihrer Teile, einher. Berichte von Erfahrungen, die dieser Definition entsprechen, findet man in verschiedenen Strängen wissenschaftlicher und nichtwissenschaftlicher Literatur, über unterschiedliche Traditionen und Disziplinen hinweg. Entgrenzungserfahrungen wurden in verschiedenen Kontexten beschrieben, unter anderem in Zusammenhang mit Natur, Kunst, Liebe und Intimität, Psychopathologien, psychedelischen Substanzen und Meditation. Verschiedene Forschungsansätze arbeiten meist unabhängig voneinander und mit unterschiedlichen Terminologien. Weitere Forschung ist nötig, um eine einheitliche Untersuchung von Entgrenzungserfahrungen zu erreichen. Wir stellen eine empirisch-phänomenologische Untersuchung von Entgrenzungserfahrungen und der Selbsterfahrung in Entgrenzungserfahrungen vor, da diese eine einzigartige Möglichkeit bieten das Wesen des Selbst zu erforschen. In 29 ausführlichen phänomenologischen Interviews mit acht Mitforschenden wurden acht zufällig ausgewählte Alltagserfahrungen sowie zehn Entgrenzungserfahrungen untersucht. Die Entgrenzungserfahrungen wurden von Mitforschenden aus ihrer Vergangenheit ausgewählt und fanden in unterschiedlichen Kontexten statt. Die Ergebnisse decken die diachrone und synchrone Struktur von Entgrenzungserfahrungen auf und zeigen dabei, dass die erforschten Entgrenzungserfahrungen oft mit einer Erfahrung des Loslassens und des Vertrauens in die Welt einhergehen. Das Selbst, welches zumeist als komplexe Entität erfahren wird, die aus mehreren Teilen besteht, verliert seine interne Kohärenz, und der Großteil seiner Bestandteile verschwindet. Oft bleibt nur ein Gefühl der Meinigkeit. Unsere Studie trägt zum konzeptuellen und phänomenologischen Verständnis von Entgrenzungserfahrungen bei und liefert nützliche Einblicke für Diskussionen über das metaphysische und erfahrene Wesen des Selbst.

Schlagwörter: Entgrenzungserfahrungen, Selbst, Grenzbewusstsein, qualitative Forschung, empirische Phänomenologie

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Introduction

Tu m'hai detto primo
che il piccino fermento
del mio cuore non era che un momento
del tuo; che mi era in fondo
la tua legge rischiosa: essere vasto e diverso
e insieme fisso

—Eugenio Montale, Mediterraneo

You might be reading this on your PC, slightly squinting your eyes at the light of the screen. Or you might be reading the paper version, feeling its different textures against your hands. You might be reading this in your own voice, or if you know me, you might be reading these words in my voice. I invite you to observe your experience. Are you having any thoughts, any emotions? You might be experiencing a sort of bubble engulfing you, part of your body, and what you are reading from. How aware are you of what is outside of it? There might be someone else in the room, and their presence might make you aware of how you move. Or a chill draught might be reaching your neck, foreign and unwanted, as you might feel the need to protect yourself from it. At the back of your head, you might have the implicit knowledge of what you are doing, of what to do next. You are mainly in the bubble: the bubble contains what you are doing, what you are controlling. Somehow the inside of the bubble is what you are. Or is there a location where you mostly feel yourself to be? Are you observing the world from any specific point? Let me guess. You are in your head, or maybe somewhere close to your eyes, right behind them or somewhere in between them and this page. You are witnessing and acting on the world from there. Is that so? I am in a similar situation, now that I am writing this. I hear my voice saying these words, I am clearly located somewhere around my eyes, but I am also my body, that I can control and act with, and the legs that I'm moving at the rhythm of the music I am listening to are definitely mine. I clearly feel what I am, and what I am not. I am writing my thesis, I had a nice time yesterday evening, and I am not outside of the bubble where I am thinking and acting.

But this is not always the case. Think about it, have you had any experiences where the boundaries of your self expanded so much to come to encompass everything, or simply dissolved and disappeared?

I am in the sea, swimming. The sun, with its warmth, gently presses on my head, and makes me perceive the air around me as denser. My body is relaxed, the vision of the coast blurred. I am quite offshore. When I move, I almost do not feel the water sliding softly against my skin. There is only freshness. It is so easy to move. All is welcoming me. I create some tension with my body, then I let go, and I fall in the water. As soon as I start seeing little waves getting up, raised and thrown all around, I am already below the surface, and their sound reaches me muffled. I move my legs to reach some place deeper down, my eyes wide open on the light blue and green shades in front of me. Different silky temperatures caress my skin, fleeting. I turn towards the golden rays perforating the surface and cutting the water, dissolving with it. Dissolving with me. When I emerge, I emerge accompanied by splashes, and surprisingly by laughter of pure joy. Then I dive down again. When a wave passes above me, my body is rocked ahead, energized. When the waves leave space to the undertow, my body follows its receding, relaxed. And so does my breath. Wave, undertow. We have the same rhythm. We are the same thing.

When I am in the sea; while looking into the deep, green eyes of my mum; when I am meditating, closed in a narrow room; during a party in the woods; while feeling that love underlies everything; when reading Walt Whitman. When blurring the boundaries with the person I love, until we are not two separate things anymore. In all these cases the sensed division between myself and the world softens, and dissolves.

Similar experiences are reported in different strands of literature, both academic and non-academic, across different traditions and disciplines. However, we[1] find that such episodes lack a comprehensive and detailed definition that would unify them all under the same term. We therefore constructed, from the reports found in literature and from our own experience, a working definition of those that we named *dissolution experiences*$_{g}$.[2,3]

[1] Up until here, the first-person singular was used to emphasize the personal nature of what was written. From now on, however, “we” is used instead of “I”. This, both to include both the principal investigator and her mentor, and to adopt a more impersonal, academic, and objective stand.

[2] Terms marked with the subscript “g” are addressed in the *Glossary*.

We then adjusted and enriched the definition and our understanding of the term with our empirical work.

The descriptions of the perception, typical of dissolution experiences, of a lost or more vague distinction between the individual and the world$_g$, bring out two distinctive aspects: a sense of unity with the world and elements of it, and a diminished sense of self. This thesis was precisely born from the idea that episodes of dissolution$_g$, often experienced as very meaningful, have something to do with—and something to say about—the principal investigator's main research topic of interest: *the self*.

The present thesis aims at a deeper understanding of the experiential structure of dissolution experiences, with a focus on the experience of the self during episodes of dissolution.

In the first chapter we present an overview of the existing literature (academic and non-academic) on dissolution experiences. Similar descriptions can be found across different contexts, and we argue that they all represent examples of dissolution experiences. We focus on reports and studies on episodes of dissolution as occurred across the contexts of: art, nature, love and intimacy, psychopathology, the use of psychedelic substances, and meditation. The most relevant studies are discussed in further detail.

The aspect of dissolution experiences that we intend to focus on is the experience of the self. In line with this, the second chapter is intended as an overview of the various existing theories and views on the nature—metaphysical and experiential—of the self. We proceed delineating the insights that the literature provides us on how the self is experienced both during daily life experiences$_g$, and during dissolution experiences.

In the third chapter we describe our pilot study, an exploratory empirical phenomenological study on dissolution experiences across different contexts, that the principal investigator conducted with Ema Demšar. The pilot study served to test our hypothesis that dissolution experiences which occurred across different contexts represent the same kind of phenomena, and to provide a more specific direction to our study.

The fourth chapter is dedicated to detailing our study, an empirical phenomenological study on dissolution experiences, with a focus on the experience of the self during

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[3] Throughout the text, we address dissolution experiences also as *episodes of dissolution*.

episodes of dissolution. We explicate the research questions, the research design, the sample of co-researchers$_g$, the interview method, the analysis method, and the validity of the study.

The results are presented in the fifth chapter in the form of a codebook$_g$, an instrument of qualitative research. The codebook is preceded by an explanation of its structure. Furthermore, the general situation in which each investigated experience took place is briefly summarized.

In chapter six we extensively discuss and interpret our findings, comparing them with the literature on dissolution experiences and on the self. Specifically, we focus on: a comparison of daily life and dissolution experiences, the experiential structure of dissolution experiences, similarities and differences between dissolution experiences that occurred across different contexts, our main findings, the experience of the self, and the experience of the presence of other people. Along with this, we present the relevance of our findings. In the last two subchapters of chapter six we discuss limitations and further studies.

Chapter seven includes our conclusion: a summary of the most relevant points touched throughout the text, with a focus on what can be learnt from our study.

We provide a glossary, that is, a list, in alphabetical order, of some of the important terms used in this thesis, along with their definitions. The first time that they appear in the text, the terms that are addressed in the glossary are marked with the subscript "$_g$".

1. Dissolution Experiences

> Sometimes I'd pray like I always done. On'y I couldn' figure out what I was prayin' to or for. There was the hills, an' there was me, an' we wasn't separate no more. We was one thing. An' that one thing was holy... An' I got thinkin', on'y it wasn't thinkin', it was deeper down than thinkin'. I got thinkin' how we was holy when we was one thing, and' mankin' was holy when it was one thing. An' it on'y got unholy when mis'able little fella got the bit in his teeth an' run off his own way, kickin' and draggin' and fightin'. Fella like that bust the holiness. But when they're all workin' together, no one fella for another fella, but one fella kind of harnessed to the whole shebang—that's right, that's holy. An' then I got to thinkin' I don't even know what I mean by holy... I

> can't say no grace like I use' ta say. I'm glad of the holiness of breakfast. I'm glad there's love here. That's all.
>
> —John Steinbeck, The Grapes of Wrath

This section provides a literature review on dissolution experiences. Its main aim is to illustrate that dissolution experiences have been reported: a) by a variety of different strands of literature, both academic and non-academic, of traditions, and of schools of thoughts; and b) as occurring in a multitude of different contexts.

With regard to the first point, similar descriptions of dissolution experiences can be found in different schools of thought around the world within different disciplines and various traditions which have investigated consciousness, some dating back thousands of years. Furthermore, comparable reports are provided by both academic and non-academic literature. Although we are going to address the specifics of some of these reports and studies, it is not our goal to provide a comprehensive description of dissolution experiences as delineated in literature. Providing a proper account of all the traditions that have addressed dissolution experiences is beyond the scope of this thesis. However, we believe it necessary, in order to support our claim that dissolution experiences are reported by various kinds of sources, to mention a selection of them, including those we drew from for the study presented in this thesis.

First, we address the phenomenon of dissolution experiences in general, and then we focus on dissolution experiences that occurred in specific situational contexts. As argued, for example, by Yaden, Haidt, et al. (2017), the occurrence of dissolution experiences is not bounded to a single specific context, but instead, episodes of dissolution can take place in a multitude of different contexts. This was empirically tested with our pilot study (Caporusso & Demšar, 2020; see *3. Pilot Study*[4]). Furthermore, we collected reports of experiences that occurred in different contexts and that do nevertheless show similarities and a common pattern. Specifically, they correspond to our definition of dissolution experiences, regardless of the context that the experiential episodes occurred in.

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[4] When referring to a chapter or subchapters of the present thesis, we report its number and title in italics.

We define dissolution experiences as experiential episodes during which the perceived boundaries between self and world (i.e., non-self) become fainter or less clear. This is usually accompanied by a sense of unity with the world or elements of it. We constructed this definition drawing from the literature on dissolution experiences, and then adapting it and enriching it informed by the findings of both our pilot study and the main study, presented here.

Between the studies that inspired our definition of dissolution experiences there are those of Yaden, Haidt, et al. (2017) and of Jussi A. Saarinen (2014). Yaden, Haidt, et al. define *self-transcendent experiences*$_g$ as "transient mental states marked by decreased self-salience and increased feeling of connectedness" (p. 1). When the individual is in such mental states, "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'" (Yaden, Haidt, et al., 2017, p. 1).

The term *oceanic feelings*$_g$ appeared for the first time in a letter that Romain Rolland, a Nobel-winning novelist and mystic, wrote to Sigmund Freud. As rephrased by Freud, this term indicates the feeling of "an indissoluble bond, of being one with the external world as a whole" (as cited in Saarinen, 2014, p. 4). Saarinen writes about how oceanic feelings

> come in two distinct forms: (1) as transient episodes that consist in a feeling of dissolution of the psychological and sensory boundaries of the self, and (2) as a relatively permanent feeling of unity, embracement, immanence, and openness that does not involve occurrent experiences of boundary dissolution. (p. 3)

As Yaden, Haidt, et al. (2017) have highlighted, empirical research on dissolution experiences is carried out under a multiplicity of different labels. Some of the terms often used in scientific literature to address dissolution experiences are *ego dissolution*$_g$ (e.g., Millière, 2017) and *ego death*$_g$ (e.g., Harrison, 2010). In psychology, Abraham Maslow addresses as *peak experiences*$_g$ "moment[s] of awe, ecstasy, or sudden insight into life as a powerful unity transcending space, time, and the self" (American Psychological Association, n.d.). The psychologist John Harrison (2010) lists some phenomena and non-scientific terms corresponding to dissolution experiences: "cosmic unity, unio mystica, mysterium tremendum, cosmic consciousness$_g$, union with God, Atman$_g$-Brahman$_g$ union, Samadhi$_g$, satori, moksha, or the harmony of the spheres" (p. 41).

Notably, the states that mystics (see *mysticism*$_g$ in *Glossary*) aspire to experience represent examples of dissolution experiences. Namely, "the aim of most mystics is to establish a conscious relation with the Absolute. (...) Mysticism aspires to intimate union with the Divine within the soul and to a disappearance of the individuality in the Divine" (Golkhosravi, 2004, p. 2). Sebastjan Voroš (2016) writes that mystical experiences include *the experience of oneness, a unification of the self with the Absolute*[5], and William James in *Varieties of Religious Experience* (1902/2002) states that "in mystic states we both become one with the Absolute and we become aware of our oneness" (p. 324). Being not a religion itself—"rather the most vital element in all religions" (Golkhosravi, 2004, p. 1)—nor a philosophical system,

> the everlasting and triumphant mystical tradition [is] hardly altered by differences of clime or creed. In Hinduism, in Neoplatonism, in Sufism, in Christian mysticism [(e.g., see Saint John of the Cross's Dark night of the soul, 16th century/2010)], in Whitmanism, we find the same recurring note, so that there is about mystical utterances an eternal unanimity which ought to make a critic stop and think, and which bring it about that the mystical classics have, as been said, neither birthday nor native land. (James, 1902/2002, pp. 324-325)

Pantheism$_g$—whose name derives from the Greek roots pan (all) and theos (God)—is

> at its more general, (...) the view that God is identical with the cosmos, the view that there exists nothing which is outside of God. (...) All that distinguishes a pantheist from an atheist is *feeling*; a certain emotional reaction or connection that we feel to the universe. (Mander, 2021)

To make a few other examples of traditions or schools of thoughts that tackle dissolution experiences, pantheistic ideas and feelings, closely recalling dissolution experiences, characterize and can be found in: many spiritual and religious traditions, for example Hinduism of the Advaita Vedānta$_g$ school and Celtic spirituality, and many ideologies of philosophers like Baruch Spinoza, Giordano Bruno, Anaximander, Georg Wilhelm Friedrich Hegel, Thales of Miletus, Albert Einstein. They are also present in many works of literature, such as those of Johann Wolfgang von Goethe, William Wordsworth, Ralph Waldo Emerson, Walt Whitman (Mander, 2021). Furthermore,

[5] Translated from the Slovene by Aleš Oblak.

Transcendentalism$_g$ and Sufism share "the view that the Divine permeates all objects (animate/inanimate) and the purpose of human life is union with God" (Golkhosravi, 2004, p. 1). Golkhosravi compares the transcendentalist terms *Santa Spirita* (Whitman) and *Over-soul*$_g$ (Emerson) to the sufi term *Al-Haq*, all referring to "a cosmic and universal force" (p. 6).

Moreover, dissolution experiences can occur in concomitance with different "practices or activities" (Yaden, Haidt, et al., 2017, p. 3), as well as with different kinds of situational frameworks. Comparable descriptions of dissolution experiences can be found in reports on episodes occurring in relation to different contexts (e.g., during meditation practice and in contact with nature). A pilot study was conducted that demonstrated that dissolution experiences which occurred in different contexts constitute the same underlying experiential structure and characteristics (see *3. Pilot Study*). These results allowed us to draw the conclusion that even though some internal variation can be observed, the target episodes can be addressed as the same kind of experiential phenomenon, and grouped under one term: namely, *dissolution experiences*.

Following, we present an overview of the literature reporting on dissolution experiences in a selection of contexts. The choice of the contexts to be addressed is guided primarily by the impact that the literature related to each context had on our work, by the amount of literature available in relation to each specific context, and by the particular nature of the dissolution experiences that we empirically investigated in our study. The six contexts selected correspond to the general contexts in which the dissolution experiences we investigated took place. However, we do not mean to claim that the presented contexts are the only ones in which dissolution experiences can occur. The contexts addressed are: art, nature, love and intimacy, psychopathology, the use of psychedelic substances, and meditation. Although we present these six contexts separately, we apprehend that different contexts do often overlap and intertwine. That is to say, each episode of dissolution often occurs in those that can be identified as more than one context (e.g., a dissolution experience that takes place in a wood under the effect of psychedelics refers to two of our contexts: nature and the use of psychedelic substances). In our review we divide the different contexts in order to emphasize the message that we aim to convey. Namely, dissolution experiences have been reported as occurring in a multitude of contexts, as documented by the presence of similar descriptions of episodes of dissolution across different contexts. The main goal of the

present overview is merely to show that reports of dissolution experiences are present across different contexts, and that they present similar patterns regardless of the context—and not so much to delve in depth into the described nature of such episodes.

In the various subsections, we present poems and excerpts of novels and other works of literature as examples of non-academic reports of dissolution experiences. Exactly as the academic reports, they are meant to support the claim that dissolution experiences occur in the specific context that each subchapter addresses. They are therefore considered for the message they convey, before than for their nature: that is, being works of art. On the contrary, in the following subsection, *1.1 Art*, art is presented as a context in which dissolution experiences can take place, and not only as an instrument to report on them.

1.1 Art

> There was no dancing in couples any more. Arms were outstretched to embrace everyone within reach, and knees were bent and feet pounded the earth to the slow beating of the guitars. The dancers began in low humming, one tone struck deep in the throat, and in off-beat. A quarter-tone came in. More and more voices took up the beat and the quarter-tone. Whole sections of the packed dancing space were bobbing to the rhythm. The humming grew savage and deep and vibrant where at first there had been laughter and shouted jokes. One man had been notable for his height, another for the deepness of his voice, (...) but that was changing. The dancers lost identity. Faces grew rapt, shoulders fell slightly forward, each person became a part of the dancing body, and the soul of the body was the rhythm. (...) 'We have found something here, all of us. In some way we've come closer to the earth for a moment.
>
> —John Steinbeck, To a God Unknown

In Saarinen's words (2015), oceanic feelings have been reported in the context of "artistic creativity, analysis of visual artworks, and aesthetic encounters" (p. 2). Drawing from *The Hidden Order of Art* by Anton Ehrenzweig (1967), Saarinen describes how this manifests as

> an unlimited mutual interpenetration between images, objects and concepts: opposites are undone, inner and outer worlds merge, death and birth become one, and the

> restrictions of space and time are dissolved. In effect, all splitting and choice-making is temporarily suspended. (p. 3)

In Ehrenzweig's words (1967), "dedifferentiation suspends many kinds of boundaries and distinctions; at an extreme limit it may remove the boundaries of individual existence and so produce a mystic oceanic feeling that is distinctly manic in quality" (p. 294). Ehrenzweig agrees with Saarinen—and we agree with them—on the fact that such episodes of dissolution in the context of art can both be experienced by the artist, and by the perceiver.

More specifically, in various literary, artistic, and philosophical currents that manifested throughout history, such as Romanticism and Transcendentalism, the artist is seen as being "in tune with the universal spirit more than others" (Miller, 1972, p. 224). Their ability to interpret nature's lessons comes with the duty to express them through art (Namin et al., 2019), so to allow art's enjoyers to feel the deep connection between them and the *ultimate reality* (Emerson, 1841/1950).

As we are presenting it in this subsection, art can represent the context of a dissolution experience in different ways. First, the episode of dissolution can be experienced by the artist, in the context of creating a work of art. We do not consider part of this category the creation of works of art that are about a dissolution experience previously occurred, since they merely represent the expression of an episode of dissolution, not its occasion. Second, the episode of dissolution can be experienced by the audience—the viewer, the listener, and so on of a work of art. We distinguish two subcases: that particular form of art inherently had the idea of evoking a dissolution experience, or it did not.

To make an example, we are here zooming into the first subcase, an example of which is the poetic form of haiku$_g$. In Gabriel Rosenstock's definition (2019), a haiku is

> one-breath poetry, traditionally seventeen syllables (5-7-5), now increasingly practiced outside Japan as a free-style form, usually in three lines. It owes its impact and inspiration to a meditative flash in which he/she who experiences the haiku moment merges suddenly with perceived phenomena. (initial unnumbered pages)

Rosenstock (2019) calls *haiku moment* the brief event in which the self merges with the object and reaches a state of dissolution (Rosenstock, 2019). A haiku is not only the artistic expression of such experience, its conveyer (Manzari, 2012; Namin et al., 2019), but also its enhancer. For example, consider the following haiku: "this bee / how loath to

emerge from deep / within the peony" (Bashō, as cited in Rosenstock, 2019, p. 4). Rosenstock, commenting on it, writes: "where the bee sucks there suck I. And then the 'I' dissolves in sweetness" (p. 4).

Furthermore, dissolution experiences can take place in the context of different kinds of art. We have mentioned literature, and Ehrenzweig (1967) mainly refers to visual art. However, Reuven Tsur (2003) applies Ehrenzweig's ideas to poetry, and Richard Allan Etlin (1998) mainly focuses on how experiences of *pantheistic union* can be enhanced by architecture. Maslow (1968a) emphasized how peak experiences can easily be reached through music (see also Tarr et al., 2014). Dance can also be the occasion for dissolution experiences, as for example in the case of Sufi whirling dervishes (Erzen, 2008; Harel et al., 2021) or trance dance (Dein, 2020).

1.2 Nature

> When the soul lies down in that grass,
> the world is too full to talk about.
> Ideas, language, even the phrase 'each other'
> doesn't make any sense
>
> —Rumi, Out Beyond Ideas

In the previous subchapter, art was treated as a context in which dissolution experiences can occur. In the present and in the following subchapters, artistic currents and artistic productions are addressed as, respectively, providing and representing reports on dissolution experiences.

We have already seen that various poetic forms and literary currents often report on dissolution experiences. Specifically, many literary works across the years describe episodes of dissolution in the context of nature. We here mention certain literary movements and productions exactly to support the idea that dissolution experiences can occur in the context of nature. We then proceed moving the focus on phenomenology$_g$.

Already in the ancient Chinese Nature poetry, two exponents of which are the landscape poets Meng Haoran (689/691-740) and Wang Wei (699-759), there is "a 'Taoist' relationship with nature, that is, one in which the subject-object dichotomy vanishes and the self is lost in the greater unity of the natural world" (Miller, 1972, p.

220). In later times, during the 13th century, episodes of dissolution between the self and nature are described by the Persian poet, theologian, and mystic Jalāl ad-Dīn Mohammad Rūmī (1207-1273), most commonly known as Rumi (Fayez, 1980; Moores, 2014; Namin et al., 2019). The already mentioned haiku, the poetic form of seventeen syllables emerged in Japanese literature in the 17th century, traditionally includes a reference to nature. Specifically, the self usually merges with elements of the natural environment (Rosenstock, 2019). From the late 18th century to the mid 19th century, Romantic literature, especially English Romantic poetry (e.g., the production of Wordsworth, 1770-1850) shows similarities with Chinese Nature poetry, with regards to the Taoist view of nature (Miller, 1972). In his essay "Nature", the father of Transcendentalism (the 19th-century movement of writers and philosophers that took place in New England) Ralph Waldo Emerson (1803-1882) (1836/2018) writes:

> In the woods, we return to reason and faith. There I feel that nothing can befall me in life, — no disgrace, no calamity, (leaving me my eyes,) which nature cannot repair. Standing on the bare ground, — my head bathed by the blithe air, and uplifted into infinite space, — all mean egotism vanishes. I become a transparent eye-ball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part or particle of God. (p. 4)

He here refers to what he calls *over-soul*, a concept inspired by the platonic *anima mundi* (world soul). The *over-soul* is the transcendent oneness between the individual (and humanity), God, and nature, for which "everything is connected, everything is one" (Manzari, 2012, p.1). Key concept and theme of the Transcendentalist thought and work is precisely that such state has to be sought in nature. The Transcendentalist conception of nature, furthermore, importantly influenced American literature and thought. Remarkable examples include the poetry of Walt Whitman (1819-1892) (Manzari, 2012), and the production of the cultural and literary movement of the Beat Generation$_g$ (mid 20th century) (Calonne, 2017). In particular, Bucke (1905) recognizes in Whitman's production what he calls *cosmic consciousness*, which he defines as "a higher form of consciousness than that possessed by the ordinary man" (p. 1). Between the late 19th century and the beginning of the 20th century, the Bengali poet, philosopher and polymath Rabindranath Tagore (1861-1892) depicts experiences of dissolution with nature in his production (Moores, 2014), and in the same years, the concept of panismo$_g$, or sentimento panico della natura, takes hold in Italian literature (see, for example,

Gabriele d'Annunzio, 1863-1938; Bianco, 2008). Panismo refers to a sentiment of joyous communion with nature (Treccani, 2020) where the self shifts to the background, immersing itself into nature.

Also phenomenologists have lately shown interest in dissolution experiences in nature (Abram, 1996/2017; Petitmengin, 2021). In Claire Petitmengin's words (2021),

> In this type of experience, the vibrations of light, the ebb and flow of water, the texture of trees and stones, the breath of the wind … do not break at the border of the skin, but unite inside and outside into one uninterrupted space. The landscape pervades me. We are made of the same stuff, of the same tender, sensitive, alive and shivering 'matter,' for which our language has no word, (...) called 'la chair du monde' [(the flesh of the world) by Maurice Merleau-Ponty], and which we can also call the 'felt dimension' of experience. (p. 174)

1.3 Love and Intimacy

> Between the lover and the loved
> There will be no divide,
> But you yourself, Hafez, must draw
> The veil of Self aside.
>
> —Hafez

In this subchapter we present how love and intimacy often represent the context in which dissolution experiences take place.

"The aim of most mystics is to establish a conscious relation with the Absolute, in which they can find the personal object of love. They desire to know they love," writes Golkhosravi (2004, p. 2). As he argues, love is the unity that both Rumi and Whitman are seeking, and the driving force guiding them in their mystical and poetic path. Love balances the poles of transcendence and immanence. Rumi "believes that love is the only way to achieve unity [between the individual and God], and says that love consumes the forms and ideas that lead to disconcerted and contradictory thoughts" (Namin et al., 2019, p. 44). This concept can also be found, for example, in Tagore's poetic production (Tagore, 2017).

Although in these terms *love* is mainly used to "express the nature of Divinity" (Namin et al., 2019, p. 44), both Whitman and Rumi "believe in such a divine nature in human beings" (Golkhosravi, 2004, p. 4), and in the realization of the union with God throughout the union with another person (Aspiz, 1987; Baghira, 2013; Golkhosravi, 2004). We can see an example of how "God reveals Himself in every union of loving souls" (Golkhosravi, 2004, p. 5) in the realization of the union with God that Rumi achieves through the reunion with his friend Sahmsi Tabriz. Rumi (as cited in Halman, 1988) writes: "Blessed moment, Here we sit in this palace of love, you and I. / We have two shapes, two bodies, but a single soul, you and I" (p. 193).

A similar experience can occur, for example, between a child and a parent: in developmental psychology, the term *symbiosis* refers to a "state of undifferentiation, of fusion [of the child] with [the] mother, in which the 'I' is not yet differentiated from the 'not-I,' and in which inside and outside are only gradually coming to be sensed as different" (Mahler, 1967, p. 742).

Eugene G. d'Aquili and Andrew B. Newberg (2000), in their exploration of aesthetic, spiritual, and mystical experiences, theorize the existence of a *unity continuum*, "a spectrum (...) of unitary states in which the sense of unity increasingly transcends the sense of diversity" (p. 43). They suggest that, moving along the spectrum, one goes from baseline reality, to aesthetic experiences, and, before reaching spiritual experiences, to romantic love:

> as one moves along the unitary continuum with progressively greater experience of unity over diversity, one moves out of the realm of aesthetics and into a real that more properly would be described as religious experience. A transitional phase between aesthetic and religious experience may be romantic love, which might be characterized by the phrase, 'It is bigger than the both of us'. (d'Aquili & Newberg, 2000, p. 43)

In philosophy, the *union view* of love understands love as the creation of a *we*, two different identities coming to form a shared one, a new entity in a literal or metaphorical way, which is either a fusion of the two previously existing entities, or a third one (See Nozick, 1989; Solomon, 1988).

In Whitman's artistic vision, transcendence can be realized through the exploration of sexuality (Baghira, 2013). This can be seen in his poems, where sexuality culminates in, and corresponds to, a state of sublime and spiritual elevation (Aspiz, 1987). For the poet it

is through the duality$_g$ between physical and spiritual, and its overcoming, that an individual can reach transcendence and unity (Baghira, 2013). Whitman is not the only one relating sexuality and transcendence. As argued by Megan Rundel (2015), the philosopher

> [George] Bataille [locates] a crucial link between religion and sexuality, in that both are modes of responding to human desire for sacred experience, for a relaxing of the boundaries of the ego and returning to a sense of being coextensive with all beings and things. (p. 623; see Bataille, 1957)

Sexuality is often presented as a way to reach dissolution in various spiritual and religious traditions: as reported by Anne J. Woodward, Bruce M. Findlay, and Susan M. Moore (2009, p. 431), "Hinduism, Buddhism and Judaism (...) also document the possibility of mystical sexual experiences in religious texts: the Kama Sutra, Vajrayana, and Kabbalah, respectively". In Tantric sex, the Sanskrit term *maithuna* delineates a sexual ritual, or a couple participating in it, that refers to the union of opposing forces that underlies the non-duality of human and Divine (Eliade, 1969), as well as between kama and moksha: sexual pleasure and desire, and enlightment (Thomas, 1960). The couple becomes Divine, and through their union they experience bliss and transcendence (Garrison, 1964).

Also the psychologist Abraham Maslow refers to dissolution experiences as occurring in the context of sexuality. In his own words (Maslow, 1968b), "it is possible in (...) the love experience to become so absorbed and 'poured into' the object that the self, in a very real sense, disappears" (p. 79). He also argues that sex, along with music, is one of the "easiest ways of getting peak experiences" (1968a, p. 165). Rundel (2015) supports the idea that "an essential aspect of sexuality is the movement toward union, experiences and phantasies of merger, and loss of boundaries between self and other" (p. 623). Specifically,

> the subjective psychic experience of orgasm can be one of dissolution of barriers that constrict the self, and into a felt sense of expansion and dedifferentiation. (...) At the moment of orgasm, there is often a feeling of intense connection and merger with the lover, as the usual boundaries fall away. There is an experience of dedifferentiation with the lover, which may be felt as joyous, claustrophobic, or triumphant. (p. 623)

1.4 Psychopathology

> You want to be, eh? There's this catch: in abstract, you cannot just be. The being must be trapped in a form, and for some time it has to stay in it, here or there, this way or that. And everything, as long as it lasts, bears the penalty of its form, the penalty of being this way and no longer being able to be otherwise. (...) If the name is the thing, if a name in us is the concept of everything that is situated without us, if without a name there is no concept, and the thing remains blindly indistinct and undefined within us, very well, then, let men take that name which I once bore and engrave it as an epitaph on the brow of that pictured me that they beheld; let them leave it there in peace, and let them not speak of it again. For a name is no more than that, an epitaph. Something befitting the dead. One who has reached a conclusion. I am alive, and I reach no conclusion. Life knows no conclusion. Nor does it know anything of names. This tree, tremulous breathing of new leaves. I am this tree. Tree, cloud; tomorrow, book or breeze; the book I read, the breeze I drink in. Living wholly without, a vagabond. (...) Live and whole, no longer inside myself, but in every thing outside.
>
> —Luigi Pirandello, One, No One and One Hundred Thousand

Arguably, episodes of dissolution can take place in the context of psychopathology$_g$; more specifically, in the context of psychotic disorders$_g$. Although the aim of this subchapter is to report on literature providing descriptions of episodes of dissolution in the general context of psychopathology, we mainly address literature on schizophrenia$_g$. This, due to the extensive presence of literature on the topic, and on the fact that it appears to fit well our aims and interests.

Disturbances to the sense of self have always been linked to the concept of psychosis (Hur et al., 2014), and altered self-experiences are considered a core characteristic of schizophrenia spectrum disorders in particular (Connell et al., 2015; Heering et al., 2016; Hur et al., 2014; Lysaker & Lysaker, 2010; Park & Nasrallah, 2013; Parnas & Handest, 2003; Parnas et al., 2003; Parnas et al., 2005; Sass, 2013). In the ICD-11, the International Classification of Diseases,

> schizophrenia and other primary psychotic disorders are [defined as being] [characterized] by significant impairments in reality testing and alterations in [behavior] manifest in positive symptoms such as persistent delusions, persistent

> hallucinations, [disorganized] thinking (typically manifest as [disorganized] speech), grossly [disorganized behavior], and experiences of passivity and control, negative symptoms such as blunted or flat affect and avolition, and psychomotor disturbances. (International Classification of Diseases, 2022)

As reported by Hur et al. (2014), the terms that have been used to describe schizophrenia include "a basic alteration of self-consciousness, basic disorder of personality, loss of natural self-evidence or loss of ego boundary" (p. 58).

The disturbances connected to schizophrenia often include *transitivism*, described by Eugene Bleuler as the "inability to discriminate self from not-self" (as cited in Parnas & Handest, 2003, p. 129). That is, ego boundaries dissolve, get blurred, permeable, or porous (Heering et al., 2016; Hur et al., 2014; Sass, 2013), "such that [the individuals] may fail to experience self as distinctly different from others" (Hur et al., 2014, p. 61). Namely, at a certain stage schizophrenia may get to the point where the patient experiences loss of agency, perceiving "self-generated movements [and thoughts as if they were] 'made', (...) performed, [or inserted] by an alien force". The patient's delusion therefore "implies a dissolution of the boundary between self and other" (Fuchs, 2015, p. 329). An example of this can be found in the self-portraits made by Bryan Charnley (https://www.bryancharnley.info/self-portraits-2/charnley_self_portrait_series_01/), an artist suffering from schizophrenia. In the last self-portrait that he realized "there are no shapes or forms to communicate to the observer where the self begins or ends, just strips of color stranded in space and time. This is how he saw himself" (Hur et al., 2014, p. 1).

Studies conducted using *descriptive experience sampling*$_{g}$ (Hurlburt & Heavey, 2006)—which "observes mainly disturbances in perception" (Bass-Krueger, 2021, p. 59)—also show that "participants [suffering from schizophrenia have] (...) distortions to their sense of self and locus of self. Some may [even have] no organized locus of self altogether" (Bass-Krueger, 2021, p. 59).

Furthermore, self-disturbances can lead, in schizophrenia, to solipsistic delusions. Parnas and Handest (2003), writing about the case of a 22-years old patient, report a description of a point of view that seems to be that of dissolution experiences:

> He always believed in the existence of a 'world-soul.' All humans were, metaphorically speaking, like water drops fallen on earth, and so irreversibly separated from this soul. He, however, still felt in touch with the 'world-soul,' like a droplet yet

> hanging in a tiny manner to its original source. (...) He felt 'as if' he somehow contained the entire universe within his own consciousness. (p. 131)

Disturbances in the self-boundaries are also reported in states of ecstasy ("states of emotional exaltation," Anderson, 1938, p. 80), occurring to people with personality disorders and without, and to people suffering from psychosis. They "might describe feeling at one with the universe, merging with nirvana, experiencing unity with the saints, identifying with the trees and flowers or a oneness with God" (Oyebode, 2015, pp. 200-201).

1.5 Use of Psychedelic Substances

> O (name of voyager)
> The time has come for you to seek new levels of reality.
> Your ego and the (name) game are about to cease.
> (...)
> O (name of voyager),
> That which is called ego-death is coming to you
>
> —Timothy Leary, Ralph Metzner, and Richard Alpert, The Psychedelic Experience: A Manual Based on The Tibetan Book of the Dead

Psychedelic substances have been largely used in the context of aspiring to reach mystical states (e.g., see James, 1902/2002). Consequently, as proposed in this subchapter, dissolution experiences can take place in the context of the use of psychedelic drugs.

The culture and knowledge proper of psychedelic substances is full of guidelines, references, and descriptions of dissolution experiences. For example, in *The Psychedelic Experience: A Manual Based on The Tibetan Book of the Dead* (Leary et al., 1964), from which the quote reported above as epigraph is taken, the authors describe the various stages of ego death, giving to the *voyager* instructions on how to deal with them.

Yaden, Le Nguyen, et al. (2017) discuss the hypothesis that mystical experiences are similar whether induced by the use of psychedelic substances or not. That is to say, whether drug-induced mystical experiences and mystical experiences that occur spontaneously show significant differences in: mystical quality, positive impact, and

sense of religiosity and spirituality. Although "many psychedelic experiences do not have religious or spiritual import" (Yaden, Le Nguyen, et al., 2017, p. 10), Yaden, Le Nguyen, et al. discard the hypothesis that dissolution experiences induced by psychedelics are less meaningful than the spontaneous ones. Instead, their participants rated psychedelic-triggered dissolution experiences "as more intensely mystical, more positive in impact, and more related to spiritual and existential outcomes" (p. 10). In the literature on the use of psychedelics (Griffiths et al., 2006; Hood, 2014; Huxley, 1958; Smith, 1964), the utilization of substances is usually not considered as the cause of a dissolution experience, but as its occasion. As William James (1902/2002) writes, borrowing from Christian mysticism: "by their fruits ye shall know them, not by their roots" (p. 21). In other words, the focus, what matters the most, are the outcomes of an experience, rather than its origins.

The scientific community has shown increasing interest in the fact that "users of psychedelic drugs often report that their sense of being a self or 'I' distinct from the rest of the world has diminished or altogether dissolved" (Letheby & Gerrans, 2017). This phenomenon has long been known to be likely to happen during experiences under drugs like LSD (lysergic acid diethylamide) and psilocybin (i.e., magic mushrooms), and it has been observed and investigated in several recent studies (e.g., Carhart-Harris et al., 2016; Kometer et al., 2013; Lebedev et al., 2015; Letheby & Gerrans, 2017; Milliere, 2017; Nour et al., 2016; Tagliazucchi et al., 2016). Different methods have been used, such as functional magnetic resonance imaging (fMRI) (e.g., Tagliazucchi et al., 2016), electroencephalogram (EEG) (e.g., Kometer et al., 2013), and magnetoencephalography (MEG) (e.g., Carhart-Harris et al., 2016). A study validating a scale to make the participants assess the ego-dissolution, called Ego-Dissolution Inventory (EDI) (Nour et al., 2016), found that items correlated with dissolution experiences are: *I experienced a dissolution of my 'self' or ego*; *I felt at one with the universe*; *I felt a sense of union with others*; *I experienced a decrease in my sense of self-importance*; *I experienced a disintegration of my 'self' or ego*; *I felt far less absorbed by my own issues and concerns*; *I lost all sense of ego*; *all notion of self and identity dissolved away* (p. 3).

1.6 Meditation

We sit together, the mountain and me,
until only the mountain remains.

—Li Bai, Zanzen on Ching-t'ing Mountain

Meditation is widely recognized as a context in which dissolution experiences can arise: similarly to what we said relatively to the use of psychedelic experiences, states of dissolution have been reached through meditative practices since remote times.

An example is *Samadhi*, that in Hinduism, Buddhism, Jainism, Sikhism, and yogic traditions, is "the one mental state humans can achieve where the dichotomy of subjective and objective breaks down" (DeGracia, 2015, p. 6). It "entails the unifying of the mind in a steady, undistracted awareness" (Shankman, 2008, p. 4). In Samadhi, we do not identify with transient mental states, as it otherwise usually happens. Instead, we only experience them in their impermanence. In this state "awareness experiences itself without the distortions imposed by the dualistic structure through which we usually deal with reality" (Dreyfus, 2011, p. 122).

The scientific community has lately shown interest in changes in the sense of boundaries$_g$—"the fundamental experience of being an 'I' (self) separated from the 'world' (nonself)" (Dor-Ziderman et al., 2016, p. 1), enhanced by meditative practices. In particular, Ataria, Dor-Ziderman and Berkovich-Ohana (2015) and Dor-Ziderman et al. (2016), have been studying *contemplation-induced loss of self* and *dissolved sense of boundaries*. Sense of boundaries, at its usual state, is in this context understood as enacting the fundamental distinction between self and non-self, implemented by the so-called self-specific processes. Ataria, Dor-Ziderman et al. used different methods—i.e., phenomenological interviews$_g$ and MEG—to investigate the experience of lacking a sense of boundaries, and its neural correlates. As suggested by Francisco Varela (1996) (see also Kordeš et al., 2019), this was made possible thanks to the particularly advanced introspection abilities of long-term meditation practitioners. In particular, the study was conducted in collaboration with an expert meditator, Stephen Fulder. He had practiced, for about 40 years and to a total of around 20,000 hours, mindfulness meditation in the context of the Satipathana and Theravada Vipassana traditions. Therefore, he was able to

volitionally change the state of his sense of boundaries from what in the study was defined as *normal*, to *dissolving*, and finally to *disappeared*. He reported on his experience with high fidelity and precision while his brain activity was being measured with MEG. The findings relative to the investigation carried out with MEG was then partially validated on an independent group of 10 experienced meditators. In the article "Self-Specific Processing in the Meditating Brain: A MEG Neurophenomenology Study" (Dor-Ziderman et al., 2016), the authors focus on the part of the study relative to neuroimaging. Specifically, they inquired: whether self-specific processes are identifiable in neuroimaging data, whether they have to be considered as all-or-nothing or graded phenomena, and whether attentional training can alter them. The results show that neural mechanisms implicated in the shift of the experience of self-boundaries include right-lateralized beta oscillations in the temporo-parietal junction and in the medial parietal cortex. These two areas are respectively known as being associated with the experience of unity of self and body, and as an essential center for the representational system of the self. In "How Does it Feel to Lack a Sense of Boundaries? A Case Study of a Long-Term Mindfulness Meditator" (Ataria et al., 2015), the authors describe the phenomenological side of their work. Nine categories of experience were developed based on the descriptions, provided by Stephen Fulder, of the three stages of sense of boundaries (default, dissolving, disappearance). Seven of them—*internal versus external*, *sense of time*, *sense of location*, *sense of self*, *sense of agency (control)*, *sense of ownership*, *sense of center (first-person-egocentric-bodily perspective)* (pp. 143,144)—showed alterations throughout the three stages, while the other two—*bodily feelings* and *the touching/being-touched structure* (p. 144)—seemed to persist even in the final stage of dissolution of sense of boundaries. The work of Ataria et al. and Dor-Ziderman et al. has lately been summarized and deepened by Nave et al. (2021).

States of dissolution experiences can occur in multiple other contexts, such as, for example, during an episode of *overview effect*$_{g}$ (Yaden et al., 2016), or during sleep (Alexander, 1988). However, including them in our review goes beyond the purview of this work.

2. Self

> I thought to myself, I'm the youngest person in this omnibus; now I'm the oldest… Millions of things came back to her. Atoms danced apart and massed themselves. But how did they compose what people called a life? She clenched her hands and felt the hard little coins she was holding. Perhaps there's 'I' at the middle of it, she thought; a knot; a [center].
>
> —Virginia Woolf, The Years

One of the fundamental elements of the descriptions of dissolution experiences, along with a perceived sense of unity, is a *dissolution of self*, or, more in general, a change in the experience of the self. Due to the principal investigator's personal interest and to the findings of our pilot study (see *3. Pilot Study*), we decided this would be the main focus of this thesis. In this chapter, we provide a review of the literature on the self.

While the self, the ego, or similar concepts were mentioned in the previous chapter to describe and sometimes define dissolution experiences, there is not a consensus on what the self is, or even if it exists at all. The aim of this chapter is first of all to allow an understanding of what different views or theories mean by *self*. Then, the chapter has the goal to contextualize what the literature says about the self in dissolution experiences—which represents the main focus of our thesis—in the larger framework of the literature about the self. This will consequently allow us to interpret our findings in light of the current discussion on the self. The chapter is divided into three sections. In the first, more general one, we delineate the principal views and theories on the self, addressing various understandings of self and concepts related to it. In the other two sections we provide a review of what is reported in literature about how the self is experienced, respectively, during daily life experiences (see *2.1 Self in Daily Life Experiences*) and during dissolution experiences (see *2.2 Self in Dissolution Experiences*).

The sense of self$_g$ is defined as "the (perhaps sometimes elusive) feeling of being the particular person one is" (Siderits et al., 2011, p. 3). While there is a more or less general agreement on what the sense of self is, the views on how to understand the self differ extensively between each other. There is even no agreement on whether it exists or not. Mark Siderits, Even Thompson, and Dan Zahavi (2011) differentiates between non-self$_g$, substantialist$_g$, and non-substantialist$_g$ theories. The non-self theories deny that the self

exists. Their claim is often that the self, to be such, would have to be an invariant and persistent entity. Since they believe that no such entity exists, they do not believe the self to exist. Explaining the unity that we feel between our different inner states with the presence of a self (see *synchronic unity of the self*$_g$ in *Glossary*), how it is generally the case in folk thought, is considered a mistake. While the substantialist theories see the self as a substance that bears properties and qualities, and being conscious is one of them, non-substantialist theorists consider the self to be consciousness itself: it does not encompass properties that might involve variation, like agency. Importantly, when different theories hold the existence or the nonexistence of the self, they might refer to different concepts of self. As Galen Strawson (2000) wrote, "before we ask the *ontological* question 'do selves exist?' we have to answer the *phenomenological* question 'what sort of thing is figured in self-experience?'" (p. 40). Strawson (1999) came to identify 21 different concepts of self.

Our mental life is characterized by a "flux of permanently changing (...) mental events" (Fasching, 2011, p. 195). Each view on the self holds the self to relate in a different, specific way with such flux. We introduce the main theories on the self, addressing their perspective on this relationship. An important challenge that each of them has to face is explaining how, confronted with such a fleeting reality, the self remains somehow stable throughout time—the so-called *diachronic unity* of the self$_g$ (Zahavi, 2014).

The traditional view on the self (Kant, 1781/1908) sees it as an entity "that stands apart from and above the stream of changing experiences and which, for that very reason, is able to structure it and give it unity and coherence" (Zahavi, 2005, p. 104). The self is therefore the subject of the experiences, it is something other and separated from them, and it is not afflicted by their continuous changing.

Another way of understanding the self is considering it as a narrative construction (see *narrative self*$_g$ in *Glossary*; MacIntyre, 1985; Ricoeur, 1985, 1991): as Bass-Krueger (2022, p. 303) writes, "our very *self*, the lens through which we experience the world, is a narrative, a story that imagines itself into existence". In this view, the unity of the self against the different experiences occurring in time "resides in the unity of a narrative which links birth to life to death as narrative beginning to middle to end" (MacIntyre, 1985, p. 205). As paraphrased by Zahavi (2005), "to talk of the sequence as being fragmented is to measure it against the narrative that continues to remain the framework

of intelligibility" (p. 113; see MacIntyre, 1985). The self is not something given and fixed, but an ongoing narrative project, which is continuously shaped by one's own decisions, the story of one's own life experiences, the context in which one is inserted, and the social dimension, and it is regulated by linguistic dynamics. The self constitutes the main character, the narrator, and one of the many authors of its own narrative. The different stories that are being told about it, being them truthful or not, create "changes and mutations within the cohesion of a lifetime" (Zahavi, 2005, p. 108), and make "life itself a cloth woven of stories told" (Ricoeur, 1985, as cited by Zahavi, 2005, p. 108). However, the narrative framework in the context of which the flux of changing experiences is interpreted also provides them with an order, a unity, and a continuity that they would not have otherwise. In this context, Daniel Dennett (1991, 1992) famously describes the self as a *center of narrative gravity*, that is, "the abstract point where various stories about us intersect" (Zahavi, 2005, p. 110). In Dennett's opinion, this makes the self nothing more than a useful fiction. A similar view is held by Bass-Krueger (2022, p. 304), who argues that the self might represent "a good story, able to explain similarities in our experience that let us act in the world and survive. But it's a story nonetheless". In Owen Flanagan's view (1992), however, "the self can be a construct or a model, a 'center of narrative gravity', a way of self-representing, without being a fiction in the problematic sense"—namely, "it does have causal efficacy" (pp. 209-210). This is an example of how similar beliefs on the state of things can nevertheless bring to two different conclusions on the existence of the self (i.e., the self does not exist, or the self exists), in the presence of two different definitions of what the self is. Furthermore, the narrative self does not appear to account for the self in its full complexity (Drummond, 2004; Ricoeur, 1985), and it can co-exist and complement other ways of understanding the self, such as the phenomenological or experiential one.

In the phenomenological tradition (Sartre, 1943/2018; Merleau-Ponty, 1945/2020; Husserl, 1950-2020; Zahavi, 2005), the self is not considered to be something to be looked for externally from the stream of experiences, "but is, rather, immersed in conscious life; it is an integral part of its structure" (Zahavi, 2005, p. 125). Specifically, the changing experiences constituting our mental life present, naturally, different contents, as well as different modes of givenness (i.e., different ways in which those contents are experienced): "perceptual, imaginative, recollective, etc" (Zahavi, 2005, p. 124). However, all the modes of givenness share the same feature: all of them are *mine*,

given to me. That is, we have first-personal access to each of them, and this is what makes them subjective. This self-givenness or self-referentiality is what Jean-Paul Sartre and Maurice Merleau-Ponty refer to as *ipseity*$_g$ (see Zahavi, 2005). Ipseity fundamentally characterizes consciousness, and it is in it that the most basic form of self is to be found. In other words, this basic self does not constitute the subject of experience, but it is the same as the subjectivity that constitutes experience. Since nothing without this characteristic deserves, in Zahavi's opinion, to be considered a self, he labels this concept of the self *minimal*$_g$ or *core self*$_g$. Zahavi delineates different related notions, such as *mineness*$_g$ and *for-me-ness*$_g$, that inspired multiple interpretations (Zahavi, 2017). In the present text we interchangeably use them to indicate the first-personal givenness$_g$ aspect of experience, with which the minimal self is identified. In this scenario, the self is still recognized as maintaining its identity while the single experiences come and go. This aspect, argues Edmund Husserl (1950-2020), is encountered only when we look at multiple experiences. The diachronic unity of the self is maintained because all of one's own experiences share the same givenness. Even though it does not exist outside of it, the self is the invariant feature of the constantly changing stream of experiences. As Husserl famously wrote (as cited in Zahavi, 2005, p. 131), "it is *a transcendence in the immanence*". The minimal self is a substitute to the classical concept of self and can be complementary to the narrative self: it is not the subject of experience, but it is its fundamental subjectivity, the same subjectivity in which the narrative self finds its experiential basis (see Letheby & Gerrans, 2017).

We can here introduce the terminological distinction between self and persona$_g$, and between self and ego. When we refer to the minimal self, it makes sense to "retain the term 'self', since we are dealing precisely with a primitive form of self-givenness or self-referentiality" (Zahavi, 2005, p. 129). On the other hand, when referring to the narratively constructed identity, we might want to talk of the persona: "what is being addressed by this model is the nature of my personal character or personality, a personality that evolves through time and is shaped by the values I endorse and by my moral and intellectuals convictions and decisions" (Zahavi, 2005, p. 129). Sartre similarly differentiates between self and ego. The ego, contrary to the self—understood as ipseity—is not present in pre-reflective$_g$ consciousness. When we reflect on it, it is present as the object of consciousness. "It is consciousness in its fundamental ipseity which, under certain conditions, allows the appearance of the ego as the transcendent phenomenon of that

ipseity" (Sartre, 1943/2018, as cited in Zahavi, 2005, p. 115). Similarly, for Thomas Fuchs (2015), the self is "in its most basic sense, [...] the implicit, prereflexive self-awareness that is present in every experience without requiring introspection or reflection" (p. 325). The ego, on the other hand, is the "higher-level, reflective self-consciousness" (p. 325). The self/persona or self/ego differentiation more or less corresponds to the distinction between the concepts of core self and autobiographical self elaborated by Antonio Damasio (1999).

Orthodox schools of Hinduism, such as Advaita Vedānta, also consider the self to be "in no way some trans-experiential entity (...), but (...) in a certain sense nothing but experience itself. (...) Experience does not take place *for* a subject, but simply *as* the subject" (Fasching, 2011, p. 200). In this view, experiences come and go, but they all share the property of being witnessed, of being experienced. While the experiences pass, the experiencing abides. And it is in this experiencing that the self lays. That is to say, the experiences vary in their content, but not in their being consciously present. The term *witness-consciousness*$_g$ indicates this "*modus operandi*" (Albahari, 2006, p. 7) of the subject experiencing. Witness-consciousness has to be differentiated from the concept of *for-me-ness* reported by Dan Zahavi (2005): while the latter is a "feature of the experience(s) observed", witness-consciousness is a "feature of the subject that observes [them]" (Albahari, 2009, p. 68). Advaita Vedānta, in a way comparable to what we saw before, distinguishes between jīva$_g$ (persona), atman (self), and brahman (supreme reality). Jīva, "through its egoity (...) is the empirical consciousness in the locus of every individuated being", while atman is "consciousness understood as the ground of every individuated being", and brahman "consciousness as the universal and singular basis for all reality" (Ram-Prasad, 2011, pp. 220-221). The jīva is held to be of illusory nature, while atman is the experience's "*thereness*, their presence (and that is the *one* presence of the manifold contents)" (Fasching, 2011, p. 204).

Buddhism holds a different view. "In the Buddhist perspective, the mental life is to be characterized as a flux of permanently changing substrate-less mental events, each caused by some other, previous event, rather than in terms of a persisting experiencing self (...). Experiences take place, but there is no one who experiences them" (Fasching, 2011, p. 195). Buddhism holds a *non-self* view.

2.1 Self in Daily Life Experiences

> Like it or not we cannot escape the fact that the mind seems split, like a house divided, between the knower and known. (Damasio, 1999, p. 191)

In the present subsection we deal with the literature on how we experience the self in our daily life (i.e., in experiences the nature of which is understood as usual, normal, and normative).

According to what argued by phenomenologists such as Sartre (1943/2018) and Zahavi (2005, 2014), our daily life experience is pervaded by the *ipseity*. In Advaita Vedānta, the same applies for the *witness-consciousness* (Albahari, 2006, 2009). Both ipseity and witness-consciousness are considered to be what makes an experience *experienced*. However, even though they are both, in the respective literature, held to be "always present," they are "largely unnoticed in ordinary conscious states" (Albahari, 2009, p. 64). Our narrative of ourselves, on the other hand, normally defines us as an individuated beings with their own personal history, values, convictions, decisions, dispositions, personality, interests, and so on (see Zahavi, 2005). We identify as the agent of actions and as the owner of our thoughts and emotions. This occurs in a social context in which we perceive people as *other* from us.

As stated by Galen Strawson (2009),

> In the ordinary human case the self is figured as a subject of experience, a persisting single mental thing that is an agent and is distinct from (non-identical with) the whole human being, and also, perhaps, has a certain personality. These are the principal thought-elements in ordinary human self-experience, although they doubtless occur in different strengths, and with different distributions of emphasis, in different individuals. This phenomenological conclusion can be established prior to and independently of any philosophical theory about whether or not there is such a thing as the self, or about what its nature is. (p. 116)

This means that "we identify a certain special sphere of what is experientially given to us as 'ourselves'" (Fasching, 2011, p. 210), distinguishing it from what is not ourselves. This *sense of being a self* points to a bounded, unified, and enduring subject of experience. A subject that, in other words, is differentiated from the rest of the world, presents synchronic unity (i.e., the sense that all the different things that we are

experiencing in a specific moment in time are experienced by the same, singular subject), and presents diachronic unity, since all the experiences we have in time are perceived as having the same subject (Albahari, 2011). This subject is an agent of actions, an owner, and it has a specific point of view over the world, which is not impersonal, but it is bound to an identity (Albahari, 2011), our narrative understanding of who we are, what are our values, what is our life story, and so on. In daily life experiences we also experience ourselves as embodied subjects and agents. That is to say, "we are aware of our bodies in distinctive ways" (Bermùdez, 2018, p. 125). In other words, as argued by Maurice Merleau-Ponty in *Phenomenology of Perception* (1945/2020), we experience the spatiality of our own body differently from that of external objects. The body is experienced from the inside, as a *lived body*$_g$: "I am not in front of my body, I am in my body, or rather I am my body" (p. 151). At the same time, the body is "the mediator of a world" (p. 146), and it represents "that by which there are objects" (p. 94). It provides the "absolute permanence that serves as the basis for the relative permanence of objects", the invariable perspective through which "the perspectival presentation of objects itself must be understood" (p. 94).

This sense of being *me* corresponds to what in Advaita Vedānta is referred to as *jīva*, person. In Buddhism, the sense of being a person depends on the organizations of the five *skandha* (*aggregates*, "the five elements that sum up the whole of an individual's mental and physical existence" (The Editors of Encycopaedia Britannica, n.d.a):

1. Rūpa: The body or corporeality
2. Vedanā: affect and sensation
3. Samjñā: perception and cognition
4. Samskāra: conditioning and volition
5. Vijñāna: consciousness. (Mackenzie, 2011, p. 242)

They "are seen as interdependent aspects of a causally and functionally integrated psycho-physical (...) system or process" (Mackenzie, 2011, p. 242).

However, this sense of self is often held to be illusory (e.g., in Advaita Vedānta and Buddhism (Ram-Prasad, 2011); see also Dennett, 1992), since it does not correspond to an existing entity, a self, with its characteristics. Both in Buddhism and Hinduism it is believed that the usual way in which we conceive ourselves, that is, "as a distinct psychophysical entity with particular characteristics and abilities, formed by a personal

history, standing in manifold relations to other things and persons, etc" is what "obscures what we really are" (Fasching, 2011, p. 193). It supposedly "creates a sense of boundedness", that, in turn, brings "a fundamental bifurcation (…) within [our] cognitive universe between what is on the self and of the other, that is, everything else" (Dreyfus, 2011, p. 129).

2.2 Self in Dissolution Experiences

> Which I is I?
> (…)
> The mind enters itself, and God the mind,
> And one is One, free in the tearing wind.
>
> —Theodore Roethke, In a Dark Time

> And these tend inward to me, and I tend outward to them,
> And such as it is to be of these more or less I am,
> And of these one and all I weave the song of myself.
>
> —Walt Whitman, Song of Myself

In this subsection, we present some of the existing literature about the experience of the self during dissolution experiences.

When approaching the experience of the self in dissolution experiences, authors like Yaden, Haidt, et al. (2017) remain agnostic on the specific notion of self that they deal with, highlighting the importance of future work on the issue. However, they emphasize the fact that, during dissolution experiences, the self can not only be experienced as *dissolved*, but also as *expanded*. We saw how dissolution experiences are often described as presenting both a dissolution of the self, and a sense of unity with the world or elements of it (Saarinen, 2014; Yaden, Haidt, et al., 2017). This sense of unity can be interpreted and/or perceived as an experience of expanded self. This largely depends on the understanding of self that one holds.

Nour et al. (2016) developed the Ego-Dissolution Inventory, a "8-item self-report scale designed to measure ego-dissolution" (p. 1), that they specifically used to investigate the phenomenon of dissolution experiences during psychedelic experiences. In the inventory,

items like *I experienced a dissolution of my 'self' or ego* and *all notion of self and identity dissolved away* (p. 3) are used, without defining, neither before the administration of the inventory nor in the discussion, what it is meant by *self*, *ego*, and *identity*.

Etlin (1998), when exploring our experience of works of art, gets into what concept of self is concerned, arguing that our aesthetic response involves a bodily sense of self, which also has its spatial dimension"—and "at the deepest end of the aesthetic scale, in situations to which we attach the notion of the sublime, it is the spatial sense of self that is most directly engaged in a pantheistic feeling of transport and transcendence" (p. 1).

The father of psychopathology, Karl Jaspers (1913/1963), associates ego consciousness (*Ich Bewusstsein*) (see the distinction between self and ego in *2. Self*) to the following elements: sense of agency, identity over time, unity, and demarcation of the ego against the external world and others. Kurt Schneider (1959) calls *ego-disorders* (*Ich-Störungen*) the "disturbances of ego demarcation or self-other boundaries" (as cited in Fuchs, 2015, p. 324). Fuchs's argument is that ego-disorders such as schizophrenia have at their core self-disorders, since they imply "a diminishment of the basic self-awareness or self affection which permeates all dimensions of experience" (p. 325).

Lebedev et al. (2015), in their study about the neuropharmacological mechanisms of dissolution experiences, associate the activity of the default mode network to the narrative self, while brain processes affected in dissolution experiences are related to the minimal self. Raphaël Millière (2017), in consistence with Bayesian models of phenomenal selfhood, argues that dissolution experiences—or, more specifically, *drug-induced ego dissolution*—"[consist] in the disruption of subpersonal processes underlying the 'minimal' or 'embodied' self, i.e., the basic experience of being a self rooted in multimodal integration of self-related stimuli" (p. 1). He does not exclude, however, that also the narrative self might get involved. A similar view is brought forth by Chris Letheby and Philip Gerrans (2017), who argue that "ego dissolution is best explained by an account that explains self-awareness as resulting from the integrated functioning of hierarchical predictive models which posit the existence of a stable and unchanging entity to which representations are bound" (p. 1). Ataria et al. (2015), in a study in which they investigated the sense of boundaries experienced by an expert meditator, asked their participant to produce three states: a default state, a state of dissolving of the sense of boundaries, and a state of disappearance of the sense of boundaries. These correspond to three alterations in the sense of self that the control group was asked to produce: narrative

for the default state, minimal for the dissolving state, selfless for the disappearing state. This seems to suggest that not only both the narrative and the minimal self might be affected in dissolution experiences, but also that they might get involved at different phases of the episode. Namely, using the terminology of Ataria et al., the narrative self would get affected first, during the dissolving of the sense of boundaries, while the minimal self only later on, during the disappearance of the sense of boundaries. The selfless state is a "mode of awareness defined by and practiced within Buddhist contemplative traditions, in which identification with a static self is replaced by identification with the phenomenon of experience itself" (Ataria et al., 2015, p. 136).

In Buddhism and Hinduism it is believed that through meditation we can distance ourselves from how we usually see ourselves, and become aware of our true nature. The fundamental difference between Buddhism and orthodox schools of Hinduism like Advaita Vedānta is that for Buddhists there is no self (see anātman doctrine$_g$), and therefore while a transient flow of "experiences take place, (…) there is no one to experience them" (Fasching, 2011. p. 195). In Advaita Vedānta, however, the self subsists. "Consciousness"—the true self—"is the witnessing (experiencing) of the experiences, and while the experiences change, experiencing itself abides. (…) Presence as such does not change" (p. 201). Distancing ourselves from how we usually conceive of our identity—jīva—we get to our true self—ātman. Ātman, however, is ultimately brahman, and self-realization involves recognizing their unity. Realizing the unity of ātman and brahman means recognizing that "the intentional individual conscious subject"—ātman—"is, in the highest reality (...), the universal non-intentional subject of non-duality"—brahman. They "not only share consciousness as one *essential nature*, but, more importantly, are seen to be a single subject, identical with the totality of conscious Being" (Connolly, 2016, pp. 3,4). As exposed by Nikhilananda, when oneness is realized, "the Ātman apparently does not see, nevertheless It is seeing, since for the Seer, who is imperishable, there is no cessation of seeing. There exists, however, no second thing besides this Seer, nothing distinct from It for It to see. (...) It is not that the self [in such state] is unconscious; for it is consciousness itself" (as cited in Connolly, 2016, p.17). And "anyone who becomes aware of such self-awareness will disappear in the Supreme Self" (Afroogh et al., 2020, p. 135). This disappearance, however, should not be considered, in the context of Advaita Vedānta, a complete disappearance of consciousness. What remains is the so-called *witness-consciousness*, the modus operandi

of the experiencer (Albahari, 2006), that is "mode-neutral awareness with intrinsic phenomenal character" (Albahari, 2009, p. 62). It has been reported that expert meditators—as well as, arguably, individuals experiencing dissolution in different contexts—can get to a state where only witness-consciousness is present, and "there is *something it is like* to be in such a state" (Albahari, 2009, p. 64).

3. Pilot Study

Between November 2019 and January 2020, together with Ema Demšar, the principal investigator carried out an exploratory empirical phenomenological study on dissolution experiences (Caporusso & Demšar, 2020) that then served as a pilot study for the present thesis. The research questions were: *(1) What is it like to experience dissolution experiences; what are the typical experiential elements that can be found in dissolution experiences? (2) What are the potential similarities and differences between dissolution experiences occurring in different contexts?*

Based on the literature review and on our personal understanding of the topic, we developed a working definition of dissolution experiences. The definition, later informed by our further investigation, was used as a selection criteria to collect seven episodes experienced by six co-researchers (sex assigned at birth: three females and three males; age: M = 31.2, SD = 12.6; years of education: M = 17.7, SD = 3.0). All of them except for one had education in cognitive science, and all of them except for one had prior experience with phenomenological inquiry. All the selected experiential episodes occurred in an ecological setting (as opposed to laboratory settings), but the contexts in which they happened are various. Specifically, three of them occurred during meditative practice, three under the effect of psychedelic substances, and one while engaging with an artistic performance.

To investigate the seven episodes, we conducted phenomenological interviews based on the micro-phenomenological approach (see *micro-phenomenology*$_g$ in *Glossary*) (Petitmengin, 2006). The choice of using an approach inspired by micro-phenomenology was justified by our aim to collect high quality data about the subjective experience of our co-researchers, including the pre-reflective dimension and going beyond the ways they conceptualized their experiencing to be. Interviews lasted, on average, 70 minutes (SD = 8.1). Each interview focused on detailing the diachronic$_g$ and synchronic$_g$ dimensions of the selected dissolution experience; that is, on its temporal unfolding, and on the in-depth

description of a specific phase or moment. In particular, we guided each co-researcher to describe the temporal unraveling of their experience, and, based on the reported changes in the experiential elements reported, we operationally defined the different phases (initial phase(s)$_g$, middle phase(s)$_g$, peak phase$_g$, and final phase(s)$_g$) of each experience. We focused on the transitions between different phases, as well as on the synchronic description of the peak phase. The peak phase was identified as the phase of a dissolution experience in which the defining characteristics of dissolution experiences were more present. We analyzed the obtained data following guidelines for qualitative research (Charmaz, 2014; Flick, 2018) and those specifically relative to the micro-phenomenological method (Petitimengin et al., 2019; Valenzuela-Moguillansky & Vásquez-Rosati, 2019).

The results of the pilot study provided a better phenomenological understanding of dissolution experiences, that additionally led to an updated definition and to important insights for our successive research. In particular, the findings of the pilot study support the idea that dissolution experiences that occurred in different contexts amount to the same underlying experiential structure and characteristics. Even though some internal variation can be observed, the target episodes can be addressed as the same kind of experiential phenomenon, and grouped under one term: namely, *dissolution experiences*. The pilot study also served as a basis to narrow down the focus of our investigation. Specifically, it showed how the experience of the self, focal point of the present thesis, changes throughout a dissolution experience.

4. Method

This thesis presents an empirical phenomenological study on dissolution experiences and the experience of the self in dissolution experiences. We carried out the study between November 2020 and April 2021. In the following subsections we address the research questions, the research design, the sample, the interviewing method, and the analysis method.

4.1 Research Questions

Based on the literature and on the co-researchers' reports on episodes of dissolution and the experience of the self, we were interested in examining the experiential structure of dissolution experiences compared to that of daily life experiences, and more

specifically, how the self is experienced in dissolution experiences compared to daily life experiences. Thus we formed the following research questions:

RQ1: How are dissolution experiences characterized experientially, compared to daily life experiences?

RQ2: How is the self experienced throughout a dissolution experience, compared to how it is experienced in daily life experiences?

4.2 Research Design

In the present subsection, we present the research design of our empirical phenomenological study.

We investigated two kinds of experiences: *dissolution experiences*, and *daily life experiences*. Dissolution experiences are defined as experiential episodes during which the perceived boundaries between self and world (i.e., non-self) become fainter or less clear. This is usually accompanied by a sense of unity with the world or elements of it. Daily life experiences are defined as experiential episodes that the participant would not, at least in absence of a more in-depth phenomenological observation, consider particularly meaningful, strongly emotionally charged, or in any relevant way different from what is experienced as *usual*. Daily life experiences amount to *normative experiences*. We assume that the definitions of dissolution and daily life experiences are not mutually exclusive.

We selected ten dissolution experiences (reported by eight co-researchers: two co-researchers reported on two dissolution experiences each). The choice was made throughout informal conversations between each potential co-researcher and the principal investigator, after that the potential co-researchers proposed episodes of dissolution occurred in their past. This ensured a common understanding of the phenomenon of interest. However, it led to a selection $bias_g$: we selected only experiences that were meaningful and easily remembered by the co-researchers.

We selected eight daily life experiences (one for each co-researcher). The selection of daily life experiences was based on the method of descriptive experience sampling (Hurlburt & Heavey, 2006). The experience of our co-researchers was sampled multiple times (with a minimum of three times), at arbitrary moments throughout a predefined day. To randomly select instances of their daily life experience, each co-researcher received

calls by the principal investigator, or used a system of alarm. At each time, the co-researcher wrote a short description of the sampled experience. For each co-researcher, an experience was chosen between the (three or more) sampled experiences. The choice, made by the co-researcher together with the principal investigator, was guided by the interest of the co-researcher in investigating a given experience, and by the relevance that the episodes seemed to have for the study. The selected experience was then investigated within an interview.

The investigated daily life and dissolution experiences present variability with regard to their approximate duration (ranging from a few moments to several minutes), the time since their occurrence (ranging from one day to a few years prior the interview), as well as the context and activity within which they arose. The eight daily life experiences that we inquired occurred while: the co-researcher was with her boyfriend on the sofa; the co-researcher was at his best friend's doorway, talking with him; the co-researcher was listening to music and programming at the pc; the co-researcher was on the sofa, video calling a friend; the co-researcher was drawing with her niece; the co-researcher was following an online lecture and looking at a webpage; the co-researcher was buying a Christmas present in a crowded shop; the co-researcher was in her apartment with her mum. The ten investigated dissolution experiences can be roughly divided in six groups based on the context in which they happened. Such contexts are: art (two dissolution experiences), nature (two dissolution experiences), love and intimacy (one dissolution experience), psychopathology (one dissolution experience), the use of psychedelic substances (two dissolution experiences), and meditation (two dissolution experiences). Different contexts can co-exist in the same experience (e.g., a psychedelic experience happened in nature). When this was the case, we assigned the experience to the context that appeared to be more relevant experientially. In doing so, no cases of indecision or unclarity occurred.

The choice of investigating dissolution experiences that occurred in different contexts is supported by the results of our pilot study (see *3. Pilot Study*). We chose to include experiences from different contexts to avoid obtaining results relative only to one of them (e.g., only to dissolution experiences occurring while meditating). However, we did not exclude the possibility of discovering experiential differences between the different contexts. In other words, in the present study we specify the division in groups relative to different contexts for multiple reasons: we do not want our data and results to be relative

only to a specific group of experiences that occurred in a particular context, and we aim to discover and point out at possible differences between experiences occurred in different contexts. Furthermore, we believe it important to emphasize that, even though they are usually investigated or reported in relation to a single context, dissolution experiences amount to a phenomenon that can occur across a multitude of contexts. In our opinion, taking more of such contexts into account can lead to a more comprehensive understanding of the phenomenon. In Table 1[6], we report the codes of the investigated experiences, with the corresponding co-researchers. Each co-researcher is identified through a code and a made-up name that the co-researchers chose for themselves[7].

In Table 2, we report which dissolution experiences, and how many of them, occurred in each context.

Each selected experience was investigated with one or more phenomenological interviews. In total, we conducted 29 phenomenological interviews: one each for the eight daily life experiences, and 21 for the 10 dissolution experiences (M = 2.1, SD = 0.7).

Due to the Covid-19 pandemic and the long distance between the principal investigator and some co-researchers, most of the interviews (18 out of 29) were conducted online, via Zoom[8]. Four interviews (DE_A.1, DE_A.2, DE_D.1, and DE_G.1) were already conducted in the context of the pilot study. They were recorded using a video camera. All the other interviews were recorded twice for safety: using Zoom (also in the case of the interviews conducted in person), and using a smart-phone (different models of smart-phones were used). The interviews were transcribed verbatim. The original recordings of two interviews went lost: those relative to dlE_A, and DE_G.1. Therefore, we are not able to reconstruct the precise time length of the respective interviews. The average length of the remaining 27 interviews is 76.4 minutes (SD = 18.3). All the interviews were conducted in English (English was not the native language of the interviewer, and it was the native language of only one out of eight interviewees).

[6] The tables are presented in the final part of the thesis.

[7] When reported outside of tables, the made-up names of co-researchers are reported preceded by “cr.”, short for *co-researcher*.

[8] A platform for videotelephony.

4.3 Co-Researchers

The co-researchers were selected between the principal investigator's acquaintances. The choice was based on: their reports on having experienced episodes of dissolution, their experience with phenomenological reporting, and their interest in exploring their experience and participating in the study. The selected co-researchers reported having experienced at least one dissolution experience at any point of their life, and expressed interest in exploring it phenomenologically. Four of them were assigned female at birth, while four male. Four of them identified as women, two of them as men, and two of them as men and non-binary. Their age ranged from a maximum of 44 to a minimum of 26 years old (M = 29.2, SD = 5.8). They had 20.6 years of education on average (SD = 2.1). Three of them had obtained a Bachelor's degree, four a Master's degree, and one a Ph.D.. All of the co-researchers were somehow involved in cognitive science studies, as students or working in the field. Their experience with phenomenological reporting varied from basic (four co-researchers), to medium (one co-researcher), to high (three co-researchers).

4.4 Interview Method

Epoché$_g$, also referred to as *bracketing*$_g$, is one of the basic concepts of phenomenology, (see Husserl, 1950-2020). To properly observe and describe experience, it is necessary to do it from a first-person point of view. In doing so, one has to bracket, that is, temporarily not take into account the presuppositions, beliefs, and assumptions on how their experience is or should be. Only in this way one is supposedly able to observe, and report on, experience as it is. Empirical phenomenology$_g$ (that is, "empirical research on lived experience" (Kordeš, 2016, p. 375) is often seen as second-person research$_g$ to gather phenomenal data. By second-person research it is meant a "dialogical co-research" (Kordeš, 2016, p. 379), where the principal investigator collaborates with a co-researcher to explore the co-researcher's experience. In doing so, the principal investigator is supposed to guide the co-researcher away from the presuppositions, the beliefs, and the assumptions mentioned before. The principal investigator also non-suggestively guides the co-researcher toward the exploration of specific dimensions of their experience, allowing them to become aware of the pre-reflective aspects of their experience, or conducting the investigation in a direction relevant to the research question(s). This is often done during phenomenological interviews.

Specifically, we chose to base our interviewing approach on the micro-phenomenological interviewing method$_g$ (Petitmengin, 2006). During a micro-phenomenological interview, the interviewer helps the interviewee: to get, and to stay, in contact with their experience; to describe the *how* of the experience rather than the *what*; and therefore to avoid the so-called satellite dimensions$_g$ as much as possible. The investigated experience has to refer to a single, specific episode, that cannot be confused with other episodes and that the co-researcher remembers well enough to be able to *go back* to it. Such an episode is then explored in more of its different dimensions (e.g., visual, emotional, kinesthetic), at the wanted level of precision.

In micro-phenomenological interviews, the interviewer employs specific techniques to guide the co-researcher in the description of the diachronic and the synchronic dimensions of their experience. The diachronic dimension refers to the temporal or dynamic dimension of the experience, that is, its unfolding in time (Petitmengin, 2006, p. 248). The synchronic dimension refers to the non-temporal dimension of specific moments or phases of the experience, that is, the "specific configuration of the interviewee's experiential space (...) associated with each of [those] moments" (Petitmengin, 2006, p. 248). During the interviews we carried out a subdivision in phases of each experience in phases, that we then better defined during the analysis. Such operational procedure previously emerged during the pilot study (see *3. Pilot Study)*, and it was aimed at better orienting ourselves during the interview and the analysis. We do not mean to claim that the investigated episodes are necessarily experienced by the co-researchers as divided in phases. This, for two reasons: often the shifts from one phase to another are not clear and abrupt, and not all the experiential elements present move simultaneously from one phase to the other. As reported by cr. Gianpaolo:

> (1)[9] It would be a bit of a violence to my experience if you describe them in terms of like phases. There was a flow - (...) I experienced this as like a flow of consciousness. (...) There is a point where the entirety of my experience transitions into something else. Parts of my experience… Those transitions don't overlap. (...) They are not synchronized, and they end by petering off, not just abruptly coming to a stop. Did that make sense? (...) So, the reason why I would feel uncomfortable [with subdividing the experience] into phases, is because I would always have to say 'yeah but then there is this part of experience that kind of was an echo or a thing from before'. (DE_B_1)

[9] The excerpts reported in the text have been edited for clarity. They are reported with a number in brackets preceding each of them, so that they can be referred to.

We conducted one phenomenological interview for each daily life experience, for a total of eight interviews on daily life experiences. The recording of one of them got lost; the length of the remaining seven interviews on daily life experiences varied from 48 minutes to one hour and 33 minutes (M = 68.7, SD = 13.1). Before the interviews, we agreed on the experiential episode to investigate, defining its beginning and end. During the interviews, we first guided the co-researchers to provide a description of the diachronic structure of the selected experiential episode. We then focused on deepening the description of the experiential elements that, based on our theoretical knowledge and on the findings of our pilot study, seemed relevant to our interest in dissolution experiences and sense of self.

We conducted either one, two, or three phenomenological interviews for each dissolution experience (M = 2.1, SD = 0.7), for a total of 21 interviews on dissolution experiences. The recording of one of them got lost; the length of the remaining seven interviews on dissolution experiences varied from a minimum of 54 minutes to a maximum of 2 hours and 7 minutes (M = 79.1, SD = 19.0). Before investigating each experience, we agreed with the co-researcher on its beginning and end. When the availability of the co-researcher allowed it, we planned two phenomenological interviews for each dissolution experience. The first one was aimed at investigating the diachronic structure of the experience, as well as focusing on the shift between different phases and on the description of the experiential elements that, based on our theoretical knowledge and on the findings of our pilot study, seemed relevant to our interest in dissolution experiences. The second interview was aimed at the deepening of the description of the peak phase (i.e., the phase of a dissolution experience in which the defining elements of dissolution experiences are present the most), and at the further exploration of the experiential elements that, based on our theoretical knowledge and on the findings of our pilot study, seemed relevant to our interest in the sense of self. Furthermore, we investigated how such elements present themselves differently in various phases of the dissolution experience. Consider, for example, how cr. Cedar's experience of his thoughts change throughout his dissolution experience:

> (2) I had inner voice, when I laid down, but then it seemed as if (...) the more that I relaxed, the more the inner voice transitioned into… (...) My thoughts, instead of manifesting in this inner voice, manifested as… different lengths of… bright, of brightness, or like this yellow/white color. (...) There was a visual part of it, definitely, but always also like a felt part. (...) So, the inner voice, (...) its position, was around my mouth. And, as this transition [was happening], (...) [the inner voice] was moving up my head, and

> by moving up my head, it transitioned from an inner voice, to these different lengths of bright color, or brightness. (...) But at the same time, this… same kind of sensation of thoughts, this bright light, was starting to be felt in my body, my whole body. (...) I would say [that I was] less and less [aware of the content of my thoughts]. (...) *Definitely* [when the thoughts are in inner speech] they come from me. (...) I don't know if in that moment I *can* have them under control, [if] I could stop [them]… (...) It seems more… that they *occur* to me. [Rather] than, [me] actively [thinking them]. (...) [Later on in the experience] the thoughts… are a lot more passive. (...) They start to become more passive and kind of go up, and change modality. (...) When they change the modality, this is when the dissolution happens, and this is where we have to look a bit more where they belong to, because it's harder to determine. (...) The inner speech, that is… that I feel behind my mouth, starts to move… up in my head, and changes modality into these bright pickles. (...) The inner speech stops being inner speech. (...) [Then I identify with the thoughts] a lot less, I think. (...) I don't think [that I have control over them]. (DE_C)

Depending on the co-researcher's availability, commitment, and enthusiasm to investigate their experience, the investigation was in certain cases condensed in a single interview, while in others it was deepened in a third interview.

4.5 Analysis Method

The interviews were transcribed verbatim. To analyze the collected data, we followed guidelines for qualitative analysis (Charmaz, 2014; Flick, 2018) and the guidelines of the micro-phenomenology analysis method (Petitimengin et al., 2019; Valenzuela-Moguillansky & Vásquez-Rosati, 2019).

Coding$_g$ is the process of developing and assigning descriptive categories$_g$ to lines of the text, or parts of the qualitative data, being analyzed (see also Flick, 2018, p. 454). We employed an inductive-deductive approach$_g$: we both developed categories letting them emerge from the data, and we coded the data in a way that was informed by already existing categories. Specifically, such already existing categories derived from our theoretical knowledge about dissolution experiences and sense of self, on the findings of our pilot study, and on insights had in early phases of the study.

The analysis process started already during the conduction of the interviews, when we began to brainstorm on the possible categories that could emerge from our data. Once we had all the interviews transcribed, we proceeded with the coding of the transcripts, involving also relational coding, which refers to the establishment of relationships between categories. In doing so, we grouped together the descriptions relative to the same experiential elements, without taking into account the parts relative to satellite dimensions. Then, we chronologically ordered the descriptions of experience contained in

each transcript, and we operationally subdivided each experience into phases (this procedure is known as *extraction of the diachronic structure*).

This process both informed and was informed by the identification of the peak phase. For each phase, we were able to describe the presence of different experiential elements (procedure known as *extraction of the synchronic structure*). We constructed a codebook (see *5.1 Codebook*): a list of the developed categories, groups of categories, and subcategories, comprehensive of a description, examples, and possible considerations for each of them.

We finally validated our results through intercoder validation$_g$. Specifically, both of us agreed on the final version of the codebook.

4.6 Validity

All the phases of our study respect criteria of validity.

In micro-phenomenology, and in phenomenological interviews in general, a criterion to evaluate the validity of the descriptions produced is to assess whether during the interview the co-researcher is "in contact and have a hold on [their] experience. Each time this imprint begins to be erased, [they] must revive it, and refresh it, if [they are] not to merely pronounce empty words" (Petitmengin, 2006, p. 256). The interviewer is supposed to guide the interviewee and keep them in touch with the experience they are describing. One way to estimate whether the co-researcher is in contact with it, and to which degree, is to receive feedback from the co-researcher themselves, during or after the interview. Our co-researchers reported a general high degree of contact. Consider cr. Rigoberto's words:

> (3) cr. Rigoberto: "You're really good in letting me relive the experience, I really had the feeling that—
> (...) I'm getting goosebumps just like, from you describing it! [Laughs]
> Interviewer: [Quite long summary]
> cr. Rigoberto: Yeah, that's amazing! I… I remember it very clearly! (DE_D)

Furthermore, as argued by Petitmengin (2006), the degree of contact of an interviewee with the explored experience can be also addressed by observing the interviewee. For most part of each of the interviews we conducted, our co-researchers were in "an 'embodied' utterance position [that occurs] when the person is in contact with [their] experience", as also verbal, non-verbal, and para-verbal objective indicators$_g$ suggested.

The interviewer is supposed to accompany the interviewee in exploring various dimensions of their experience. When the interviewee discovers, during the interview, aspects of their experience that they were not previously aware of, it is a sign of the success and the validity of the interviewing process. This happened often in our study. Consider, for example, cr. Cedar's report:

> (4) This partial dissolution of self, it's what I discovered through this talk now, I didn't know—also when I was writing it down, now when I was describing this *me* so much, I figured out that there was nothing, nothing like such as this in, in this occupation. (dlE_C)

Furthermore, the similarities of the obtained descriptions, both between each other and compared with the descriptions found in the literature, constitute a proof of their authenticity.

In our study, we adopted an approach that allows later phases to inform previous phases of the research. In line with this, although at the beginning of our study we did not plan to investigate the experience of other people (see *4.1 Research Questions*), this is a line of inquiry that emerged during the interviewing and analysis processes (see *6.6 Other*). Such occurrence represents an evidence for the validity of our approach.

The validity of the analysis process and of the results is guaranteed by the process of intercoder validation. The emerged categories were largely discussed by both coders.

5. Results

In the present section we are going to address the results of our empirical phenomenological study, firstly describing the investigated experiences, and then presenting the codebook we developed. Before the codebook per se, an explanation of its structure is provided.

- cr. Morella reported on a daily life experience she had while sitting on the couch with her boyfriend (dlE_A) and on a dissolution experience that occurred while she was following a guided meditation in her room (DE_A).
- cr. Gianpaolo reported on a daily life experience that sees him standing in his best friend's doorway, while talking with him (dlE_B). cr. Gianpaolo reported on two dissolution experiences: in the first one he was in a church, where he saw a depiction of the Passion of Christ (DE_B_1); in the second one he was in an apartment, where he experienced "a sort of manic psychotic state" (DE_B_2).

- cr. Cedar described a daily life experience he had in front of his pc, while programming and listening to music (dlE_C). His dissolution experience occurred while he was up on a hill laying on the grass with two friends (DE_C).
- In their daily life experience, cr. Rigoberto was sitting on a sofa, having a video call with a friend (dlE_D). Their dissolution experience happened during a Tame Impala concert in Berlin (DE_D).
- cr. Alienora reported on a daily life experience during which she was drawing with her niece (dlE_E). Her dissolution experience occurred while she was with her boyfriend in their apartment, under the influence of LSD (DE_E).
- In her daily life experience, cr. Maya was looking at the BBC webpage while listening to a student talking on zoom (dl_F). She reported on two dissolution experiences, both of them happened while she was on a meditation retreat in Myanmar. The first one happened while she was walking from her cottage to the meditation hall, and she was surrounded by nature (DE_F_1); the second one occurred while she was meditating with other yogis in the meditation hall (DE_F_2).
- cr. James described a daily life experience that happened while he was in a shop, trying to decide, choosing between two packages, what to buy as a Christmas present for his boyfriend (dl_G). The dissolution experience he reported on occurred while he was in a wood, under the effects of mescaline (DE_G).
- In her daily life experience, cr. Helena was in her kitchen with her mum, and each of them was trying to communicate a different thing to the other (dl_H). cr. Helena reported on a dissolution experience happened while she was having sex with her boyfriend at the time (DE_H).

5.1 Codebook

A codebook is an instrument of qualitative analysis presenting a list of the developed experiential categories, and descriptions and examples for each of them. Experiential categories are the product of the process of labeling that enables the grouping of several elements under one concept (Flick, 2018). Our codebook reports categories which can refer to either daily life experiences or dissolution experiences, or to both. The codebook includes, for each category reported:

- Its name;
- A description of the phenomenon;
- One or more examples;
- Comments (optional).

The categories[10] in the codebook are organized in hierarchical and separated levels. There are: a higher-level category$_g$, three groups of categories that contain basic categories$_g$ and subcategories$_g$, attribute categories$_g$, and special categories$_g$. Aware of the complexity of this structure, we are going to further address it and describe it. Figure 1[11] can function as a guide.

Higher-Level Category: Boundaries.

The category *Boundaries* is labeled as a higher-level category. It describes the general way in which the experiential field, and therefore other aspects of experience that are made present to an individual's consciousness, are structured. Accordingly, *Boundaries* can be understood as referring to the co-researchers' existential feelings$_g$. Existential feelings "amount to ways of relating to the world as a whole. (...) [They] are variants of a non-localized, felt sense of reality and belonging, something that all intentionally directed experiences and thoughts presuppose" (Ratcliffe, 2020, pp. 1-2). Existential feelings are understood as bodily feelings that form the pre-intentional structure of experience. Although we did not define *Boundaries* as directly involving experience of the body, the experiential structure reflecting the state of *Boundaries* also specifies the nature and the presence—or absence—of bodily aspects. The higher-level category *Boundaries* describes the existential feelings of our co-researchers insofar they refer to their background feeling, the pre-intentional structure of their experiential field. This is something that emerged during the analysis process we conducted on our data, but that was also strongly informed by our research questions and interests. We hypothesize that *Boundaries* represents only one of the multiple ways of interpreting and understanding the co-researchers' existential feeling. Or differently said, the state of *Boundaries* is only one of the multiple aspects of the co-researchers' existential feeling. Specifically, *Boundaries* structures the experiential field subdividing it in *Self*, *World*, and *Interaction between self and world*—which are also

[10] When addressing a category in the present text, we report its name in italics and with a first capital letter.

[11] The figures are presented in the final part of the thesis.

the groups in which our categories and subcategories are divided. That is to say, the elements and processes experienced by the co-researchers are either perceived as *Self*; *World* (that is, non-self), or *Interaction between self and world*. We do not mean to claim that there is a rigid distinction between these three groups, or realms, nor that this division has a metaphysical value outside of the framework of the first-person experience of each co-researcher.

Furthermore, the way in which *Self*, *World*, and *Interaction between self and world* are divided is open to change. Exactly this is the meaning of the higher-level category *Boundaries*: as supported by our data, *Boundaries* describes the state of the division between the three realms, and its possible changes throughout an experience. In our opinion, this focus is fundamental to understand experiences of dissolution, that are precisely defined as episodes during which the self/world boundaries are affected. As Saarinen (2014) puts it, "[dissolution experiences] presuppose a shift in pre-intentional existential feeling that dissolves the experienced boundaries of the self" (p. 15). To sum up, the state of *Boundaries* is reflected in the overall way in which *Self*, *World*, and *Interaction between self and world* present themselves in experience—and vice versa.

In the codebook we report on instances in which the co-researchers directly describe the state of *Boundaries*, but the state of *Boundaries* can often be deducted from how the categories of the three groups are described to be present in the co-researcher's experiential field.

Groups of Categories.

The state of *Boundaries* defines how *Self*, *World*, and *Interaction between self and world* are divided. Specifically, it reflects which experiential elements belong to each of the three groups. Each group contains multiple basic categories, each of which describes an experiential element or dynamics.

Attribute Categories.

Each attribute category describes an attribute that can refer to multiple basic categories. For example, the attribute category *Sense of control (activity/passivity)* can describe the sense of control that the co-researcher experiences over their body (*Bodily qualities*) and over their thoughts (*Qualities of thoughts*), as well as over other experiential elements. We did not consider it sufficient to simply refer to the attributes in the context of the

descriptions of the various basic categories, but we felt it necessary to establish attribute categories to address them directly, for the following reason. An attribute category also describes the overall experience of that attribute. This can come in two forms. First, the co-researchers might provide a description of the overall experience of that attribute during a certain phase of an experiential phase. That is to say, for example, they describe the overall feeling of being—or not—in control (*Sense of control (activity/passivity)*) during their experience, without referring to basic categories. Second, the descriptions of how a specific attribute category is experienced relative to different basic categories might provide an overview of the general way the attribute category is experienced. For example, if the co-researcher reports on the sense of not being in control anymore over their body (*Bodily qualities*), and on the sense of being less in control over their thoughts (*Qualities of thoughts*), the overall sense of control experienced (*Sense of control (activity/passivity)*) decreases. In this way, we can have an overview of how each attribute is present in an experience in its entirety. *Number and coherence of the self-elements* can be considered to represent a special attribute category, insofar the attributes *number* and *coherence* refer to the totality of the basic self-categories, and not only to one basic category.

Special Categories.

Each special category refers to an experiential state emerging from a pattern of presence of basic and attribute categories. In other words, each special category generally corresponds to the presence of certain basic and attribute categories, and to the way they present themselves, in the co-researcher's experiential field. For example, the special category *Trusting the world / Letting go* is a specific configuration of categories that usually include an open and friendly attitude (basic category *Attitude*), a similar atmosphere perceived in the world (basic category *Atmosphere*), pleasant emotions (basic category *Emotional qualities*), and a diminished sense of control (attribute category *Sense of control (activity/passivity)*). However, the pattern of basic and attribute categories that the emergence of an experiential state depends on is not rigid and fixed, but flexible. As long as the experiential state described by the special category subsists, the basic and attribute categories underlying it can relatively vary, with respect both to how they present themselves, and to their presence whatsoever. For example, not all instances of *Trusting the world* / *Letting go* present pleasant emotions, or emotions at all.

5.1.1 Boundaries

Description:

Boundaries is the category that refers to the organization of the experiential field of the co-researcher with regard to the division between self, world (i.e., non-self), and interaction between self and world. In other words, what in their experience is perceived as self, what as world, and what as their interaction; and how these realms are divided (e.g., how clearly), if at all. Simply put, the experience of where one ends and the world begins, and how this division is structured.

Examples:

In this fragment, cr. Cedar describes the perceived boundary dividing the mental space, with which they identify (*Self*), and the outside world; and how they distinguish between the two:

> (5) Outside this thin boundary [of the mental space] there is nothing, also this thin boundary is very… It has a materiality to it. It seems to be transparent. (...) I think that one part of [what characterizes the boundary of the mental space] is not being able to go beyond this boundary. (...) It's as if, what is inside the mental space is known, and what is outside is not knowable. In this way. (dlE_C)

cr. Rigoberto reports on how he perceives boundaries separating him from the world and his friend. By consequence, he is aware of the friend as other from him:

> (6) [I am aware of my friend as a different person from me because] I feel some sense of like physical boundary, between me, the screen, and him. (...) Like, I feel *my* boundary, I feel *me*, and then there is some distance to my phone, or like from my distance to him there's… appears to be more distance. (dlE_D)

Comments:

In line with our category, Karl Jaspers (Jaspers, 1913/1963) argues that one of the fundamental elements of ego-consciousness is the demarcation of the ego against the external world and other people. A category similar to our *Boundaries* is Nave et al.'s (2021) *first-person perspective*, that refers to the dual structure of experience, and its changes. The various states of first-person perspective found during dissolution experiences occurred while meditating are: "normal; intermediate; non-dual state" (p. 9). Furthermore, Oblak et al. (2022) describe an experiential dynamics that resembles *Boundaries*: the world structures itself into vicinity and distance, wherein vicinity is that

area of embodiment that extends beyond one's own body. This is similar to how Oblak et al. (2021) conceive of the structure of lived space$_g$.

5.1.2 Self

Description:

Self groups the categories describing the experiential elements and dynamics that the co-researcher identifies with, and/or that they experience to be the owners of.

Examples:

In the following example, cr. Morella describes different characteristics that two different "feelings of herself" have:

> (7) I mean, they *are* separate feelings, but they're both, in a sense, my own feeling of myself. They are not *completely* different. They have like this similarity that I feel them to be me. (...) It's a sense of… a sense of *agency* to it. (...) There is actually a feeling of the body as a space. And this feeling, this shimmering, is also a bit spatial, it's not completely just bodily. It doesn't end at the skin areas, so it also feels like it sort of goes out into space a bit, but not completely, like it stays *close* to the body, as a physical form, but it's also spatial in the sense that it is not just the physical form of the body. (...) It's [also] got a distinct *me* quality in it, but it's so hard to describe!, because it's like a *mood*, of *me*, but, but, what is it?! I mean, it feels as though, like the whole… *history* of my life is in that. (…) There is also like this feeling of a personality, that comes with that. (…) [One of the two feelings of myself] feels less… less *thick*, with who I am, let's say. It still has some, some feeling, some… *vibe* of who I am, but less strongly so. (DE_A)

Consider how cr. Gianpaolo describes the part of his experiential field that he experiences as self:

> (8) It's part of the space that I occupy. There is space that is me and there is space that isn't. Here's the thing, the space that is me, I recognize that is not one thing, it's some of all my sensations. (...) What it is, basically - Merleau phrases in a very nice way, is that the world is a fabric and a consciousness is always a fold in that fabric. That very much resonates with how I experienced myself. [There's] part of the world that is me, there is this great continuity in every direction, but this part of the continuity that's most concrete is me. (dlE_B)

Locus.

Description:

Locus refers to the mental location(s) where the co-researcher perceives to be located the most, and/or to the element(s) or dynamics (in space) with which they identify the most.

Examples:

In this example, cr. Morella describes how she identifies with her awareness, that at the beginning of her daily life experience is located in the body, while later on it moves also in the space in front of her:

(9) I mostly feel to be in the body. I identify with the awareness and where the awareness is, as this sense of who I am and where I am, so the awareness and who I am is mostly in the body. (...) As the sound is made, then there is like more awareness also here in front of me, with the sound, and (...) it's like more dispersed. (...) I wouldn't say like I am only the body in that moment, because I also feel like there is like a strong part of me that is in the making of the sound, (...) but there is also some kind of an awareness still present in the body, but less strongly than at the beginning, when it was like only in the body. (dlE_A)

cr. Cedar reports on the changing experience of their *Locus* throughout their dissolution experience:

(10) I feel as if [the locus] was even a bit outside of my body. (...) Not already at the beginning, (...) down the line of this experience. At the start, when I like, lie down, it's in my head. (...) More upper than lower, behind my eyes more than everywhere else. But when I look at [later in the experience], (...) it's outside of my body, and it's somewhere… It's still close to my body, above it a bit, and somewhere in between my hands, which are on my stomach and my head. (...) [By locus of self I mean] where, when looking at this experience, I'm immediately… *summoned* into that point. That's how I relive it. (...) First I can say that the self went out of the body. But at some point, I can't say anymore that self is outside of the body, because it doesn't make sense to say that anymore. (...) Because there's no more body, in a way. (…) I couldn't say that I can see [the locus] going from inside to outside, but I know I can say, from closer to my body to being a bit farther away from my body. (DE_C)

In this excerpt, cr. Rigoberto describes how, at the peak of their dissolution experience, they do not perceive a precise location where they are:

(11) I'm out there somewhere. I don't really know, but I also don't really care. (...) At first I feel like I'm only in my body, and then when I lift up, it feels like I'm also outside. The more I get absorbe, by the show, or the music, the less I care [giggles], if [the locus] is inside or outside, I don't ask myself. This kind of experience, I would describe it a little bit like… Like there is no border, because like I, I'm not looking for one. (...) [Pause, deep breath] Maybe it's a little bit like going like from a solid to a liquid state. In the solid state you have like, all these… selves… in fixed relation to each other, and… When you're connected, this strongly… Everybody is immersed in the same… fluid. And it doesn't really matter *where you are* at the moment, but you know you are *somewhere* in this fluid, because like… All together you make up this fluid! (DE_D)

Comments:

Locus is to be differentiated from the category *Point of view/control*, since the location(s) where one perceives to be located and the location(s) where one perceives to have a point of view and/or from where one perceives to exert control may, but may also not, correspond with each other; and from the category *Bodily qualities*, since the location(s) where one perceives to be located may, but may also not, correspond to one's body. The attribute category *Sense of identification* is usually associated with *Locus*. *Locus* is similar to the category *self-location* developed by Nave et al. (2021). Self-location "reflects the participants' report regarding their sense of self-location ('where I am') under the experienced spatial frame of reference of the surrounding ('what else is present out there')" (Nave, 2021, p. 9). Nave et al. identified the following states that the self-location can adopt during experiences of meditation: "within body (only); body and close surrounding; expansion into vast space; indeterminate self-world structure; other alteration (ambiguous space)" (p. 8).

Sense of Mineness.

Description:

Sense of mineness refers to the fundamental experience of perceiving one's own experience as given in a first-personal mode. In other words, it refers to the sense that the experiences we experience are experienced by *us*, that we perceive experiences as ours.

Example:

In this excerpt, cr. Morella reports on perceiving her experience as unrelated to any concept of a person, but yet, as experienced by her:

> (12) [The experience] is not related to anything… that would be *mine*! Because in a sense there is a feeling of *existence*, of *being*. And yet there is no feeling of… *mine*, of like… this person's x. It's mine in the sense of it is happening right now and I am *here*, and I am… feeling these things, like this darkness and this… thickness, and that is… ALL. That is all that is, in a sense, and that is all that is *mine*. And also all that is *me*!, in a way. (DE_A)

Comments:

Sense of mineness is to be differentiated from *Sense of ownership*, since the latter refers to the more specific experience of elements of the experiential field as being owned by the co-researcher, and not to the more fundamental experience of the experience immediately presenting itself as in a first-personal mode. *Sense of mineness* draws from the phenomenological concepts of mineness, first-personal givenness, ipseity (see Zahavi,

2005). The category *Sense of mineness* was mainly developed deductively. Due to its pre-reflective nature, it was particularly hard to gather reports on the sense of mineness. During the interviews, we addressed it with direct questions, but the relative transcript excerpts are not rich enough to qualify as examples in the codebook. We suggest checking the special category *Sense of shared mineness* (in *5.1 Codebook*) to read more excerpts referring to the sense of mineness (that however, in that case, is perceived as shared).

Point of View/Control.

Description:

Point of view/control refers to the co-researcher's experience of a specific spatial location and/or perspective from which they are viewing and/or controlling something in their experiential field.

Examples:

cr. Gianpaolo reports on how he perceives his point of view during one of his dissolution experiences:

(13) Right now, what I would describe as my point of view, is a part of my body from which I am aware of this field in front of me that is given to my consciousness in the visual mode. (…) And it's also the point from which I will now attend to my mental space at the back of me. It's not *looking*, but I'm *feeling* that space from the same point. Daniel Dennett would be super upset, but it feels like the center of the, sort of, geometric space from which I do physical and mental and experiential operations onto my life world. But in that moment my life world wasn't differentiated, so there wasn't… There was both an absence of gestures to be made on it, but also there wasn't any point from which to make them. (DE_B_1)

In this example, cr. Alienora describes how her point of view changes during her dissolution experience:

(14) In the [first moment of the experience] (...) I felt like I did have a sort of point of view that belonged to where my body was positioned in that space. Even though the whole space and environment was a bit disordered, it still felt like I was physically somewhere with a physical perception and point of view, which I can manipulate. But in the second [moment] there is [still] a sort of point of view, but not really. Because, as I said, I felt like I was literally everywhere in the room, and at the same time, the same being as [*my boyfriend*] was. The point of view was a little bit lost. (...) Because I was all over the place and one with him, so I felt like I could feel and see everything in that room, everything in that situation at once. From where can you look at something, when you see everything at once? (DE_E)

Comments:

Point of view/control is to be differentiated from the category *Locus*, since the location(s) where one perceives to be located and the location(s) where one perceives to have a point of view and/or from where one perceives to exert control may, but may also not, correspond with each other. *Point of view/control* is to be differentiated from the category *Bodily qualities*, since the location(s) where one perceives to have a point of view and/or from where one perceives to exert control may, but may also not, correspond to one's body.

Bodily Qualities.

Description:

The experiential category *Bodily qualities* encompasses the co-researcher's experience of their own body. Therefore, any quality or element of the co-researcher's experiential field that is understood as (part of the) body.

Examples:

In this example, cr. Morella reports on how she identifies with her body:

(15) I identify with the body, with the feeling of where my body is and how I feel it, so this type of thickness, this type of thing that is felt to be a bit more thick than the outside, let's say. Yeah, I identify with that. (DE_A)

cr. Helena reports on her experience of the boundaries of her body:

(16) There's an awareness of… *permeability* versus non-permeability. (...) There's just this [other feeling] that's expanding, and on the one hand… [the chest] is *solid*!, and therefore doesn't let anything through, but as [the feeling]… *expands* it also feels like [the chest] *could* become permeable. (...) It's kind of a very… clear reminder that I'm in my body. [Laughs] It kind of just feels like, okay, so this is the boundary of my body, this is kind of… my limit, or my… I don't know. No, I can't pass through here [laughs]. (DE_H)

Comments:

Bodily qualities is to be distinguished from *Locus*, since the location where one perceives to be located may, but may also not, correspond to one's body. Furthermore, the two could overlap but not correspond completely: for example, one might identify with their own body and experience to be located inside of it, but the *Locus* might be localized to a spatially smaller, or more specific area. Furthermore, *Bodily qualities* is to be distinguished from *Point of view/control*, since the location(s) where one perceives to

have a point of view and/or from where one perceives to exert control may, but may also not, correspond to one's body. The attribute categories *Sense of ownership* and *Sense of identification* are often associated with *Bodily qualities*. In fact, particular relevance is given to the experience of being aware—or not—of one's own body or parts of it; the experience of being the owner—or not—of one own's body or parts of it; the experience of identifying with one own's body or parts of it. Even in the case in which one identifies with their body, this does not imply that they identify solely with their body. Particular relevance is also given to the experience of the boundaries of one's body, that may, but may also not, correspond to the *Self* boundaries. The category *Bodily qualities* is similar to the category *body sensations* in Nave et al. (2021), since both account for feelings experienced in relation to the body. However, while our focus is on the totality of the body, they focus on the singular sensations. Consider what they found about how body sensations can present themselves during experiences of dissolution had while meditating: "prominent, distinct; indistinct bodily sensations; imperceptible, non-local" (p. 8).

Emotional Qualities.

Description:

The experiential category *Emotional qualities* encompasses the elements and qualities of the co-researcher's experiential field that present an emotional nature.

Examples:

In this example, cr. Rigoberto describes how in their dissolution experience a "huge euphoria" is present—not in their body, but everywhere:

(17) It's like a huge euphoria. But - it feels like it's everywhere. It doesn't like feel that it's in my body, it just feels, everything [is] very euphoric. (DE_D)

cr. Maya, on the other hand, reports on a calm, peaceful, and pleasant feeling experienced during her dissolution experience, occurred while meditating:

(18) I felt very calm, and peaceful, and it was nice, it was a positive feeling, very nice, it was kind of *expanding* feeling in a way. (…) It was like this neutral positive feeling. (DE_F_2)

Comments:

The attribute categories *Sense of control (activity/passivity)*, *Sense of ownership* and *Sense of identification* are often associated with *Emotional qualities*. Particular relevance is given to reports on: the experience of exerting—or not—control over and/or being

more or less passive with regard to one's own emotions, the experience of being the owner—or not—of one's emotions, and the experience of identifying with one's own emotions. Furthermore, particular relevance is given also to: the experienced location in lived space of one's own emotions (specifically, the location is often considered in relation to one's body); and the valence, that is usually understood as a spectrum between pleasant and unpleasant, with which one's emotions present themselves in experience. In their study on boundary dissolution during meditation, Nave et al. (2021) developed a category very similar to our *Emotional qualities*. They label as *affective valence* "the emotional tone experienced by the participants throughout the meditation from blissful or pleasant to stressful and intimidating, (...) [structuring] the fundamental pre-reflective emotional background that structures our sense of relatedness to the world and to other individuals" (p. 9, 25). Affective valence, however, only concerns the valence of affections, while *Emotional qualities* refers also to other aspects of the co-researcher's experience of their emotions. In their analysis of experiences of dissolution occurred during meditation they found the following states of affective valence: "highly negative; slightly negative; mixed (various opposing emotions); neutral; positive" (p. 9).

Qualities of Thoughts.

Description:

The experiential category *Qualities of thoughts* refers to the co-researcher's experience of their own thoughts and ideas.

Examples:

In this excerpt, cr. Alienora reports on how she experiences her thoughts during her dissolution experience:

> (19) I think [the thoughts] did have a location, but the location was everywhere in the room. In the private space. (...) Also I guess the separation of inner dialogue and the actual dialogue was blurry. (...) I think [the thoughts] were definitely in the form of words, as in language. (...) They were everywhere, in the space. They were in the form of words, but not literally *written*. Do you ever experience, in your dreams, having conversation with someone, but not actually hearing the words, but just totally understanding what has been communicated to you? (...) That's how I experienced the thoughts and words. I didn't see them, I didn't hear them, but I got the information. (...) Yeah, [I did experience the thoughts as my thoughts,] but not, but I was also one with [my boyfriend], so I explicitly experienced all the thoughts as being all over the space, and as […] being shared. So, they were also… his! Ours. (DE_E)

Consider how cr. Maya reports on how she experiences her thoughts at the end of one of the dissolution experiences she described:

> (20) [At the end of the dissolution experience there was a] thought, and I realized it was my thought, it was kind of [in] my voice, but it was somewhere there very very up, in the left side, a little bit in front of me, but there somewhere in the sky. (…) [The thought at the beginning of the dissolution experience] is in my own voice. And it's not like the other thought [at the end of the dissolution experience], but it's very, it's elaborated. (...) Because the other thought that I described, [the one at the end], is just, it was so quick that it was not like, *ta ta ta ta ta*, word by word, but [the one at the beginning] is really completed. (…) [The thought at the beginning] was outside of my head, but somehow connected with my head. (...) It was my thought, it was my voice. (…) I had control over the thought, (…) it came from inside of me. (…) [While the other one, the one at the end], was there in the sky, *very* far. (...) It didn't feel like my thought… Yes, in a way it did. In a way it did feel my thought, yes. (...) How to say it. Somehow I know that it's me asking [the question of the thought]. It did have a part of my sound, like it would be my inner voice, but it was also… strangely interrupted. Perhaps [it was] just one word, and I knew what the word would mean. Like, it was not even the whole sentence. (...) But it was just like an *idea*, but this idea was somehow connected with me, *spread* in a way. (DE_F_1)

Comments:

The attribute categories *Sense of control (activity/passivity)*, *Sense of ownership* and *Sense of identification* are often associated with *Qualities of thoughts*. Particular relevance is given to reports on: the experience of exerting—or not—control over and/or being more or less passive with regard to one's own thoughts, the experience of being the owner—or not—of one's own thoughts, and the experience of identifying with one's own thoughts. Furthermore, particular relevance is also given to: the experienced location in lived space of one's own thoughts (specifically, the location is often considered in relation to one's body), and the modality in which one's thoughts present themselves in experience.

Narrative Understanding of Oneself.

Description:

Narrative understanding of oneself refers to the co-researcher's experience of a more or less explicit understanding or knowledge of their identity, personality, and/or history.

Examples:

cr. Gianpaolo reports on his experience of the concept of himself as "a language thing":

(21) The me in that moment just became, not even like an object in the world, but it's kind of like talking about… you know, in abstract, about Washington being the capital of the United States. Or you know, the square root of three is nine. It became this weird language-level thing, that you can talk about, (...) and I then made an intellectual point about it. In a way. But it didn't refer to anything in the world. Like we can now have an argument about I don't know, Greek mythology, (...) and it's gonna be a language thing, but nothing in the world actually relates to Greek mythology. There's no Zeus. But we can talk about Zeus. And so it, [the] me became purely that. Like a weird… a weird concept that I can describe in language, but that's not really, there's no part of my experience that I could point to. And even then when I could, when I found a me, it was still, it had this language-y quality. (...) It's a weird thing, because I have no idea who I am actually. There's an understanding that [Gianpaolo] is not a real thing. It's like, you know, like Zeus. Or… I don't know. Captain America. It's like a weird… *story*-thing that has no referent in the real world. (...) It's still like this *story* that's back here. It doesn't point to any…body. (DE_B_2)

In this excerpt, cr. Morella reports on how, during the initial phases of her dissolution experience, the feelings of her history and personality are present:

(22) It feels as though, like the whole… *history* of my life is in that. If I use like Husserl's term, like this sedimentation, sort of like just this *vibe*, this feeling of my life, the choices I have made, the things I have done, etcetera etcetera, like all of that is felt in this. (...) It's just like a feeling! I cannot describe it better right now, it's just like… It's like an atmosphere, like a very distinct flavor, *of* something, that is like, completely unique in this flavor… (...) I can't just grab at something… and name it. (...) There is also like this feeling of a personality, that comes with that. Like there is the feeling of history, but not like in a… *thematized* way, it's not like explicit, or concrete, it's just like a vibe, and then there is also like the personality, and the personality feeling of it, it has more of a watery quality. It's more like flow, I feel it like it's around the head right now, it's like, going here and there. (...) It feels like there is playfulness to [the personality]. (DE_A)

Comments:

The category *Narrative understanding of oneself* was developed partly inductively and partly deductively, drawing from the concepts of narrative and autobiographical self (see e.g. Ricoeur, 1985, 1991; Zahavi, 2005). By *Narrative understanding of oneself* it is not necessarily meant that the understanding is explicitly narratively constructed, or consciously. The attribute category *Sense of identification* is often associated with *Narrative understanding of oneself*. Particular relevance is given to the experience of identifying with a narrative or autobiographical self. When the co-researcher identifies with a narrative or autobiographical self, this does not imply that they identify solely with it, or that they identify with all of it.

Attitude.

Description:

Attitude refers to the co-researcher's experience of assuming a certain attitude—that is, pattern of behaviors, or way of relating, interpreting and approaching—towards the world and/or towards their own experience.

Examples:

cr. Gianpaolo reports on how, while visiting his best friend during corona times, he maintains distance from him, adopting what we can understand as a closed attitude:

> (23) I was just a bit further away to [my friend] than it's socially normal, and I was very aware of that, you know, him being my best friend typically I would have come closer in, there would be a connection in terms of the bodily space and throughout the conversation. Because he had told me that his brother-in-law is sick, there was this continuous leaning away from him. And so I felt that in my body and in space, so I was kind of very aware of my posture, my position in space, of the distance between us. And so in a weird way I was conscious of things that I usually wouldn't be. (...) There was this weird, like a side process of paying attention to the distance, that became a thing in my experience. There was never any valuing, like that I thought "oh he's sick or there's something bad about it", it wasn't that explicit, but there was something about the way I navigated the space around him that was kind of marked and remarkable, you know, in a weird way. And a lot of that was something I was doing, this wasn't something that just naturally happened, like, I recognized that this is an attitude I took, there was some agency on my part, it was an active process. […] [There] is this continuous distance between us that I'm kind of maintaining through this weird really unnatural awareness of my body. (dlE_B)

cr. Helena reports on how, in her daily life experience, both her mum and her try to talk about a different topic. Therefore cr. Helena assumes an antagonistic attitude. Furthermore, due to the specific topic addressed by her mum, she also assumes a closed attitude towards her:

> (24) I think that I generally have a bit of a filter when my mum has been talking about my sister for a while. Yeah. [Giggles] (...) I think that we weren't necessarily speaking in a super super loud voice, we were both just trying to speak a little bit louder than the other person. So it wasn't, like, we were screaming or anything, but it was just – yeah [laughs]. (dlE_H)

Comments:

Particular emphasis is given to: the co-researcher's experience of having a more or less friendly or antagonistic attitude towards the world or towards their own experience, and the co-researcher's experience of having a more or less open or closed attitude towards the world or towards their own experience. Because of the qualities of openness/closeness

and friendliness/antagonism, *Attitude* presents a strong similarity with *Atmosphere*. However, where the latter refers to something that the co-researcher experiences as a characteristic of the world, *Attitude* refers to the co-researcher's attitude towards the world, and it is therefore experienced as a characteristic of the co-researcher. *Attitude* and *Atmosphere* are nevertheless strongly connected, to the point that often throughout a dissolution experience they become indistinguishable one from the other.

5.1.3 World

Description:

World groups the categories relative to the part of the experiential field understood as world, that is, non-self.

Example:

Notice how cr. Cedar describes how he experiences part of his experiential field as being world, instead of self:

(25) [I know that it's not me because it's] too alien. I can't do anything with it. (...) I don't have control over it, I don't identify with it, I don't… I *can't* make it disappear. (...) I feel like I *can't* make it up on my own without experiencing it occurring to me. (…) What is beyond [my self boundaries], I know it's not mine. (…) [I know that one space is me and the other is not because] I don't feel ownership over the other one. I feel ownership over *this* one. (...) [It has something to do with the fact that the points of view are in this one]. I can't place the points of view outside of my… body, where the borders are. (DE_C)

World Clarity.

Description:

World clarity refers to the experience of the world presenting itself in experience as more or less clearly. Therefore, how precisely the co-researcher experiences it, how much in detail, or how blurry it appears in their experience.

Examples:

In this excerpt, cr. Helena reports on how the compost, that she is currently interested in, stands out in her experience of the world as the only object that she experiences with clarity:

(26) [The compost is] the only object that I perceive clearly. (...) I know there are things there, (...) but none of them really, you know, clear, or… have super perceptible clear boundaries. (...) There is a

> feeling of things being there, but they aren't… Not only I'm not focusing my attention on them, but I don't even really fully perceive them. (...) It's mainly colors. (…) I mean, now I know what is there, but in that moment I couldn't have told you, what is there. (...) The compost is super clear, so, I very very clearly perceive it. Like, all of it. Like, its boundary is very… It feels like my attention is super focused on it, I see it very very vividly, very clearly, visually. (dlE_H)

Comments:

World clarity can refer to any, as well as all, of the perceptual modalities.

Unity of the World-Elements.

Description:

Unity of the world-elements refers to the experience of the world presenting itself more or less as a unified part of the experiential field, compared to presenting itself as elements separated between each other.

Examples:

In this example, cr. Rigoberto reports on how at the beginning of their dissolution experience they experience individual people, while later on they experience them as a crowd:

> (27) At the beginning I'm very aware of the people that stand next to me, and that like, they're all people. (...) [Then it's] really like a mass of people. I'm not very aware that there are individual people, but, [giggling] there is a crowd! (DE_D)

cr. Helena describes her experience of perceiving the space as one unified thing:

> (28) The space I would say is mainly one thing. (...) There was kind of this awareness we're on a bed, so this is a bed, and that there are objects, but it kind of was, I wasn't perceiving individual objects. I was perceiving the space as… this one thing [laughs]. (DE_H)

Comments:

Unity of the world-elements has to be distinguished from a more general sense of unity that the co-researcher might experience during a dissolution experience: differently said, the perception of becoming one with the world. *Unity of the world-elements* does not refer to the co-researcher, but only to elements of the world. The quality addressed in *Unity of the world-elements* is similar to the attribute *coherence* of the special attribute category *Number and coherence of the self-elements*, but while the first refers to world-elements, the second refers to self-elements.

World Finitude.

Description:

World finitude refers to the experience of the world—here mainly understood in its spatial dimension, that is, as lived space—presenting itself as more or less finite in the co-researcher's experience.

Examples:

Consider, for example, the two following excerpts, taken from interviews conducted with cr. Helena. In the first one she reports on the experience of the world being finite during her daily life experience; in the second one she reports on the experience of the world being infinite during her dissolution experience:

(29) There was a… a certain awareness of the room ending, at a certain point. And how much space there was between me until the end of the room. (...) Strangely [there was a] feeling of the boundaries of space. So, I was just kinda very aware of the amount of space that there was still left between me and the thing. (…) So, the tension and [the] stopping [that I was experiencing] made the space that there still was, kinda delineated in a way. There was kind of a perception of my body being one end, the window being the other end, and there was this space in between. [Laughs] (dlE_H)

(30) And then [the golden stream] doesn't stop. [Laughs] So it just continues expanding outwards… Further and further. And… It doesn't… seem to stop. [Giggles] (...) So, there's this wall, and what's strange about this experience is [that] the expansion… just goes through the wall, so, the wall doesn't feel like a wall. I'm not experiencing the wall as a wall, or a [boundary], or anything like physical and solid, but it's just this… (...) It feels like this expansion can just go through it, and continue. It doesn't have a solidity!, [that is typical of a wall]. (...) The wall didn't matter, yes the wall was there, but it also wasn't there in a way, because this [expansion] was just going out, out, out, through it, continuing, the wall didn't stop it, the wall - [giggles]. (DE_H)

Comments:

World finitude is often associated with *Atmosphere* and *Affordances*, in the way that a higher degree of finitude is often correlated with a more closed and antagonistic atmosphere, and to less affordances. Furthermore, the experience of elements of the world as being perceived as more or less solid is often important with regard to this category: a higher degree of solidity is often associated with more finitude.

Atmosphere.

Description:

Atmosphere refers to the co-researcher's experience of the world as having a specific atmosphere, attitude, or character.

Examples:

Often, the co-researchers report on a familiar *Atmosphere*. This is the case of cr. Morella's description of her daily life experience:

> (31) It's like this space is more, I feel more acquainted with it, it's known. It's like I know it, it's this feeling of familiarity almost, like "I know this space". I know what it is, I know what it's like, I know its quality, but this not on a conceptual level, it's more like a felt sense of this spatial quality, if that makes sense. And the other [space] doesn't have the same feeling of familiarity to it. It's more sterile, more plain outside of this space. (...) [The familiar space] feels warm, but also not warm in the sense of, you know, warm on the body, but just warm in this intuitive feeling sense. I feel at home in a way, I feel this coziness of this space. (...) It feels like very cozy, sort of warm, but not warm in the sense of warmth, but warmth like in this sense of being cozy, and familiar, and homely. (dlE_A)

Before his dissolution experience, cr. Gianpaolo experiences the space where he is—in a chapel—as constrained and oppressive. At this point, the atmosphere is also related to the perception of the finitude of space. Later in the experience, he moves to a different space, where the different atmosphere correlates to a difference in the *Affordances* that the space offers.

> (32) [The space] feels constrained, there's a quality of light about it that it's kind of oppressive. (...) It feels like it makes the room smaller, and I'm closer to the people, I'm like, more seen. (…) It felt like the walls are bending towards me a little bit. (...) I'm at this center, and then the architecture is creeping into that center. (...) [Later in the experience] I become aware of this overall illumination of light. I felt it bodily, it kind of resonated with me in this weird way. (…) It is like a sense of smoothness and of resonance, and it's primarily about light. (...) It's the openness of the space. (…) I just feel like I'm gliding through that space. (…) There's a continuity [between me and space]. (...) I'm kind of moving in a way that feels in line with this overall energy of the space. (…) It felt like (…) the space immediately around my body expanded a bit. And the oppressive feeling disappeared. (…) Now that this space happens, I can move more freely, (…) there was *potential* to move in a specific way that was *absent* before, in the side chapel. (DE_B_1)

An atmosphere can also be the atmosphere of a specific person. Consider this excerpt from cr. Rigoberto's report on his daily life experience:

(33) [The atmosphere of having an exchange with my friend A.] definitely changes the way I see or hear things. (...) It's not something that only happens when I talk to him, but at the same time it appears very characteristic. That's funny… It's [kinda the atmosphere of] friendship, but like every friendship does a little bit different. But they're still connected somehow. Like, they feel similar, but I get a different feeling when I talk to A. and I talk to other friends. (dlE_D)

Comments:

Atmosphere is often associated with *World finitude* and with *Affordances*, where a more open and friendly atmosphere is usually perceived as more infinite rather than finite, and as offering more affordances. Particular relevance is given to: how much open or closed to the co-researcher (spatially or not) the world presents itself in experience, and how friendly or antagonistic to the co-researcher the world presents itself in experience. Because of the qualities of openness/closeness and friendliness/antagonism, *Atmosphere* presents a strong similarity with *Attitude*. However, where the former refers to something that the co-researcher experiences as a characteristic of the world, *Attitude* refers to the co-researcher's attitude towards the world, and it is therefore experienced as a characteristic of the self. *Atmosphere* and *Attitude* are nevertheless strongly connected, to the point that often throughout a dissolution experience they become indistinguishable one from the other.

Affordances.

Description:

Affordances refers to the co-researcher's experience of the world offering to the co-researcher certain possibilities of behaviors, ways of relating, and/or attitudes.

Examples:

In this excerpt, cr. James reports on how, at the beginning of his dissolution experience, he experiences the wood as giving him the affordances to touch it, play with it, and do whatever he might want to do. This changes later on during the episode.

(34) I think the environment is giving me affordances. (...) [Laughs] I don't know!, I feel like, the environment around me is… is letting me do whatever. [Laughs] (...) The environment seems, it's nice and comforting. Like, compared to later in the trip, where things were kinda scary, and (...) felt kinda closed off, here in this moment, the forest, the forest has a nice feeling, it wants, it wants to be touched and played with. (...) [Later in the dissolution experience, on the other hand, I have] no sense of how to act and move in this, because there's nothing to move in. (DE_G)

cr. Helena reports on how, during her dissolution experience, she experiences an affordance to melt and let go:

(35) It kind of feels like almost like a force that's pulling me into it. So, it's kind of like, it's atmosphere that is, that is kind of proving almost an affordance to melt into it, so, it's… [Sighs] It's there, and even though it's not pulling me in any certain direction, it's kind of prompting me to, in a way, or at least, creating a… [Sighs] I don't know, an affordance is the best word I can come up with, to just really melt into it, and then just, let go. (DE_H)

Comments:

Although it emerged inductively, *Affordances* draws from the concept of *affordances*$_g$ (Gibson, 1966, 1979; Laughlin & Throop, 2009). *Affordances* can present themselves in experience more or less explicitly. Their presence does not necessarily imply that the co-researcher complies with the possibilities offered. *Affordances* is often associated with *Atmosphere* and with *World finitude*, insofar more affordances are often perceived in a world that is perceived as having a more open and friendly atmosphere, and as being more infinite rather than finite.

5.1.4 Interaction Between Self and World

Description:

Interaction between self and world groups the categories that, in the co-researcher's experiential field, present themselves at the intersection between what is perceived as self and what is perceived as world. It is possible that some of them are understood as closer to one of the two than to the other.

Immersion.

Description:

Immersion refers to the co-researcher's experience of being more or less immersed in, as opposed to observing or external to, their experience.

Examples:

cr. Gianpaolo describes how, at the peak of his dissolution experience, occurred when he was in a church facing a painting, he experienced to be "totally immersed":

(36) My mental space (…) gets filled up with colors to the point that I'm mainly focusing on that, and I'm no longer focusing on the painting, but (...) there is still the painting in my visual field. (...) I am more immersed in this imaginary world that now only contains the colors, and I'm less immersed in the

real world, even though I'm still aware that the real world still exists. (…) So, there was of course a description of me in that moment where I was still looking at a painting. But I was not conscious of that. And this is what I'm saying, that it has the quality of a… of a daydream. I was totally immersed in this one thing. (DE_B_1)

In this excerpt cr. Helena reports on how, during her episode of dissolution, she is initially attending to her experience other than living it, and then she becomes more immersed in it:

(37) In a way I'm attending to my experience, not super super consciously, but just, there's this kind of… *Implicit* knowledge that there's this kind of novel experience. And I'm kind of in a way, you know, apprehensive about it, and kind of… checking in with myself, but not consciously. (...) Like, the context is *framing*… But like, I don't know, again, this awareness then also… kind of… *disappears* in a way at some point. Because at the beginning it's present, and then, the more immersed I am in my experience [giggles], the… It feels more like it limits the possibilities of… what can happen, what can be in my experience, I don't know, it feels more like a, in a kind of way, limiting the set of possible… I don't know. Experientially relevant [laughs] dimensions. (DE_H)

Similarly, in the following excerpt cr. Gianpaolo reports on their experience of an implicit knowledge of the situation he is in, and on how it shapes his experience:

(38) In no moment does [the knowledge of the situation] enter my explicit awareness. It's this constant continuous high level thing that I participate in and which shapes my experience, but it's never at the forefront of my experience as such. (…) This high level thing, this situation kind of drove my decisions, (...) it felt that my agency kind of disappeared and I was on rails, this whole situation limited my possibilities. (...) It kind of shapes the (...) concrete possibilities for actions. (…) Very concretely I experienced this as these like forces in space and in my body, so in a way it's a very concrete experience of the possibilities in the world, or the limited possibilities. (dlE_B)

Directionalities.

Description:

Directionalities refers to the experience of perceiving that, in the co-researcher's experiential field, specific elements—entities, objects, dynamics, or forces—are directed towards other elements.

Examples:

cr. Cedar reports on how, during their daily life experience, they experience a directionality to their intention "to do something" (in this case, to program):

(39) Something will happen because of my intention to do something. (...) [My intentionality is] pointing towards something. Or it's like… It has a certain… direction. (...) It comes from inside of, so

> the starting point, would be in the "me", inside the mental space, and here the directionality was towards the sphere. It was never towards anything else. I don't know if it would be possible to have directionality… But this is how intention felt here. So there was a certain directionality towards the sphere. (dlE_C)

In the following excerpt, cr. Cedar reports on their experience of directionalities during their dissolution experience:

> (40) At one point, I can't say anymore that, it's me giving the sun the warmth, and sun giving me the warmth, it's just like, it's warmth. (...) [While at the beginning *I know* I am receiving it from the sun.] (...) [This knowledge is felt as this] really felt directionality of the warmth, that is from up to my body that is down. (…) [The directionality from the sun delineates my division from the sun], because I know there is directionality, I know that there is division. (…) [Later on in the dissolution experience] it seems that having more of this openness or friendliness, would also… establish a channel either where I'm also something directing towards the sun or where kind of we don't need a channel. (…) Something happens to the directionality that was before just from sun to me. (…) [The warmth that I was perceiving as coming from the sun] now is just warmth. Now it's totally just warmth. (…) I know that at that point that we're talking about… there is nothing to be directed towards. (DE_C)

cr. Helena, during her daily life experience, perceives different directionalities in space:

> (41) [My mum's] movement was mainly going towards me and mine was back to her via the compost [what I wanted to tell her about]. (…) It felt like the intention had an actual direction, and there was this directed intention. (…) There's just a directedness that I experience. But at the same time I also experience the directedness from my mum towards me. (...) I'm receiving her energy, but kind of letting it bounce back to her, with a new input. (...) Energy [goes] both through me, and through the other thing, and then going back to her. (...) [I'm putting this new input] by directing my energy toward the compost (…) I feel like I'm coming to the kitchen with this kind of goal, and then this goal translated into my energy. (dlE_H)

Comments:

The directionalities are usually perceived in space. They are often experienced as being associated with an intention. That is to say, the intention that the co-researcher perceives element x to have towards element y, is experienced as a directionality from element x to element y. Therefore, *Directionalities* is in line with the concept of *intentionality*$_{g}$ (see Albertazzi et al., 1995; Brentano, 1874/2012; Fuchs, 2005, 2007b; Husserl, 1950-2020; Jacob, 2019; Sartre, 1943/2018).

Dynamics of Interaction.

Description:

Dynamics of interaction refers to the experience of different typologies of dynamical interactions between self and world. It includes different subcategories.

Comments:

Anika Fiebich and Shaun Gallagher (2013) define *interaction* as "a mutually engaged co-regulated coupling between at least two autonomous agents, where the co-regulation and the coupling mutually affect each other, and constitute a self sustaining organization in the domain of relational dynamics" (p. 2) (see also De Jaegher et al., 2010). Differently from them, when referring to *Dynamics of interaction* we take interaction between an individual and an inanimate object to be possible, where the co-researcher understands the inanimate object as an autonomous agent. However, we share with them the idea that "if [in the experience of the co-researcher] the autonomy of one agent is dissolved, because one agent is the sole regulator of the coupling and the other is just co-present, this is no longer interaction in the strict sense" (Fiebich & Gallagher, 2013, p. 2).

Exchange.

Description:

Exchange is a subcategory of *Dynamics of interaction* that refers to the co-researcher's experience of dynamics of exchange between self and world, where the self is perceived as giving (more or less actively and volitionally) something to the world, and/or vice versa. The *Exchange* can take place through a specific element: in other words, a specific element in the experiential field of the co-researcher can represent the object of the exchange between self and world.

Examples:

Consider this description of how cr. Cedar, during his dissolution experience, experiences an exchange of warmth between the sun and him, that in further phases of the episode leaves space only to the experience of warmth:

> (42) It seems that having more of this openness or friendliness, would also… establish a channel either where I'm also something directing towards the sun or where kind of we don't need a channel. (…) What happens also is that I feel lighter. (...) In all of my upper body, and less dense. More permeable. (...) As if these forces, that then spread through my body, *leave* space for the world, to get inside of me.

> And what I was there, can get more outside the world. It's like, it creates exchanges, it creates… (...) At one point I can't say anymore that it's me giving the sun the warmth and the sun giving me the warmth, it's just like, it's warmth. (DE_C)

Similarly, in her dissolution experience cr. Maya experiences an exchange between her body and the sound of a waterfall:

> (43) I totally feel [the sound of the waterfall] bodily, it feels like it would mix with my body, and that sense of my body is reduced. (…) When it overwhelms me, this sound would be mixing with my body, and it feels like part of me would go to this sound outside of me, part of this sound would come inside me, in kind of waves. (…) My body goes out, and this sound of water goes in. (...) I can't control it, I can't do anything about it. (DE_F_1)

Comments:

Often, dynamics of *Exchange* lead the co-researcher to experience solely the quality of the exchange or of its object, and not anymore the actions, forces, or directionalities that constitute the exchange (e.g., as it happens in (56) with the warmth). *Exchange* has to be distinguished from *Mutuality*. In the latter, two actions are always exerted, contemporarily, one from the self to the world, and the other to the world to the self. However, in *Exchange* this is not always true: for it to subsist, it is enough for a movement to occur either from the self to the world, or vice versa, and if both directions are present, they do not necessarily take place at the same time. Also, *Exchange*—differently from *Mutuality*—involves a passage of something from one of the two realms to the other. Furthermore, *Exchange* has to be distinguished from *Joint action*. In *Exchange* the action(s) are experienced as creating a dynamics of trade between self and world, in either or in both directions. Instead, *Joint action* does not present such a characteristic, but—differently from *Exchange*—it refers to an action, perceived as being a single one, exerted by both self and world. Finally, *Exchange* has to be distinguished from *Element traversing the boundaries*. While in *Exchange* the focus is on the dynamics of trading, in *Element traversing the boundaries* the focus is on the specific element moving from the world to the self and/or vice versa.

Mutuality.

Description:

Mutuality is a subcategory of *Dynamics of interaction* that refers to the co-researcher's experience of dynamics of mutuality between self and world: while the self exerts a certain action or force on the world, the world does the same on the self. The two actions

or forces are therefore of the same quality or nature, but are exerted in opposite directions, and contemporarily.

Examples:

cr. Morella reports on how, during her episode of dissolution, she simultaneously experiences to hold and be held by space:

(44) I was just holding this space – I feel myself almost like lying on this space, letting myself being held by it but also holding it, sort of like holding this but really gently, and there is also the feeling of at the same time being held by it – for example when you're in the ocean or the sea and you just let yourself be carried by the water, that kind of feeling, but I'm also doing the holding. (...) My spine is the holding of the darkness and the thickness, and at the same time there is no effort required, and there is this feeling of still being supported in a way, but it's mostly just a feeling of – not a bodily feeling, just a feeling of being held by something. I mean, not by something, just the feeling of being held. (...) It's almost like… *trust*, as well. (...) It's like a feeling of holding, but it's very much like this trusting. (DE_A)

cr. Alienora describes her experience of influencing and being influenced by her niece:

(45) [I] had [the] feeling that I can influence the person next to me. (...) I have this realization that my emotions and behavior have some influence on her. But in the same way it's not just me having an influence on her, but also her, she was constantly (...) telling jokes, and stuff like that, she also made me feel a little bit playful, and relaxed, and like, losing myself a little bit in this playful moment. But I guess the point is that I felt a connection in a way that we were co-influencing each other. (dlE_E)

Comments:

Mutuality has to be distinguished from *Exchange*. In the latter, two actions are always exerted, contemporarily, one from the self to the world, and the other to the world to the self. However, in *Exchange* this is not always true: for it to subsist, it is enough for a movement to occur either from the self to the world, or vice versa, and if both directions are present, they do not necessarily take place at the same time. Also, *Exchange*—differently from *Mutuality*—involves a passage of something from one of the two realms to the other. Furthermore, *Mutuality* has to be distinguished from *Joint action*. The former refers to two different actions or forces—same in quality, but still separated and distinguishable. One is directed from the self to the world, and the other from the world to the self. On the other hand, *Joint action* refers to what is perceived as a single action or force exerted jointly by the self and (part of) the world. Although the co-researcher might perceive the two different sources, the resulting action or force is experienced as one, and it does not have two opposite directionalities.

Joint Action.

Description:

Joint action is a subcategory of *Dynamics of interaction* that refers to the co-researcher's experience of an action carried out jointly by them and one or more elements of the world—usually another person. Often the difference between the two (or more) agencies is not experienced.

Examples:

Consider the report on how cr. Morella experiences the sound that she is producing together with her boyfriend:

(46) I feel [the sound that we are making] taking up space around us. (…) I'm aware of [my boyfriend] making some sort of sound as well, and then [the sound he produces and the sound I produce] meet in this area, and here it's just this one sound that it's been produced. (...) I don't feel a difference between my sound and his sound, so it's sort of like the same thing, (...) that is felt like this dense thing in front of me and in front of him over here. (...) It's somewhere in the middle [between active and passive], it's almost like at first when we both started it it was like this effort a bit, that was needed to produce it, sort of like a push that was needed to, in order for us to make it come alive in a sense, but then as we both started it and as the sound started, it wasn't so effortful anymore, it was almost like you had to push a rock to a certain mountain and then just let it down. (...) You have to push it out, and then it just flows on a sense on its own. It just goes on its own. And after that I felt almost like an observer, but also with it. (...) It's not like I'm separate from the sound, I feel myself with the sound, but also I feel like I am also observing the sound. (dlE_A)

Consider the description of how cr. Rigoberto, during their dissolution experience, experiences the connection with the other people attending the concert with them:

(47) It's my behavior or someone else's, it doesn't really make a difference. (...) It feels a little bit like I act through everything that is happening. (...) If I move, the people around me will also move, this way or the other way, or like, if they move, I will also change the way I move. (...) It's like this kind of synchronization with everyone around you, that makes it feel like what you're doing is what everybody else is doing, and the other way around. (...) [The] more that you get invested in the experience, the more it feels like it's going on simultaneously, and not like, *reacting* to what other people are doing, it's more like, acting like one big blob. (...) You get into the rhythm, you get into the groove, and then… At a certain point, if you're long enough in the groove, you start to *not feel* the groove anymore, you're just *in* the groove. You're just dancing, and you're not thinking about dancing anymore. (...) I feel like this connection goes in both ways. (...) It's not anything that I see, or anything that I could locate. It's really like an overall feeling of connection. (...) Maybe the whole is like, the experience of *synchronization*. (...) It's like, I'm experiencing all the relations between things, [and not] things themselves. (...) It feels like a dynamic-shifting thing. Where… you cannot really tell apart who started what, there is no sense

of causality anymore. It's not like *I'm* doing something, someone is reacting to it, someone else is doing something, and I'm reacting to it, but it's just like, everybody is *in interaction*. (DE_D)

This is the description of how cr. Helena experiences her and her mum's movement during the daily life experience she reported on:

(48) The movement felt like it was a general… So, because I was moving, my mum was moving, and the conversation was kinda moving, everything felt like it was moving, so the movement felt external in a way, even though my body was kinda part of it, 'cause my body had this sway and it was moving, but I felt like there was just the general movement [giggles], like atmosphere, kinda. (...) Almost like a… The atmosphere when you're dancing, so when there's like a dance, and a lot of people are dancing, but more of like a partner-dance thing. And you just have this dynamic of people moving together, and you just kind of feel this movement, you're part of the movement, but it's not your movement, if that makes sense. (...) The movement didn't feel completely like a… third independent element. So there was a degree of dependence, but also a degree of, kind of, independence. (...) It didn't feel like a completely different third entity, but also it wasn't completely constituted by what I was doing. (dlE_H)

Comments:

The action itself, or its product, can come to be experienced as a third, independent element, that may as well have influences on the actors. *Joint action* has to be distinguished from *Exchange*. In *Exchange* the action(s) are experienced as creating a dynamics of trade between self and world, in either or in both directions. Instead, *Joint action* does not present such a characteristic, but—differently from *Exchange*—it refers to an action, perceived as being a single one, exerted by both self and world. Furthermore, *Joint action* has to be distinguished from *Mutuality*. The latter refers to two different actions or forces—same in quality, but still separated and distinguishable. One is directed from the self to the world, and the other from the world to the self. On the other hand, *Joint action* refers to what is perceived as a single action or force exerted jointly by self and (part of the world). Although the co-researcher might perceive the two different sources, the resulting action or force is experienced as one, and it does not have two opposite directionalities. It is postulated (De Jaegher et al., 2010 that in an interaction "relational dynamics [of the agents] acquire an autonomy of their own" (p. 441). For insights on the concept of joint action in phenomenology, see Fiebich & Gallagher, 2013; Pacherie, 2012; Salice et al., 2017.

Element Traversing the Boundaries.

Description:

Element traversing the boundaries is a subcategory of *Dynamics of interaction* that refers to the co-researcher's experience of dynamics of interaction between self and world that involve an element in the co-researcher's experiential field coming either from the self or from the world and breaching, or not respecting, the boundaries of the other realm.

Examples:

Consider the following excerpt, where cr. Morella describes how, during her dissolution experience, she experiences a pulsating feeling traversing her body boundaries, lessening them:

(49) [The pulsating feeling] goes everywhere, travels everywhere, and it goes through the space where I feel my body to be, it sort of just moves through it, and... sort of... loosens it, in a way. It's almost like the lines [that delineate where] I feel my body to be (...) become (...) sort of wobbly. I feel it not so well set anymore. (...) As this [feeling] pulsates [around the chest], I don't feel any... block. (...) Nothing slows the feeling down in this area. (...) [The pulsating feeling] makes this separation of my body sort of thinner and lessens it. (...) There was no separation. There was just something going through and coming back and going through and there was no sense of me here. (DE_A)

Notice how cr. Cedar experiences a greater delineation between themselves and the world because of the pressure that some abnormalities—mainly stones on the ground, where they are lying—exert on their back:

(50) Because I was focused on [the various abnormalities beneath my back], as them being something unwanted, there was a bigger distinction between them and me. (…) A sense of delineation between me and the world strengthens by feeling these abnormalities. (...) The delineation between me and the world, the *border* between me and the world, was stronger *only* around the spots where I felt the abnormalities. And not, for example, where my stomach was. (...) So the border between me and the world, is actually… distributed unequally. It's stronger where I feel the abnormalities. (DE_C)

cr. Maya reports on how, during her dissolution experience occurred while meditating, the breathing seems to traverse the boundaries of her body:

(51) [The breathing] went *through* my back. Usually [while breathing] you feel (…) [where the abdomen ends when it] goes down, [and] where it ends when it goes up. And here it started to dissolve, [my breathing] went down, behind behind behind, like behind my back, out of my body. (…) So also the movement of the abdomen in a way (…) goes beyond the boundaries of the body in the back. (…) It's like this movement [of breathing] out would not end! It would not end with my body! It goes outside of my body! (…) It just feels like getting… lost in some… other dimension. (…) It comes from the outside,

> then it goes inside, (…) it can go more inside, and [then it] can go more outside, so it's like just this mingling and outside and inside, it's a constant changing between inside and outside. (DE_F_2)

Comments:

Although not always, the element at issue is often understood as a disruptive, antagonistic element. The subcategory *Element traversing the boundaries* must be distinguished from *Exchange*. While in *Exchange* the focus is on the dynamics of trading, in *Element traversing the boundaries* the focus is on the specific element moving from the world to the self and/or vice versa.

Inside Equal to Outside.

Description:

Inside equal to outside is a subcategory of *Dynamics of interaction* that refers to the space inside the self boundaries and the space outside (the world, or part of it) presenting themselves in experience as having the same qualities.

Examples:

Notice how, in this report on her dissolution experience, cr. Morella describes how feeling the inside and the outside of her body boundaries as having the same quality brings her to identify with both:

> (52) I feel like I am in my body and it's almost like that thickness is both outside and inside the body, sort of like there is no sense of my body being a different quality than the space around it. (...) There is this dark thickness that is felt outside and inside, and there is this feeling of the body and where my particular limbs are located. (...) It feels like the *inside*, let's say the inside of the body, and the *outside* space, are the same. (…) But there is almost like *a line* in between. Sort of like, there is darkness, but then someone drew like a white … dotted space in between. (…) [There are] lines, and that feels like the body, like the area where the body ends. (DE_A)

Comments:

Often, the boundaries between inside and outside correspond to the bodily boundaries (see *Bodily qualities*; see also Abram, 1996/2017; Fuchs, 2005).

Drag.

Description:

Drag is a subcategory of *Dynamics of interaction* that refers to the co-researcher's experience of the world attracting their attention, dragging them spatially, or imposing some kind of movement on them.

Examples:

cr. Gianpaolo reports on how, during a dissolution experience occurred in a church, he experiences a spatial drag that influences both the actual movement of his body, and that of his attention:

> (53) There is this sense already that I'm spatially being drawn towards something. (…) [The symmetry of the room] draws me more to the left. So I kind of start moving there. (…) The drag is… It decomposes to vision and a bodily thing, but in reality this is one experience. It feels like my body is automatically walking in some direction, and then in the same direction my visual attention is - it's not (...) really a narrowing of attention, it's more that something becomes more there in my awareness. (...) It feels like the space *carries* me. (…) I'm no longer, you know, pulling myself forward, I'm no longer controlling my movements. What I'm doing is I'm in the visual space and it feels like the visual stuff, the visual field of my experience is kind of guiding my movement. (…) I like the word *arc* to describe it, because it feels like there is this… thing in space that kind of… magnetically pulls my attention to it and it goes to it, and then it lands to the painting. (DE_B_1)

Comments:

Drag is similar to *Affordances*, insofar the world urges a movement or a change in the attitude and/or behavior of the co-researcher. While in *Affordances* this takes the form of an invitation, however, in *Drag* it takes the form of an imposition. *Drag* often relates to *Sense of control (activity/passivity)*, insofar while the world drags the co-researcher, usually the co-researcher experiences to be less in control, and more passive rather than active. *Drag* can bring to a *Shift of perspective*: namely, the co-researcher might perceive the drag to lead them to a state in which they experience a different perspective from the one experienced before. Nave et al. (2021) found that one of the techniques adopted by their co-researchers to get to a state of dissolution involved "turning attention outwards" (p. 9). We think that the functioning of this technique, especially its immediate outcomes, are similar to those of *Drag*.

5.1.5 Attribute Categories

Awareness.

Description:

The attribute category *Awareness* refers to the co-researcher's experience of being—or not—more or less aware of a certain element or dynamics: whether, and how explicitly, strongly, and/or clearly, that element or dynamics is present in their experiential field. In other words, *Awareness* assesses: whether a certain element or dynamics is present in the co-researcher's experiential field, whether or not the co-researcher is consciously aware of its presence; how strongly so, and how clear the element/dynamics' features are in the co-researcher's experience.

Examples:

In this excerpt cr. James reports on how, during his dissolution experience, he experiences a pull that makes his body move back. As the body moves back, cr. James loses the awareness of it:

(54) I wasn't so aware of my body at that point. (…) It's like, as it moves back, my body... Like I'm not aware of a body anymore. If that makes sense. (DE_G)

cr. Helena describes how, during her daily life experience, she is not very much aware of certain parts of her body:

(55) For example, my left arm, I know that it was moving, but I don't know what it was doing precisely. So, there are definitely parts of my body I'm not super aware of, at least in terms of what they are doing exactly, like I could give you a rough… idea of the kind of movement, what kind of thing they were doing, if they were static, or if they were moving, that kind of thing, but. (dlE_H)

Comments:

Awareness can refer to *Self* categories (in particular, it often refers to *Bodily qualities*), as well as *World* and *Interaction between self and world* categories.

Sense of Control (Activity/Passivity).

Description:

The attribute category *Sense of control (activity/passivity)* refers to the co-researcher's experience of exerting - or not - control, and/or of being more or less active or passive. This experience can be associated with a specific element or dynamics in the co-

researcher's experiential field, or it can be perceived as general (e.g., as a general sense of being in control, without a specific element that this control is exerted over).

Examples:

In this excerpt, cr. Cedar reports on how, while programming, he experiences to be more passive on the scale between active and passive:

(56) It's more of a scale, than a binary [between active and passive]. (...) I feel that I'm more passive than active, like more waiting for answers than not, but I can sort of nudge it, in a way. Sort of nudge the sphere [that I am experiencing as representing the knowledge about programming]. (...) This gesture of doing the nudge, does something to the process of searching for an answer, of this problem-solving process. (dlE_C)

Sense of control (activity/passivity) can refer also to *World* categories. Notice how in this excerpt Alienora reports on not having control over the body of her boyfriend:

(57) I have this feeling, like there are parts in which I cannot enter, of the other person. For example there are experiences that… Or let's say, mh! It's a part of the environment, and part of the situation, that is capable of acting outside of my control. And I experienced that in a way that I know that I cannot move and act with the other body, which is the other person. (...) The environment I'm referring to is the part of the environment that is inhabited by the other person, which is literally the other body. (DE_E)

In the following excerpt, cr. Maya describes her experience of absence of control at the peak of one of the dissolution experiences she reported on:

(58) There's not even *a thought* about control, there's not even a *need* of control, it's not like… *anything*, even *close* to… I don't know, any sensation, or idea, of the control, just *far* from there, just, control is like a different universe. (DE_F_1)

Comments:

Sense of control (activity/passivity) can refer to *Self* categories, as well as *World* and *Interaction between self and world* categories. We found that often the presence of control and activity defines what is self rather than world, where the co-researcher often identifies as *Self* elements that they experience control over. *Sense of control (activity/passivity)* strongly correlates with the concept of *sense of agency*$_g$ as defined by Gallagher (2000), that is defined as following: "the sense that I am the one who is causing or generating an action. For example, the sense that I am the one who is causing something to move, or that I am the one who is generating a certain thought in my stream of consciousness" (p. 15). Nave et al. (2021) develop a category named *sense of agency* that resonates with our *Sense of control (activity/passivity)*:

> The sense of agency (...) is [typically] defined as the sense of being in control, causing or initiating an action. Although often it specifically relates to the ability to control the body, in a static meditation as explored here, it may either refer to a feeling of unfulfilled potential to move, a sense of effort or the ongoing ability to control attention and deliberately manipulate mental processing (sometimes termed attentional and cognitive agency). In this context, the category reflects the participants' sense of agency ranging from being in deliberate and continuous control of attention, to complete passivity and letting go of control. (p. 9)

These are the states of sense of agency that they found across experiences of dissolution: "active (continuously); responsive/intermediate (task maintenance); passive (non-doing)" (p. 8). Karl Jaspers (1913/1963) argues that the sense of agency is one of the characteristics of ego-consciousness.

Sense of Ownership.

Description:

The attribute category *Sense of ownership* refers to the co-researcher's experience of being—or not—the owner of a certain element in their experiential field.

Examples:

In the following excerpt, cr. Cedar reports on experiencing ownership over the lower part of their body: (59) "All the parts that are felt in the lower part [of my body], I had ownership over, yeah. Or I felt that it was mine" (DE_C).

Observe how, in this excerpt, cr. Maya describes how she experiences the breathing to be *hers*: (60) "It feels like my movement. It feels like my breathing. But then when it goes out in these other layers, it feels like being interacted with something else" (DE_F_2).

Similarly, this is how cr. James describes his movements: (61) "The movements are mine, they come from me, there's nothing separating me from my movements" (DE_G).

Comments:

Sense of ownership can refer to *Self* categories, as well as *World* or *Interaction between self and world* categories. We found that often the sense of ownership defines what is self rather than world, where the co-researcher often identifies as *Self* elements that they experience ownership over. Gallagher (2000) understands the sense of

ownership as "the sense that I am the one who is undergoing an experience. For example, the sense that my body is moving regardless of whether the movement is voluntary or involuntary" (p. 15). In our definition, this is not enough.

Sense of Identification.

Description:

The attribute category *Sense of identification* refers to the co-researcher's experience of identifying—or not—with a certain element in their experiential field.

Examples:

Notice how cr. James reports on how in his daily life experience he identifies with his body: (62) "I do feel like I'm that body. (...) I think me and my body are just the same thing. (...) I don't know if there's a difference, it feels just like one, one body, one me" (dlE_G).

Always cr. James describes how, during his dissolution experience, identifies with the universe, the void: (63) "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. (...) [I'm] feeling like I'm the void, the void is kinda this nothingness" (DE_G).

Comments:

An element or dynamics that the co-researcher identifies with is understood as *Self*. This can happen with elements or dynamics that were previously understood as *World* (e.g., see (77)). We define *Locus* as the mental location and/or element or dynamics in the co-researcher's experiential field that the co-researcher identifies with *the most*. Not all the elements or dynamics that the co-researcher identifies with are understood as *Locus*, for we found that the co-researchers can experience a more or less strong *Sense of identification* over different elements or dynamics of their experiential field.

Sense of Normality.

Description:

The attribute category *Sense of normality* refers to the co-researcher's experience of their experience being more or less normal, that is, more or less close to how they usually experience.

Examples:

Consider how cr. James reports on a sense of his experience being normal while describing his daily life experience, and on a sense of his experience being different from normal while describing his dissolution experience:

(64) I can understand [this experience] by comparing it to other experiences. But it's hard to describe it just in itself, because it just feels kinda… normal. (...) I guess that there are different kinds of normal, but they're all within this range of, you know, you're just used to this body, and the position it takes, and have some sense of proprioception. (…) So, it's just kinda regular. Here it is more the discomfort, other times it might be more relaxed, whatever. (…) It's just… (…) It's normal! [Laughs] (dlE_G)

(65) It's like an absence of all the bodily senses you take for granted, (…) I don't know if it's just an absence or presence of something new. So, I don't know if it's just an absence of all the bodily things that we take for granted, like having some kind of proprioception, or a presence of a new feeling. (…) It's so hard to say, because a lot of this experience is like, changing the way you normally experience and describe things. (...) It's just like boundaries, in the sense that you don't realize what they are until they're gone, it's like things you take for granted, and then when it diminishes, it's like... (…) It's like feeling that absence, feeling the absence of what you thought was always there. (DE_G)

Similarly, cr. Alienora reports on how she experienced her dissolution experience as "different":

(66) [Before the dissolution experience] I wasn't explicitly aware of [the borders between my body, my boyfriend's body, and our room], they were just something there in the background that I normally act according to. (…) It is something that I may not be aware of, but it's part of the way I understand my body in the environment, I know how to move it, and how I *can* move it, and I imagine where my hand is, and so on. So only as I didn't have that anymore, I realized that this is something that I experience in everyday life. Or maybe not everyday life, but like, in normal situations. (...) So [during the dissolution experience] it felt like *very different* than how I normally feel. That's why I also knew that this moment was so much different. (...) To me, at that moment, I know it felt like it was a step further from normal conscious experience. (...) I wasn't thinking about the normal experience, but I was completely immersed in the experience I was having, and I knew immediately that it was different than normal. (...) It wasn't explicitly compared to the other normal experience. (...) How did I know that it was different? I just knew! I mean, definitely one of the main triggers was not being able to move my body. (DE_E)

Comments:

Often, the elements or dynamics that the co-researcher experiences as normal, usual, go unnoticed. In other words, the co-researcher is not explicitly aware of their presence in experience. As stated by Ludwig Wittgenstein (1953, p. 50), "the aspects of things that are most important for us are hidden because of their simplicity and familiarity. (One is unable to notice something—because it is always before one's eyes.)".

Number and Coherence of the Self-Elements.

Description:

Number and coherence of the self-elements is a special attribute category referring to the experience of the presence of a certain quantity of self-elements, and/or of their being coherent with each other: in other words, to which degree they are experienced as being aspects of the same entity, and/or if they occupy the same space.

Examples:

cr. Gianpaolo describes how, during the interview, there are *a lot of different aspects that he identifies as himself*, and that *anchor together*. During his dissolution experience, however, some of the elements that usually form his sense of self disappear, and the coherence between them is lost:

(67) Right now, as I'm sitting here, there's a lot of different aspects that I identify as me. One is this location from which I'm observing, from which my vision is happening. (...) There are also various bodily feelings, which are not quite the same as this point of view. They're located elsewhere in space. But then there is also this really complex non-Euclidean space kind of behind me. (...) My thoughts are arising out of that, and there's like a bunch of intuitive understanding here. (...) But then also on a different level, there is like this thing where I can say "well, you know, this morning I woke up in my bed" and then, you know, I feel that there is a familiarity with that statement. And I can unravel it in different directions and get like a story of me. All of this, somewhere in between, this is me, right. What I identify as a self. (…) So what I'm trying to say is, all of this seems to occupy the same… field of experience. It's not entirely overlapping, (...) but they anchor together. (...) Metaphorically they have the same center of gravity. [On the other hand, during the dissolution experience] there was a complete separation between the visual thing, and then the thoughts arising. (...) I could have attended to that experience, as if those were two me. (DE_B_2)

On the other hand, in this excerpt cr. Cedar reports on how her point of view and locus correspond with each other:

(68) I think the point of view and the self are here in the same point. Also because (…) I cannot look at myself from another point of view to make sense of the experience. (DE_C)

Notice how, however, during the same episode cr. Cedar experiences a self-element, specifically his experience of his body, not being present anymore:

(69) First I can say that the self went out of the body. But at some point, I can't say anymore that self is outside of the body, because it doesn't make sense to say that anymore. (...) Because there's no more body, in a way. (DE_C)

Comments:

Number and coherence of the self-elements refers to *Self* categories. The attribute *coherence* of *Number and coherence of the self-elements* resembles the quality addressed in *Unity of the world-elements*, but while the first refers to self-elements, the second refers to world-elements. In line with the sense of coherence addressed by *Number and coherence of the self-elements*, Karl Jaspers suggests that *unity* is one of the characteristics of ego-consciousness (Jaspers, 1913/1963).

5.1.6 Special Categories

Perceptual Bubble.

Description:

Perceptual bubble is a special category that refers to the experience of being enveloped by a spatially limited area with different qualities from the area outside of it.

Examples:

Consider how cr. Gianpaolo describes the perception of a bubble had during his daily life experience:

> (70) This overall bubble in which we exist and in which the conversation is happening. (...) This physical space which right now is quite large because of how far we're standing, (...) in which we are now hanging out and having a conversation. (...) [There is definitely difference in density from the inside to the outside of the bubble.] If you imagine a heat diagram, it would be the densest kind of from my shoulders and in this three-dimensional arc towards him between us. The distance is kind of very loose and there is this very present nothingness between us, this weird distance that I now maintain, and then beyond the bubble again it gradually dissipates into nothing, so there is this thin thick thin again. (dlE_B)

In the following excerpt, cr. Maya reports on the sense of being in a bubble during the initial phases of one of the dissolution experiences she reported on:

> (71) I'm narrowing a *huge* amount of information, and really just focusing on [the pavement, and on my legs]. (...) All the other things, they don't disappear, but they're very, very much in the background. (…) I'm like in a bubble. (...) I understand that there is an environment around me, but it's just something, I don't know, unimportant, it is somewhere in the background, but I cut myself out of the environment. (…) [The bubble] is a metaphor. But maybe… But I can feel a kind of boundary between me and space around me. (...) Whatever is [inside the bubble], I have good notion and perception of it, and the other's just (...) *very* blurred. (...) Actually visually I don't even see it, [the] hearing is blurred. (…) I'm more

aware of [what is inside], it's more solid, it's structured, it's clear, and yes, all around is vague, blurry, it's more like transient, in a way. Totally different. (DE_F_1)

Comments:

Perceptual bubble usually involves, among others, the categories: *World clarity* and *Number and coherence of the self-elements*. The elements inside of the bubble present themselves to the co-researcher's experience more clearly than the ones outside and as distinguished one from the other. On the other hand, what is outside of the bubble is often perceived as a blurred unity. In *The Hidden Dimension*, Edward T. Hall (1966) discusses the notion of *personal space* (involving the experience of subjective dimensions that are surrounding us and of physical distances that we aim to maintain), a concept that resembles our *Perceptual bubble*. Oblak et al. (in press), in their phenomenological investigation of memory tasks, describe a kind of coupling with the task that resonates with *Perceptual bubble*. This is "experienced very apparently, as a sense of an enclosed, private space between the participant and the psychological task" (p. 19).

Shift of Perspective.

Description:

Shift of perspective is a special category that refers to the co-researcher's experience of a change, more or less abrupt, in the way they relate to the world (i.e., in their point of view on the world).

Examples:

cr. Gianpaolo reports on his experience of the magnitude (i.e., the salience in his field of experience), of a painting becoming greater than the one of the rest of his surrounding environment:

(72) The magnitude of the painting gradually but quickly becomes greater, and the magnitude of the rest of the room becomes smaller. (…) As the magnitude of this blue and yellow and golden and gray increases, it doesn't just feel like it increases in my, you know, in this field in front of me that I identify as vision, but it feels like (…) the magnitude goes beyond that and it starts to encompass my inner mental space and my body. (DE_B_1)

cr. James, while on mescaline, experiences a pull that changes his perspective radically:

(73) At a certain point it wasn't about the exterior world anymore, but I was being pulled out to another space and I don't think I was seeing anything outside, I don't know if my eyes were closed or I wasn't

> focusing on that side anymore. (…) It's like a total perspective shift. From very quickly being one body with the sense of what's around you, to being in a sense of hierarchy in the world, to like... To having a position of vantage point that's not even one fixed perspective, but something broader. (DE_G)

Comments: *Shift of perspective* is often associated with the subcategory of *Dynamics of interaction*: *Drag*, in the way that *Drag* often brings to a *Change of perspective*. Namely, the co-researcher might perceive the drag to lead them to a state in which they experience a different perspective from the one experienced before. *Shift of perspective* usually involves, among others, a change in the experience of *Point of view/control*.

Sense of Shared Mineness.

Description:

Sense of shared mineness is a special category that refers to the co-researcher's experience of the sense of mineness as being shared with one or more other people, or elements or dynamics, present in the co-researcher's experiential field. In other words, the fundamental experience of perceiving one's experience as presenting itself immediately as the experience of the co-researcher and of other subject(s) of experience.

Examples:

cr. Alienora reports on how, during her dissolution experience, she experiences a sense of shared mineness with her boyfriend:

> (74) At that moment, it started to feel like we shared the same consciousness. (...) This small space that I usually experience as just being my private space, at that moment it was normal that it wasn't just mine. (...) [In the daily life experience (dlE_E), with my niece I had this] feeling I usually have when I'm with other people, that there are some thoughts that aren't necessarily expressed or perceived by the other person. And this is the difference of the dissolution experience, where I was like kind of comfortable with the fact that those thoughts aren't necessarily just mine. (...) I was certain that we both have the same thoughts and the same feelings and the same experience. (...) All of it felt like it was in the shared space. Everything was kind of outside in the literal environment. (...) When I said [that the thoughts] weren't private, this might not be exactly right, because it still felt private. But even though it was shared, it was private, because it was still private within the space where we were being. And the whole space was private and ours. (…) They were private, but still shared. (...) The whole experience felt like it was mine. But [it wasn't] just mine. It was ours. So, everything I experienced, the brightness, the euphoria, all of the thoughts from before, were mine, but they were also his. (DE_E)

The same happens to cr. Helena, with her boyfriend of the time:

> (75) It feels like there's not perspective-taking involved. (...) Basically it kind of feels like I don't have to switch between him and me, to understand… the experience. (...) Of course visually and everything

> we have a different perspective, but it feels like the experience, it wouldn't matter if I'm in myself or in the other person. We are both feeling this. (...) So that's just one and the same thing, that we're both experiencing. (DE_H)

cr. Rigoberto, during a concert, feels like he is sharing the experience with all the other people there:

> (76) It feels like my experience is part of the whole scene, not part of me perceiving stuff. (...) It cannot really tie to my experience, it just seems like a big experience, one big experience. (...) It feels like my experience. And that feels like I share my experience, or like… My experience *is* shared with other people. And, yeah, it always feel like mine!, [not] separated from me. (...) [Sighs] I don't know, it's an experience [laughs], it's an experience and therefore feels like mine, because… That's the only way I can experience, through *me*. (...) It feels like everybody is experiencing… the same thing. But everybody is still *experiencing* it. You know?, like… You're connected in one big thing, but [they're] still like, individual experiences. (DE_D)

Comments:

Sense of shared mineness, among the other categories that it occasionally involves, is a specific configuration of *Sense of mineness*. *Sense of shared mineness* does not refer to the simple experience of having multiple experiences of the same time, space, and phenomena, but rather to the more fundamental experience of perceiving the experience as being immediately given to more than one subject of experience. Alessandro Salice, Simon Høffding, and Shaun Gallagher (2017) discuss the hypothesis of the presence, in the case of shared actions and intentionalities, of a "*plural* pre-reflective *self*-awareness" (p. 199), a concept that we believe resembles our *Sense of shared mineness*. (See also the Husserlian concepts of *common mind* (*Gemeingeist*) and *personality of higher order* (*Personalität höherer Ordnung*); Husserl, 1950-2020).

Trusting the World / Letting Go.

Description:

Trusting the world / Letting go is a special category that refers to the experience of: the attitude of approaching the world with trust, and/or recognizing the world as trustworthy; and giving up on, or relaxing, the control they were previously exerting. Both aspects can occur more or less explicitly and more or less volitionally.

Examples:

In this excerpt, cr. Morella describes an *I can let go* feeling, accompanied by a sense of trust and a welcoming attitude, that she experiences during her episode of dissolution:

(77) This is sort of like a release, [an] "I can let it go" feeling. (...) [To let go] I think I sort of feel like I moved back, (…) there is a feeling of moving back just a slight little bit. (…) [The light is] coming closer because I'm allowing it to, I'm in this space of… *welcoming* it, in a sense. (…) It's a bit like *trust*, like *trusting* in the… guided meditation. Also trusting in myself. (…) There is this component of trust, but there is also this… this *allowing* it to happen, allowing the white light to come. It's almost a bit like *opening* the boundaries, or like this area where I feel my skin ends and the space begins, it feels as though I allow this to… open a bit. (...) I have control, I feel. It's not like I am controlling the white light, I am controlling my… *attitude* of how I welcome it. So I am controlling, in a sense, how much I let in, or how much I open up. (…) I have agency about that, about allowing how much I let myself open up to the possibility of, in this case, the white light. (…) It's got this… *trusting*… almost open-loving quality to it. (...) More *loving*, in a sense, more allowing, more… more open. (…) [Trust is] not towards anything, it's like the trust is the… space. (…) Trust is like also a quality of the space. (...) Also yeah, the trust is like a *mood*, I don't know how else to call it right now. (DE_A)

cr. Cedar reports on their experience of *trusting the world*:

(78) I have to perform a gesture to overcome [the void I am perceiving]. (...) I have to perform this gesture, to feel… the friendliness of the world? (...) [Deep inhale] If I start looking into this, *this* is the start of the dissolution experience. (...) Before the gesture, no dissolution of the self. After the gesture, the dissolution of self is happening. (...) The gesture [changes my experience of the warmth] from passive to active. (...) I make it active. (...) What happens then is basically… [Sighs] It's *trusting the world*. (…) It's what I decide to do, *very* much so. Very much so. (...) I have to let myself… feel safe. (…) The decision is… some kind of *strength*. Some kind of strength in me, or bravery in me, to trust the world. (…) So, I have to do more control to feel less control. (DE_C)

cr. Alienora describes her experience of *letting go* during her episode of dissolution:

(79) I am the one who lets the perception change, but once it changes, I am not no longer that active in changing it. I think the best metaphor for that is, I opened the window and I was the one who did the motion and action of opening the window, but what comes inside is no longer under my control. (...) I guess the action is to let the action take place. The motion of relaxation and letting go is what allows the things to happen by themselves. (...) [I think that I do it actively,] at least a little bit at the beginning. But [then] I let it happen. (...) A bit of an effort, to *not* put extra effort, if that makes sense. Deliberately not focus, but not focusing is still, at least in that case, a kind of action. It's not the emptiness of the action, but actively not doing. (...) It's not focusing, therefore it's, I guess, relaxing, letting go. Do you know when you focus on something? You have a feeling like you move your attention a little bit forward. This feeling was the opposite, instead of moving attention and gaze forward, you move it back. (...) [It feels like] having control over not having control. (DE_E)

Comments:

Trusting the world / Letting go usually interests, among others, the categories: *Emotional qualities*, *Attitude*, *Atmosphere*, and *Sense of control (activity/passivity)*. *Trusting the world / Letting go* usually presents pleasant emotions (*Emotional qualities*). This category often involves a shift from an experience of being more active to an experience of being more, or totally, passive (*Sense of control (activity/passivity)*). The *trusting the world / letting go* can be experienced as a *gesture*, more or less volitional, and more or less explicit. The co-researcher can experience a sense of control and activity in it. Jeffrey M. Courtright (2013) describes how trust can be experienced as an atmosphere "that constitutes a fundamental way of being in relationship with the world as a whole such that one feels supportively upheld, vulnerably open, orientationally attuned, and demanded in relation to this world, with the overall effect of feeling at home in it" (p. 39). Furthermore, *Trusting the world / Letting go* resembles Nave et al.'s (2021) category *attentional disengagement (letting go)*.

Core Self.

Description:

Core self is a special category that refers to the experience of an element or dynamics in the experiential field of the co-researcher which is experienced as the most basic part of the self. In other words, a core is an entity in the co-researcher's experiential field that presents a few self-elements (usually a location, a sense of activity, a sense of identification, and a sense of mineness), when the other self-elements have disappeared, or not identified as self anymore.

Examples:

In this excerpt, cr. Rigoberto describes how they perceive that their experience have a core, with which they identify to a certain extent and that appears as more stable than other elements in the experiential field:

> (80) [Deep breath] I think there's some core!, of my experience, and from this core, everything radiates outwards. (...) I *cannot* really localize [it]… It's somewhere in me, but it also doesn't move. This ball of light changes with my experience, but this… this core stays the same. (...) It feels a little bit like a point *in* me, but also then it doesn't really feel like a point, it doesn't really feel localized. It's more like the frame of my experience. (...) Something I relate my experience to. (...) Like, I cannot imagine… to have an experience, whatever kind of experience, without it. (...) [Deep breath] I identify with it, to a certain

extent [sighs]. But also I'm aware that it's not all there is to *me*. (...) Yeah, [it is something fundamental to experience]!, some kind of ego, or like, minimal self. It's very hard to describe. (DE_D)

cr. Maya reports on how, at the peak of her dissolution experience had while meditating, she identifies with the observing:

(81) The most thing that it seems like me (...) [is the] observing. (…) But it also doesn't… feel like strongly me. (…) It has a different quality of me than it had for example me and the body at the beginning. There is… part of me in a way. (…) I can sense a little bit that it's different than the environment around. (…) It's distinctive in a way. (...) [The identification with the fact that I'm observing] is a very different identification than with the body before. [That] was very much more solid, this is just like… It's me… I know that's me because *I'm* deciding in a way. (…) At a certain point I feel just this (...) observing. (DE_F_2)

In a similar way, cr. Helena identifies with the following—observing—the expansion that she is experiencing:

(82) I feel like I'm mainly just following this expansion. And because there's something following this expansion, I feel like there must be me somewhere. [Laughs] But I wasn't experiencing myself. (…) I'm at the end of [the expansion], so I'm, you know, following… [the expansion] *out*, and it just goes out and out and out, [giggles] and the volume becomes large. I don't experience myself as a reference point. (DE_H)

Comments:

Core self usually involves, among others, the categories: *Sense of mineness, Locus, Sense of control (activity/passivity), Sense of identification*, and *Number and coherence of the self-elements*. The elements identified by the first three of these categories are often the only self-elements remaining in *Core self*, and they usually cohere with each other, forming the single entity that is a core self. *Core self* is often perceived as the most stable part of the self (e.g., see (100)). Even though the name of the category reminds of Gallagher's *core self* (Gallagher, 2000) the two concepts correspond only partially. While Gallagher (2000) and Zahavi (2005) use the term *core self* as a synonym of minimal self, our *Core self* has *Mineness*, that is, minimal self, as its fundamental characteristic, but it is not limited to it.

State of Presence.

Description:

State of presence is a special category that refers to the co-researcher's experience of being in a non-dual state. Self and world are not experienced as two different entities or dynamics. The self is present in the experience only as a sense of mineness.

Examples:

cr. Gianpaolo reports on how, in one of his dissolution experiences, he experiences unity with the color red:

(83) [The colors] kind of replace parts of my awareness that I would identify as the location where I'm looking from, and my body, and my mental space. (…) The color becomes so strong in my awareness that it felt like there is no point of view or body looking at that, it just felt that there are these colors that are radiating and glowing and increasing in size for no one. (…) It didn't feel like I'm looking *at* something, there wasn't an I-it distinction anymore. (…) There was a *unity* with that, it wasn't as if I was observing the color. I was *experiencing* the color. (…) The richness of my life world got reduced to one thing of information, which is the color. (…) For a moment there's only the color. (DE_B_1)

cr. Maya, during one of her episodes of dissolution, experiences to be one and the same with nature:

(84) I couldn't hear any boundaries, I couldn't separate myself from anything around me, from this nature, (…) and I was all mixed in all that, and it was just all incorporated, and I didn't feel my body anymore! It was just calm. I didn't have any emotions, any thoughts, I was just flowing with (...) what was coming, just part of that, (...) I was just calm. (...) You know that is *all present*. (…) It is something, in a way, positive, but it doesn't really have any strong emotions, in a way it is quite neutral! It's just happening! It's just happening, and I'm just part of it, and I'm not even following it, it's just -– *I am* following it, but I'm not following [giggling] it! I'm not active, I'm just part of it. (…) [I don't have control], but then there's not even *a thought* about control. (…) It's like just… being what it is, just being the same. And it has nothing to do with me! It isn't me. And it doesn't matter. (…) Even when I'm observing, it's not action, from my part, (…) it's just like being part with all that. In a way it's so simple. It's just, not doing, absolutely not doing. (…) Nothing is needed, in a way. (…) It's just that it is what it is, like that. (…) It is as it is, and nothing more. There wasn't even the perspective, or timing, like, "nothing is needed", because just, it is like it is, and just, total presence. (DE_F_1)

Comments:

State of presence usually involves, among others, the categories: *Sense of mineness*, *Locus*, *Emotional qualities*, *Qualities of thoughts*, *Sense of control (activity/passivity), Sense of identification,* and *Directionalities*. Specifically, *State of presence* usually

presents the absence of a locus, emotions with neutral valence, the absence of a point of view, the absence of any thoughts, the absence of any control (or care about it), the absence of any directionalities. There is no sense of identification, and the only self-element present is a sense of mineness.

Wish/Need to Go Back.

Description:

Wish/need to go back is a special category that refers to the co-researcher's experience of an urge, often accompanied by unpleasant emotions, of going back to the usual way of experiencing. This often leads to an actual return to the usual way of experiencing.

Examples:

cr. Morella experiences a need to go back to her normal way of experiencing during her dissolution experience, occurred while meditating:

> (85) I'm in this circle and then there is like a wish, like this nag, or a need to come back to - not to stay in this. (…) [It's] like something that urges to come back and then that colors the entire space. (…) That need to come back sort of colors the entire space. (DE_A)

The same happens to cr. James. In this case, the *Wish/need to go back* is accompanied by unpleasant emotions:

> (86) There's a sense that I don't want that, it's too scary. (…) I get scared and I'm like, "uh fuck!", and then I pull out of it. (…) Very soon I'm back in the world seeing what's around me. (…) It's a feeling of scrambling, like kind of a frantic like "uh! no, fuck!, get away from that". Physically I don't know if [I] do anything. Mentally... I'm not sure what specifically I do, besides maybe just the fear in franticness itself is enough (…) to make me pull away somehow. (…) Actually the fear becomes active. Like the end of the fear becomes very active. Or at least is perceived as active. (…) Once the thoughts come, and the fear comes, then I get pulled out the universe and more into… me, myself, my body. […] Once the fear comes in, I'm like "Oh shit! Can I pull out of this?" But before that there wasn't really an awareness that I can pull out. (DE_G)

Comments:

Wish/need to go back usually involves, among others, the categories: *Emotional qualities*, *Attitude*, *Sense of control (activity/passivity)*, and *Sense of normality*. *Wish/need to go back* is often accompanied by unpleasant emotions like fear, and by an antagonistic and closed attitude. It can be experienced as more or less under the control of the co-researcher: *Wish/need to go back* can be experienced as a gesture, more or less explicitly

and more or less volitionally exerted. Furthermore, the wish or need to go back is often connected to the perception that the current way of experiencing is abnormal, strange.

6. Discussion

In the first subchapter of this section, *6.1 Daily Life and Dissolution Experiences*, we address our findings about the gradual nature of dissolution experiences, and about the possible intersections between daily life and dissolution experiences.

The second subchapter (*6.2 Structure of Dissolution Experiences*) provides an overview of our findings about the experiential structure of dissolution experiences, with a focus on the various phases of an episode of dissolution: initial phase(s), middle phase(s), peak phase, and final phase(s). Daily life experiences were found to be experientially comparable to the initial phases of dissolution experiences. Therefore, the provided description of the initial phases of dissolution experiences count for the daily life experiences as well. The discussion present in the second subchapter answers our first research question (*How are dissolution experiences characterized experientially, compared to daily life experiences?*).

In *6.3 Different Contexts*, the third subchapter of the present section, we discuss the similarities and differences between the investigated dissolution experiences that occurred in different contexts.

In the fourth subchapter, *6.4 Main Findings*, we present a table reporting on the various experiential elements that emerged from our data, and how they vary throughout the phases of a dissolution experience.

In *6.5 Self*, the fifth subchapter, we specifically address the findings about the experience of the self, answering to our second research question. A further focus is going to be given to the experiences of *Core elf*, *State of presence*, and *Sense of Mineness*, and later on to the experience of multiple selves.

6.6 Other, the sixth subchapter, addresses the insights that emerged from our data about the experience of the presence of other people during daily life and dissolution experiences.

In *6.7 Limitations*, the seventh subchapter, we present our reflections on the limitations of our study.

6.8 Further Studies, the eighth and final subchapter of the present section, contains our considerations on the further studies that might be carried out after ours.

Throughout the text, we use some numbers in brackets, in the form (n). They are meant as a reference to the corresponding excerpt from the transcript, reported in the *5. Results* section or previously in the *6. Discussion*.

6.1 Daily Life and Dissolution Experiences

In this subsection, we discuss how our data support the hypothesis of the gradual nature of dissolution experiences, and suggest that daily life and dissolution experiences can coexist.

We investigated eight daily life experiences (one for each co-researcher) and 10 dissolution experiences (two co-researchers reported on two dissolution experiences each, six co-researchers reported on one each) that occurred in different contexts. The experience of *Boundaries*—the organization of the co-researcher's life world with regard to the division between *Self*, *World*, and *Interaction between self and world*—is what mostly differentiates a dissolution experience from a daily life experience. Dissolution experiences are defined precisely on the basis of a faint, less clear, or absent sense of *Boundaries*. However, the definitions of daily life experiences and dissolution experiences are not mutually exclusive.

Our findings support the hypothesis of the gradual nature of dissolution experiences, as formulated by Dor-Ziderman et al. (2016) and Yaden, Haidt, et al. (2017). Yaden, Haidt, et al. write:

> These temporary mental states are proposed to be experienced along a spectrum of intensity that ranges from the routine (e.g., losing yourself in music or a book), to the intense and potentially transformative (e.g., feeling connected to everything and everyone), to states in between, like those experienced by many people while meditating or when feeling awe. (p. 1)

Comparably, we found different degrees of presence of the elements characterizing dissolution experiences in most of the investigated experiences. For example, two out of the eight daily life experiences investigated comply particularly well with the definition of dissolution experiences (i.e., they present a fainter or less clear self/world division):

a) cr. Morella, in dlE_A, experiences to be one with her boyfriend in the sound that they are producing together;

b) cr. Cedar, in dlE_C, experiences a moment in which their whole experiential field is a color, and there is not any reference to themselves.

From here on, when talking about daily life experiences, if not differently specified, we refer only to the daily life experiences which are not considered dissolution experiences as well. In other words, all the daily life experiences except from dlE_A and dlE_C. However, we do not mean to claim that the daily life experiences (besides dlE_A and dlE_C) do not present any characteristics of dissolution experiences: we believe that we are not looking at a binary system not-dissolution experiences / dissolution experiences, but a scale, or a multidimensional space, where different levels and kinds of dissolution experiences are placed. Nevertheless, drawing a line and distinguishing between experiences that qualify as dissolution experiences and those which do not is fundamental to us in this case, since our intention is to compare dissolution experiences to non-dissolution experiences.

cr. Morella and cr. Cedar (4)[12] were not aware of the dissolution occurred during their daily life experiences, before investigating them.

6.2 Structure of Dissolution Experiences

In this subsection we are going to present our findings about the experiential structure of dissolution experiences, focusing on the different phases of an episode of dissolution: initial phase(s), middle phase(s), peak phase, and final phase(s). The structure of dissolution experiences as entailing different phases emerged in our pilot study (see *3. Pilot Study*). Each of the initial, the middle, and the peak phases feature some tables reporting on its experiential structure (the experiential structure of the final phase(s) resembles that of the initial phase(s), therefore we do not include dedicated tables). The findings relative to daily life experiences are addressed along with those relative to the initial phase(s) of dissolution experiences. This, because daily life experiences and the initial phase(s) of dissolution experiences are experientially comparable. We are presenting the prototypical structure of a dissolution experience, writing of *the co-*

[12] The numbers in parenthesis refer to the excerpts with the corresponding number, reported previously in the text.

researcher as a general co-researcher that experiences a prototypical episode of dissolution. However, the presented structure does not precisely conform to each and every investigated dissolution experience in every of its details. The one here presented is the general structure that emerged from the analysis of each of the investigated experiences.

6.2.1 Initial Phase(s)

In the present subsection, we address the experiential structure of the initial phase(s) of dissolution experiences, comparable to that of daily life experiences. By *initial phases* we mean the phases chronologically at the beginning of an episode of dissolution, when the elements characterizing dissolution experiences are not strongly present yet. We introduce an overview of how the emerged experiential categories present themselves in Tables 3-7. Following, we describe them more in detail, tackling the state of the boundaries, of the self, of the world, and of the interactions between self and world.

Boundaries.

In the initial phases of a dissolution experience, the co-researcher experiences clear and defined boundaries to divide what is self and what is not (that is, the world), similarly to daily life experiences. The *Boundaries* between *Self* and *World* are therefore perceived as strong and clearly defined (5, 6). The presence of strong and clear boundaries can delineate a general separation between an individual and their environment, or between an individual and specific elements of their environment, that can also be other people.

Self.

A relatively high number of elements of the co-researcher's experiential field are experienced as *self* (first part of 67). The self is experienced as a cohesive entity with many characteristics, or elements: a personality and a history (22), emotions and thoughts (initial part of 2), a point of view and a point of control on the world (first part of 14), an attitude, a body (with the relative boundaries) (15). The presence of the self in the co-researcher's experiential field is connected to their sense of being in control and being active, and their sense of being an owner (59, 61) (e.g., of their body, of their thoughts, and of their emotions). They identify with the self-element (i.e., the ones listed above (62), and they are aware of them, even though sometimes pre-reflectively. These elements present coherence between each other (first part of 67, 68). *Coherence*, in this case,

means that the different elements are experienced as being part of the same entity, and/or as sharing the same spatial location. Specifically, it is in the body, or in its vicinity, that all the self-elements are experienced. Usually, the center of the self, or *locus* (9), and the point of view/control (14), are perceived to be located in the head area. This is also the case of thoughts, often experienced as inner-speech (initial part of 2), and emotions. This emphasizes the co-researcher's experience that they are their body, and that its boundaries, clearly delineated, almost completely correspond to the self boundaries—clearly delineated themselves. In line with this, the attitude towards the world is often closed and antagonistic (23, 24), as to preserve the strong self-world boundaries, and emotions are often experienced as unpleasant. The general way in which the self is experienced is perceived as normal and usual (64). Therefore, the self and its various aspects do not stand out in the co-researcher's reflective experience. This holds particularly true for the sense of mineness: although their experiences are immediately given in a first-person mode, the co-researcher fails to explicitly notice it.

World.

The world often presents a closed and antagonistic atmosphere (first part of 32). The affordances it offers to the co-researcher are limited. Some of its elements, often the ones that the co-researcher is paying attention to, are experienced as being inside of a bubble where also the co-researcher is in (70, 71), and are clearly perceived (26). They are experienced as separate objects (27), while outside of the bubble, the world is experienced as a blurred unity (71). Similarly, the findings of Nave et al. (2021) show that in the usual state of boundaries co-researchers report solely on the objects immediately close to them. The world is experienced as spatially finite (29).

Interaction Between Self and World.

The degree at which the co-researcher is immersed in their experience is such that they maintain a more or less implicit understanding, or knowledge, of the situation they are in (first part of 37, 38). When an interaction between self and world is present, the co-researcher clearly perceives themselves and the world to be distinguished, autonomous agents taking part in the interaction (see De Jaegher et al., 2010; Fiebich & Gallagher, 2013). The strong division between self and world is often accompanied by specific dynamics of interaction between the two that emphasize such division. For example, it is often the case that an element of the world violates the self boundaries in such a way that

the co-researcher perceives it as invasive and foreign (50). The co-researcher experiences clear directionalities between self, world, and elements of the world (39, first part of 40, 41). Directed forces are perceived from one element of the co-researcher's experiential field to the other. Such directionalities are often associated with experienced intentions. All the aspects of the experience, or the ways in which they present themselves in experience, are perceived as normal, usual (64).

6.2.2 Middle Phase(s)

In this subsection we address how the experiential elements relevant to our study present themselves in the co-researcher's experience during the middle phase(s) of an episode of dissolution. We define as *middle phases* the phases of a dissolution experience between the initial phases and the peak phase of the experience, where the elements characterizing dissolution experiences start to be more strongly present, but not yet as strongly as they will later be in the experience. In Tables 8-12 we present an overview of the state of the various experiential categories during the middle phase(s) of a dissolution experience. Following, we enter more into detail, describing how the various *Boundaries*, *Self*, *World*, and *Interaction between self and world* categories present themselves in the co-researcher's experience.

Boundaries.

During the middle phases of dissolution experience, the *Boundaries* start to get confused, to blur, or to dissolve. This means a less clear division between *Self*, *World*, and *Interaction between self and world*, reflected also by specific dynamics of interactions between *Self* and *World*. Some experiential elements are not clearly belonging to one or to the other realm.

Self.

Concomitantly with the more or less gradual dissolution of the self/world boundaries, the elements previously composing the entity *self* lose coherence between each other, while some of them are not identified as self-elements anymore, or disappear altogether from the co-researcher's awareness or experience (69). In line with what proposed by Ataria et al. (2015), usually the first self-element the co-researcher stops identifying with is the narrative understanding of themselves—their personality, their history. The co-researcher also ceases to identify with their body, and often also loses control and

ownership over it, or even, in part or completely, awareness of it and of the relative boundaries (16, 54). Also emotions, thoughts (second part of 2), and the point of view/control often stop to be objects of identification. The various remaining self-elements are now not perceived as a unity. Many of them move in different locations, and are experienced as being located gradually away from the body, or as gradually unrelated to it (second part of 9). This is the case, for example, of emotions and thoughts, and of the locus where the co-researcher locates the center of their self. Thoughts lose their clarity and structure, and the co-researcher perceives them more as something that they don't identify with, they don't own and they don't control (second part of 2). They are also less frequently experienced. Another thing that happens often is that the co-researcher starts identifying (also) with elements of the experiential field previously understood as part of the world. The co-researcher, more or less volitionally and more or less explicitly, trusts the world and lets go of control (77, 78, 79). Reflecting the loosening of the self/world boundaries, they adopt a more open, friendly, and trusting attitude towards the world (beginning of 42). This is accompanied by the experience of decreased control, or increased passivity, either in general or referred to specific elements of the co-researcher's experiential field (such as their actions, their body, and their thoughts). The emotions acquire a pleasant valence. In some experiences, the sense of mineness is experienced as shared (74, 75, 76): the co-researcher has the fundamental experience of perceiving the experience as being immediately given to more than one subject of experience.

World.

The world itself is experienced as more open and friendly (second part of 32), safe, familiar (31)—trustworthy (77, 78, 79). William James (1902/2002) described how mystical experiences can bring a sense of being at home in the universe. The bubble where the co-researcher previously perceived to be disappears or gets larger, coming to include a bigger part of the world. The world is perceived more as a unity (second part of 27, 28) and acquires more clarity in the co-researcher's experience. The finitude of the world's spatiality ceases to be perceived, and the world is experienced as offering more affordances to the co-researcher (34, 35).

Interaction Between Self and World.

During the middle phases of a dissolution experience, the co-researcher gets more immersed in their experience, starting to lose a high-level understanding of the situation they are in (second part of 37). The directionalities between different elements of the experiential field are less strongly felt, along with the intentions associated with them (second part of 40). Dynamics of interaction of different nature between self and nature take place. In the interaction, the co-researcher still recognizes the autonomy of self and world, even though less and less (see De Jaegher et al., 2010; Fiebich & Gallagher, 2012). The dynamics of interaction are such to emphasize the less strongly and clearly defined distinction between self and world, and are often accompanied by a shift of perspective (72, 73). They can be of different kinds (42, 43; 44, 45; 46, 47; 49, 50, 51; 52, 53). The co-researcher perceives their experience as out of ordinary, unusual, special (65, second part of 66).

6.2.3 Peak Phase

By *peak phase* we mean that phase of an episode of dissolution in which the elements characterizing dissolution experiences are the most strongly present. In this subsection we describe how the experiential elements relevant to our study present themselves in the peak phase of a dissolution experience. We show an overview of the state of the experiential elements during the peak phase through Tables 13-17. Following, we address the *Boundaries*, *Self*, *World*, and *Interaction between self and world* categories more in detail.

Boundaries.

The peak phase, by definition, is the phase of a dissolution experience where the self/world division is at its minimum (relative to the specific experience). Therefore, during the peak phase of a dissolution experience the self/world boundaries are dissolved, often completely, along with the dual subject-object structure of experience. Also Nave et al. (2021) found examples of non-dual awareness: they describe “a field of happening, which is neither external nor internal, and which is not relative to a first-personal observer position” (p. 17). Similarly to theirs, also our findings relative to states of dissolution (that is to say, peak phase for us, SB- for them) present a major diversity than the ones relative to usual states of boundaries (initial phases and daily life experiences for us, SB+ for

them). Different dissolution experiences reach different degrees of *Boundaries* dissolution.

Self.

At this point of a dissolution experience the number of self-elements is at its lowest. Most of the elements previously referring to the self, such as the narrative understanding of oneself, the body and the relative boundaries (54), the point of view/control (second part of 13, second part of 14), and the thoughts, are not present in the co-researcher's awareness and experiential field anymore, or they stop sharing the same spatial location, which is not related to the body anymore (17, 19). In some cases, also the coherence is at its lowest (second part of 67). In others, there is only one, or very few self-elements left, and they cohere with each other. For example, the locus, that is not associated with the body anymore (11), often corresponds to a core self (80, 81, 82). The core self is a version of the self deprived of most of its characteristics and elements. The co-researcher identifies with it. Besides that, the core self only presents a location, a sense of (passive) activity, and a sense of mineness, which is often experienced as shared (74, 75, 76). In experiences of deeper dissolution, not even the core self is left. The co-researcher does not feel to be distinguished by their experiential field, and experiences a *state of presence* (83, 84). The only thing that delineates and identifies a self is a sense of mineness. Talking about it, cr. Rigoberto reported: (87) "I cannot imagine… to have an experience, whatever kind of experience, without it" (DE_D). The absence of a clear subject/object structure is concomitant with no experience of any attitude: as cr. Cedar said, (88) "attitude of what towards what?" (DE_C). When experienced, the co-researcher's attitude—open, friendly, trusting—is hardly separable from the world's atmosphere. The co-researcher does not experience to be exerting any ownership, agency, or control (58). This resonates with what Nave et al. (2021) found about the sense of agency in dissolution experiences during meditation. They write:

[Some] participants described passive states in which there was little to no sense of agency reported. These participants often described their meditation through the lack of action and control, replaced by what can be described as a sense of release and surrender to the flow of experience. (p. 17)

When experienced, emotions often present a neutral valence (18).

World.

During the peak phase of a dissolution experience, the world is often perceived as spatially infinite (30), and its solidity diminishes or disappears altogether. Some of the previous world-element might disappear from the co-researcher's experiential field, often leaving only a quality, or transmodal feeling, which is not experienced as world (i.e., non-self) anymore. Such quality or transmodal feeling is often a residue of the previously existing self/world interactions. In this case, the world is perceived as a unity presenting a high degree of clarity. This resonates with what was found by Nave et al. (2021), who write: "In these experiences, the structure of awareness pertaining to attentional and perceptual objects shifted towards a more unitive sense of open space" (p. 17). However, as already mentioned, usually the co-researcher does not experience the element constituting the world as something other than themselves, as *world*. It could therefore be argued that, during the peak phases of at least some dissolution experiences, no awareness of the world is present. The atmosphere is hardly or not separable from the co-researcher's attitude. When experienced, it presents openness, friendliness, familiarity, trust (31). The co-researcher perceives no or infinite affordances, or just the affordance to simply exist, simply experience: the affordance to just be present.

Interaction Between Self and World.

The (more or less complete) unity between self and world also means that no interaction between the two is experienced anymore. Namely, since the co-researcher does not recognize self and world as two distinguished and autonomous agents anymore, no interaction can take place (see De Jaegher et al., 2010; Fiebich & Gallagher, 2013). Often, a quality or transmodal feeling residual of the previously perceived interactions is still experienced. No directionalities are experienced anymore, along with the associated intentions (final part of 40). The co-researcher's degree of immersion is very high, if not total (36): there is no understanding of the situation and no observation of the experience anymore. This kind of state is often accompanied by the perception of the experience as out of the normal, unusual, or even special (65, second part of 66), (89) "a step further from normal conscious experience" (DE_E).

6.2.4 Final Phase(s)

In the present subsection, we address the configuration in which the experiential elements relevant to our study present themselves in experience during the final phase(s) of an episode of dissolution. By *final phase(s)* we mean those phases of a dissolution experience that come after its peak, and where the elements characterizing the dissolution decrease or disappear altogether.

Each dissolution experience presents a different level of graduality at which, after the peak phase, the co-researcher goes back to the usual way of perceiving the boundaries, the self, the world, and the interaction between the two. That is, the structure and nature of the co-researcher's experiential field more or less gradually go back to how they were during the initial phases of the dissolution experience, or to how they usually are during a daily life experience. Consider, for example, cr. Morella's and cr. Helena's experiences:

> (90) The feeling of the location, of being *there*, become more intense. (…) *I* become more intense; as this location. (…) [I give the location more importance] by focusing more strongly on it. So there is less focus on the space around. (...) [The relation with the blackness around, the connection, the trusting, is] less… strongly… felt, the trust is not so much… present. It's not present as much. (...) It feels again as though the body has lines. And there is like this distinct… *separation* that is still present between inner and outer. (...) It feels as though [the location where I feel to be is] pulling closer to itself the awareness, that was before more situated around in the space. Now it just becomes more *condensed* in this… location. (...) [The sense of my history, my personality, gradually] comes back with this sucking in. (...) I become more aware of *who I am*. (...) In this sense of my personality and my history, and who I am, and where I am currently, and what I'm doing. (...) It was just a feeling of… *myself* being more like, strong, more… more dense, more… *sculpted*. (...) More strongly defined. Like, *precisely* defined in some aspect[s]. (...) And then like there is this feeling of… *trusting less*, almost. (DE_A)

> (91) It's almost like I feel like I'm regaining consciousness [laughs]. (...) I mean, I don't know, it's something between waking up, and regaining consciousness. And… Just, coming back to the world as I know it. I don't have a good, [giggles] correlation that I'm very satisfied with. But… It's kind of like the feeling of waking up when you've just almost drifted off to sleep, but you didn't actually fall asleep. That kind of regaining awareness of 'okay, I'm here in space, my body is in this position'. I don't know, just regaining a… *physicality*. (DE_H)

This process is often preceded by a perceived wish, or need, to go back to the usual way of experiencing (85, 86). This wish is often accompanied by an understanding of one's experience as unusual, and sometimes by unpleasant emotions. The co-researcher can experience being more or less actively or passively involved. The characteristics of *Wish/need to go back* can be also found in two of the items used by Lebedev et al. (2015)

to address dissolution experiences: “I felt afraid”, and “I feared [losing] control of my mind” (p. 4). The experience of wishing to go back is beautifully described in John Steinbeck’s novel *To a God Unknown* (1933/1995), where one of the characters, Elisabeth, says:

> I thought I suddenly felt myself spreading and dissipating like a cloud, mixing with everything around me. It was a good feeling, Joseph. And then the owl went over, and I was afraid that if I mixed too much with the hills I might never be able to collapse into Elisabeth again. (p. 59)

Saarinen (2014), in reply to Freud’s definition of oceanic feelings as transient, argues that, while the episodes of dissolution of the boundaries are indeed transient, the related “feeling of unity, embracement, immanence, and openness” (p. 2) is relatively permanent. We do not possess long-term data about the co-researchers’ experience after the investigated dissolution experiences. However, the analysis of the final phases of the episodes of dissolution shows that, at least in some cases, the *Emotional qualities* and the *Attitude* of the co-researcher return to a similar state to the one before the dissolution. We hypothesize that only some dissolution experiences, supposedly the ones with a higher degree of dissolution, are experienced as transformative episodes, and have long-term influence over one’s feelings. This resonates with what Nour et al. (2016) claimed. Differently from Saarinen (2014), they focus on the long-term impact of dissolution experiences on the co-researchers’ well-being. Their co-researchers “reported that on average their reported experiences with psychedelic drugs had a positive and lasting impact on their well-being, which correlated positively with the degree of ego-dissolution experienced” (p. 10).

6.3 Different Contexts

In the present subsection we discuss what our findings tell about similarities and differences of dissolution experiences that occurred in different contexts. Our findings support the hypothesis, brought about in various studies (e.g., see Yaden, Haidt, et al., 2017) and already investigated in our pilot study (see *3. Pilot Study*), that dissolution experiences that occurred in different contexts represent the same kind of experiential phenomenon. The investigated dissolution experiences, that occurred across six different general contexts, were found to present the same general synchronic and diachronic

structures. The most differences were found between DE_B_2 and the other dissolution experiences. DE_B_2 is the experience that occurred in the context of psychopathology.

6.3.1 Psychopathology

In this subsection, we discuss the differences between DE_B_2 and the other dissolution experiences. In line with our findings on dissolution experiences and on the literature about psychopathological disorders such as schizophrenia (e.g., see Škodlar & Henriksen, 2019), DE_B_2 presents permeable self/world boundaries, as well as a dissolution of the self. There is an anomalous, at times absent bodily experience. Furthermore, cr. Gianpaolo questions, and does not identify with, the narrative about his identity (21). He experiences his thoughts in an unusual modality, but contrary to other dissolution experiences, his thoughts are strongly present during the episode, and he identifies with them. Instead of letting go of control, cr. Gianpaolo perceives to be increasingly active. As he thinks of something, he experiences it appearing in the world. Even though he perceives to exert a direct influence over the world, however, the interaction between the two is not mutual. DE_B_2 lacks most of the experiential characteristics perceived in the world in other dissolution experiences. First of all, the world does not present an open, friendly, and familiar atmosphere. This resonates with what Škodlar and Henriksen (2019) write about psychotic episodes. Psychotic episodes often involve "feelings of being estranged from the shared-social world (...), i.e. patients do regularly not feel at home or at ease in the world and among others". As they remark, "this is reminiscent of Heidegger's concept of uncanniness (German: Unheimlichkeit), by which he sought to articulate an experience of profound unfamiliarity, which he also describes as the feeling of 'not being at home' (unheimlich literally means 'nonhomely')" (p. 3).

In DE_B_2, the world is never experienced as spatially infinite, and it is instead perceived as unreal:

> (92) There isn't a sense that there's a world stretching out before me. You know. It's really two-dimensional, but it really feels like watching, not a cartoon, but like an animation. There is depth, but the depth is… it's a trick, it's a… you know. And then around me, it didn't feel like I'm embedded in space. It felt like there's nothing beyond my vision. (DE_B_2)

cr. Gianpaolo, instead of experiencing a sense of growing unity with the world, experiences estrangement from it. Škodlar and Henriksen (2019) note how such

"*diminished presence* in the world (...) [is] occasionally associated with a pervasively felt distance to the world, perhaps as if there is an invisible barrier between the [co-researcher] and the world" (p. 4). Notice how this resonates with our experiential category *Perceptual bubble*, and to the experience of being in a bubble usually found in concomitance to the initial phases of dissolution experiences. In DE_B_2, however, this experience persists:

> (93) I exist in this very small bubble, and that bubble is the whole reality. And so I wasn't aware of anything behind me. And I wasn't aware of anything beyond my sight, but within my sight everything was just continuity, there was no body, there was just like a point of view that was kind of looking in the world and having thoughts, and then those thoughts became a part of the world. (...) As if there was this bubble, that encompasses my vision, that is all that I am. There's no body, and there's no space around me, nothing. (...) When I said the only thing that existed was the bubble, is that this is the only thing about *the world* that existed. A life-world, or… *reality*. (DE_B_2)

In DE_B_2, the experience of *Trusting the world / Letting go*, which we found to be strongly related with dissolution experiences, is absent. Drawing on various definitions of dissolution experiences, such as those of Yaden, Haidt, et al. (2017) and Saarinen (2014), dissolution experiences can be defined as presenting two components, one involving the dissolution of the self, and the other the sense of unity with the world and with other people. It appears to us that DE_B_2, although presenting the first one, lacks the second. Whether this finding is extendable to other experiences of psychosis is a question for further research. Notice that the context *psychopathology* was not present in our pilot study (see *3. Pilot Study*), which we used to support the hypothesis that episodes of dissolution that occur across different contexts represent the same kind of phenomenon.

Our study demonstrates that the separated lines of research on dissolution experiences that occurred across different contexts can be unified. An open question remains with regard to the context of psychopathology. We provided a terminology that addresses all the different kinds of dissolution experiences. The experiential nature of episodes of dissolution that we present is not bound to a singular context.

6.4 Main Findings

In the Tables 18-23 we present how the different categories that emerged from our study vary across the phases of a dissolution experience (specifically, in the initial, middle, and peak phases).

Our findings show how self/world boundaries, as stated by David Abram in *The spell of the sensuous* (1996/2017), "define a surface of metamorphosis and exchange" (p. 46). We reported on how such boundaries, in daily life experiences as well as in the initial phases of dissolution experiences, delineate a clear definition between what is perceived as self and what is not. This resonates with what reported by Nave et al. (2021): the boundaries characterize "a bounded being immersed, related but distinguished in its lived body from the external environment" (p. 2).

Our data show self/world boundaries to be flexible, to be able to restrict and enlarge, to change and dissolve. It is by looking at how the self/world boundaries present themselves in experience that we distinguish a dissolution experience from an experience of not-dissolution. By our definition, a dissolution experience is an experiential episode in which the co-researcher perceives fainter, or less clear, self/world boundaries.

However, the distinction between dissolution and non-dissolution experiences is not binary: as already suggested by Dor-Ziderman et al. (2016), the dissolution of boundaries is a graded, rather than an all-or-nothing, phenomenon. Our results show both that a certain degree of dissolution is also present in some of the investigated daily life experiences, and that different investigated dissolution experiences present different degrees of dissolution. With this we mean that, for example, while some experiences reached a non-dual state, in others the self/world boundaries were in part preserved. However, we did not specifically address the degree of dissolution of the investigated experiences, as it was otherwise done by Nave et al. (2021). The intensity, or degree, of a dissolution experience is also said to be positively correlated, in the case of psychedelic experiences, with the dose of substance assumed (see, for example, Nour, 2016). D'Aquili and Newberg (2000), in their investigation of aesthetic, spiritual, and mystical states, identify a *unitary continuum*. On one end there is the baseline reality, and going towards the other end, one experiences aesthetic states, romantic love, and then spiritual and mystical states: they mention cosmic consciousness and the consequent *Absolute Unitary Being*, "characterized by absolute unity" (p. 43). This continuum identifies different degrees of dissolution, insofar across the spectrum "the sense of unity increasingly transcends the sense of diversity" (p. 43). However, the unitary spectrum does not only assess the degree of unity (and therefore of dissolution) of different experiences. It is also in line with the diachronic progression of the dissolution experiences we investigated.

Specifically, we observed how the self/world boundaries gradually progress in an experience of unity (see *Boundaries* in Table 18).

Various studies (such as Yaden, Haidt, et al., 2017; Saarinen, 2014), describe dissolution experiences as being generally constituted by two components: the reduction of the salience of the self, and the increase of the sense of unity with other people, objects, or entities—that is to say, with the world. Note how also the items of the Ego-Dissolution Inventory (Nour et al., 2016) can be divided in these two parts. (Namely, reduction of salience of self: *I experienced dissolution of my 'self' or ego*, *I experienced a decrease in sense self-importance*, *I experienced disintegration of my 'self' or ego*, *I felt far less absorbed by my own issues and concerns*, *I lost all sense of ego*, and *all notion of self and identity dissolved away*; increase of sense of unity: *I felt at one with the universe*, *I felt a sense of union with others*, p. 3). We aimed at providing more in-depth descriptions of such experiences. However, as Nour et al., we found the concepts of boundary dissolution, ego-dissolution, and unity, to be hardly discernible. We believe we gave account to them, respectively, through the group of categories *Self*, and through the higher-category *Boundaries* and the group of categories *World* (for all three of them, see Tables 18, 19, 21). In support of the idea that they are highly interconnected, Nour et al. found the item of the Ego-Dissolution Inventory *I felt at one with the universe* (p. 3) to load strongly on the *ego-dissolution* factor.

Nevertheless, we found that the decreased division between self and world characteristic of the middle phases of a dissolution experience (see *Boundaries* in Table 18) is reflected by a general increase in the perceived unity. A higher sense of unity is not only perceived between self and world, but also internally to each of the two realms (see *coherence* in *Number and coherence of the self-elements*, and *Unity of the world-elements*, in Tables 20 and 21). As cr. Cedar described:

> (94) [It's] as if the granularity of me and the world, [it] is now more unified, but still, only the world more unified, and me more unified. (DE_C)

We saw how the coherence of the self-elements diminishes throughout the length of a dissolution experience (see *Number and coherence of the self-elements* in Table 20). However, from our data we can also observe how, in daily life experiences and during the initial phases of dissolution experiences, different self-elements understood as features of the same entity are also perceived to be divided one from the other. Throughout the dissolution experience, this sense of division is lost. Consider cr. Alienora's report:

(95) Usually when I speak to people it's not always that easy, there is this little space in between, maybe a filter, where you have to, at least briefly, think about 'will this be understood? Is this the best word to describe what I want to express?'. But at that moment the little space in between, either it didn't exist, or it was close together, or I just didn't pay attention to it. The point is, everything could happen directly, in a way. (...) [In non-dissolution experiences there is a space] between the thought and action, (...) a little tiny filter space that helps you either understand or find the right way to express. (...) I think all three stages [– thought, understanding, and action –] feel like me. (...) The thought, (...) without the space in between, can happen spontaneously, and without any effort from my conscious self. (DE_E)

At the same time, as we have seen, in the middle phases of a dissolution experience we witness an increased perceived unity in the world (see *Unity of the world-elements* in Table 21). This is also reflected in a decreased division between different sensory perceptions, as described by cr. Rigoberto:

(96) The borders between visuals and sound become blurry. So, it feels like one. (...) It feels a little bit like synesthesia, like the sound has a color and the colors have a sound. (...) But then when everything else [– i.e., the band, the lights –] comes in again it just loses the separation between the sound and colors and different sensory perceptions. (...) There are no clear boundaries anymore between light, music, and movement. It feels a little bit like, imagined synesthesia. You hear the light, and you feel the music. (DE_D)

Our results generally resonate with those of Nave et al. (2021): the dissolution of the self/world boundaries is connected to a "reduction in sense of agency [see *Sense of control (activity/passivity)* in Table 23], sense of ownership [see *Sense of ownership* in Table 23], body sensations [see *Bodily qualities* in Table 19], first-person perspective [for a similar category, see *Point of view/control* in Table 19]" (p. 3).

Saarinen (2014) describes the oceanic orientation, characteristic of dissolution experiences, as including:

a sense of secure embracement, of 'being held', or in more poetic terms, of 'not falling out of this world'; (...) the sense of immanence, (...) the feeling of 'something' unperceivable permanently pervading and sustaining the universe; (...) [the sense of] a world of significant possibility, a world to be actively and creatively engaged with rather than one to be withdrawn from into a state of passivity. (p. 18)

We believe that the sense of secure embracement and the sense of immanence show similarities to our findings about the sense of familiarity and the trust-worthiness perceived in the world (see *Atmosphere* in Table 21), connected to the feeling of being able to let go (see *Trusting the world / Letting go* in *5.1 Codebook*). The sense of a world

actively and creatively engaged resonates with the kinds of *Dynamics of interaction* (see Table 22) that we found in the investigated dissolution experiences, where the world is experienced as assuming an active role (e.g., 46, 48, 53).

As Saarinen (2014) puts it, "the oceanic orientation is a background feeling of unity with a certain kind of world—an immanent world that embraces and opens up a space of meaningful possibility" (pp. 18-19). Indeed, it has to be noted that our data shows experiences of dissolution occurred with a world that was, or became, experienced in specific ways (see *World* in Table 21, in particular *World finitude*, *Atmosphere*, and *Affordances*). An exception might be offered by the experience DE_B_2, which happened in the context of psychopathology (see *6.3.1 Psychopathology*).

Relative to the experience of the world, we saw how the co-researcher goes from perceiving a spatially finite world, where only the most relevant elements are clearly perceived, to a spatially infinite world experienced clearly and as a unity (see *World finitude*, *World clarity*, and *Unity of the world-elements* in Table 21). We believe that the way in which the world is perceived (specifically, its clarity and unity) might be strongly related to the co-researcher's attentional disposition$_g$. Differently from Nave et al. (2021), we did not explore attentional dispositions in our study. However, it is often the case that the *Perceptual bubble* that our co-researchers experience during the initial phases of a dissolution phase (see *Perceptual bubble* in *5.1 Codebook*) envelopes the elements that the co-researcher is paying attention to. The getting larger or dissolving of the bubble that takes place in later phases of the dissolution experience is arguably associated with a widening of the co-researcher's attention. Interestingly, Nave et al. also found that some co-researchers used spatial imagination, picturing landscapes that suggest spatial infinity, to induce the dissolution of boundaries.

Some of the descriptions and investigations on dissolution experiences report on a changed experience of time (e.g., see Ataria et al., 2015; Bass-Krueger, 2021, 2022). This emerged also from our pilot study (see *3. Pilot Study*), and from a few excerpts of the interviews we conducted for the main study. However, we did not conduct our investigation in the direction of an exploration of the experience of time during daily life and dissolution experiences, since we were more interested in other dimensions of the co-researcher's experience, such as their perception of space. Therefore, our data on the experience of time is insufficient to make any claims about it.

Each state of the self/world boundaries is accompanied and reflected by dynamics of interaction between the two realms (see *Dynamics of interaction* in Table 22). We address the specific kinds of interaction found in the investigated experiences in the codebook (see *Dynamics of interaction* in *5.1 Codebook*). When there is no dissolution, the interaction emphasizes the self/world distinction. When, on the other hand, the dissolution takes place, the self/world interaction mirrors the loosen division between the two realms. However, our data does not allow us to claim that there is a causality between the kind of dynamics of interaction and the state of the boundaries, and if so, in which direction.

The state of the boundaries and the dynamics of interaction are also associated with specific attitudes and atmospheres (see *Attitude* and *Atmosphere* in Tables 19 and 21). In the initial phases of a dissolution experience, strong boundaries and dynamics of interaction that emphasize the self/world division are accompanied by a closed and antagonistic attitude of the co-researcher towards the world, and by a closed and antagonistic perceived atmosphere in the world. In later phases of the episode of dissolution, the boundaries dissolve, accompanied by dynamics of interaction that reflect a decreased separation between self and world. The co-researcher's attitude and the atmosphere of the world increasingly become more open, and friendly. Although they do not specifically address attitudes and atmospheres, Nave et al. (2021) address similar issues when they write that "the flexibility and permeability of self-boundaries, ranging from open and wide to closed and constricted, can be understood in relation to an innate concern for distinction (involving protection and autonomy) and participation (involving connectedness and openness)" (p. 26). Similarly, Saarinen (2014) recognizes in dissolution experiences the "propensity to 'expand, unity, and say yes'" (p. 19), and he suggests that this is connected with the general pleasant perception of such experiences.

One of the most interesting of our findings is the process of letting go of control and trusting the world (see *Trusting the world / Letting go* in *5.1 Codebook*), that accompanies the co-researcher towards the peak phase of the dissolution experience. Analyzing reports on dissolution experiences, *Trusting the world / Letting go* emerged more often than other categories. This suggests that this category fundamentally characterizes, if not fosters, dissolution experiences, differentiating them from daily life experiences. The process of letting go and trusting the world refers to a more open and friendly attitude and atmosphere, but it also includes other experiential elements. The co-researcher experiences a more or less explicit feeling of trust towards the world, and the correlated

sense that they can let go of control. When they do let go of control, the co-researcher experiences a shift from feeling to be more active, to feeling to be more passive. At times, the co-researcher experiences that they initially (97) "have to [exert] more control to [then] feel less control" (DE_C). This resonates with a report from Nave et al. (2021): "There's effort in letting go. It's . . . it's funny to say that. There's a sense of giving up on the holding on. But then there's no need for more effort—you just give up" (p. 14). Specifically, we believe that our category *Trusting the world / Letting go* resembles Nave et al.'s *attentional disengagement (letting go)*. In describing it, they focus on the attentional aspect. We believe that this is the case because of the specific nature of the experiences they investigated: experiences of meditation, associated with activities that involve specific attentional dispositions. As already mentioned, in our study we do not explicitly address attentional dispositions, since they were rarely tackled during the interviews.

Nave et al. (2021) describe how "gestures of 'letting go', which reduce attentional engagement and sense of agency, emerged as driving the depth of dissolution" (p. 1). In other words, "deeper experiences of [self-boundary] dissolution [resulted] from surrendering into an effortless sense of passivity characterized by an attenuation of all mental activity, and more subtly, the suspension of attentional dynamics" (p. 24). Also our findings seem to suggest *Trusting the world / Letting go* to be fundamental to the reach of deeper experiences of dissolution, if not of experiences of dissolution altogether.

Furthermore, *Trusting the world / Letting go* seems to represent a *gesture* that can be performed more or less volitionally and more or less implicitly. This is clearer in Nave et al.'s study (2021), where the letting go is perpetuated through a meditation technique that involves "a mental gesture of relaxation, letting go, and release" (p. 24). While this technique turned out to be the most effective to reach states of dissolution, it seems like also the other techniques somehow, more indirectly, foster a letting go.

One of the advantages of Nave et al.'s study (2021) over ours is that, due to the nature of the investigated experiences (induced instead of collected), it allows them to support the hypothesis of a causal relation between the gesture of letting go and the dissolution of boundaries. In their study, co-researchers are specifically formed and instructed to induce a dissolution experience. From their reports it appears that they often adopt a gesture of letting go to reach their goal: this supports the hypothesis that letting go is what produces or leads to a dissolution experience. If such is the case, dissolution experiences can be

initiated volitionally. While this was a pre-given in Nave et al.'s study, it remains an open question in ours. Even though the letting go is, in our study, reported in correspondence to experiences that occurred in different contexts, it is not clear whether in contexts different from meditation the letting go is completely under the co-researcher's control, or to what extent it depends on world-elements as well.

Our study, however, reporting on the phenomenon of letting go across multiple contexts, provides a complementary and more comprehensive overview on the presence of such phenomenon in dissolution experiences, and on its experiential nature. We are, as Nave et al. (2021), interested in the applications that the gesture of letting go could have, once its volitional nature and its leading to dissolution experiences are further investigated. Our study shows how this might be possible also outside of a context of meditation. We therefore consider the findings relative to *Trusting the world / Letting go* particularly relevant, both for the research on dissolution experiences, and for psychopathology research. We address this issue in *6.8 Further Studies*.

Nave et al. (2021) noted how the affective valence of their co-researchers was going from comfortable and peaceful, and joyous and blissful, in certain cases, to negative. Like them, we found that an experience of loss of control can lead to unpleasant emotions. Emotions reflect, for most of the dissolution experience, the attitude of the co-researcher, for example being pleasant when the co-researcher has an open and friendly attitude (see *Attitude* and *Emotional qualities* in Table 19). However, they can become unpleasant at the peak of a dissolution experience. This is usually related to a phenomenon that we coded *Wish/need to go back* (see *5.1 Codebook*). *Wish/need to go back* refers to an unpleasant feeling related to the sense of lost control and of abnormality of the experience. Interestingly, the *Wish/need to go back* is accompanied by a change of attitude and by an—arguably consequent—return to the way of experiencing typical of daily life experiences.

Many are the similarities between *Wish/need to go back* and *Trusting the world / Letting go*. We hypothesize that the two are one the opposite of the other: while *Trusting the world / Letting go* seems to initiate dissolution experiences, *Wish/need to go back* seems to end them. However, we found *Wish/need to go back* way less frequently than *Trusting the world / Letting go*, and we therefore propose that *Wish/need to go back* is only one of the many ways in which a dissolution experience can terminate. In the pilot

study (see *3. Pilot Study*) we discussed how the return to the usual way of experiencing is often forced by external events.

We found that, in daily life experiences and during the initial phases of dissolution experiences, the co-researcher experiences certain elements of their experiential field to be directed towards other elements (see *Directionalities* in Table 22). Directionalities, either from the self to the world, vice versa, or between world-elements, are perceived in space. Often, such directionalities are experienced as being associated with an intention. See, for example (39, 41). In line with this, intentionality is a concept that in phenomenology refers to the property of being about something, being directed towards something (see Albertazzi et al., 1995; Brentano, 1874/2012; Fuchs, 2005, 2007b; Husserl, 1950-2020; Jacob, 2019; Sartre, 1943/2018). Throughout the length of a dissolution experience, however, while the co-researcher is experiencing a higher level of immersion and a decreased sense of control and activity, they also perceive the directionalities less and less. In fact, Nave et al. (2021) found that in deeper states of dissolution the co-researchers' orientation towards objects decreases, and Kometer et al. (2012) argue that psychedelic substances affect goal-directed behavior. Along with the directionalities, also the co-researcher's intentions, aims, wishes, and concerns, more or less gradually disappear. Consider, for example, the following excerpts, provided by cr. Rigoberto, cr. Maya, and cr. Helena: (98) "I'm out there somewhere. I don't really know, but I also don't really care". (DE_D)

> (99) It's just that nothing is needed, in a way, but also when I say (…) 'everything is okay', it's also strange, because it doesn't incorporate all this… It's just that it is what it is, like that. It is as it is, and nothing more. There wasn't even the perspective, or timing, like, 'nothing is needed', because just, it is like it is, and just, total presence. (DE_F_1)

> (100) Everything felt insignificant. [Laughs] Like, if anything felt significant, it would have been the expansion, but even the expansion itself didn't feel significant, 'cause just *everything* felt… insignificant. [Laughs] (…) The connectedness is still there, and then the expansion kind of takes over, and the connectedness becomes… an insignificant part [laughs] of the… expansion. (DE_H)

Often, as in (98), the absence of interest from the co-researcher has as object the self. We believe this phenomenon to resonate with the lack of concern, typical of Buddhism, towards the self (see, e.g., Barre Center for Buddhist Studies, 2010).

Our findings show how, compared to the initial phases, peak phases of dissolution experiences present less self- and world-elements (see *number* in *Number and coherence*

of the self-elements and *World* in Tables 20 and 21). That is to say, during the peak phase the co-researcher is aware of the minimal number of elements both of the self and of the world. In the case of world-elements, they often increase during the middle phase to then reach their lowest number during the peak phase. But this process is even more evident when involving self-elements: initially, the self is a complex, multi-elements entity. Throughout the dissolution experience, most of the self-elements gradually disappear, sometimes leaving only a *core self* (as defined in *5.1 Codebook*), or a minimal self. We are addressing this further in the *6.5 Self* subsection.

6.5 Self

The second research question of this thesis (*How is the self experienced throughout a dissolution experience, compared to how it is experienced in daily life experiences?*) concerns the experience of the sense of self during dissolution experiences. It is one of our main aims in this investigation to discuss what such experience can tell us about the nature of the self. We do so in the present subsection.

Different investigations and reports on dissolution experiences refer to them addressing, and sometimes focusing on, the process of dissolution that interests the self. For example, consider: Ataria et al., 2015; Lebedev et al., 2015; Millière, 2017; Nour et al., 2016; Saarinen, 2014; Tagliazzucchi et al., 2016; Yaden, Haidt, et al., 2017. As we have seen in the literature review (see *1. Dissolution Experiences*), in some cases terms like *self* and *ego* are already used to refer to dissolution experiences: notice, for example, *self-transcendent experiences* (Yaden, Haidt, et al., 2017), *ego dissolution* (Millière, 2017), *ego-loss* (Lebedev et al., 2015), and *ego death* (Harrison, 2010). Our findings confirm that such self-dissolution does in fact occur, and they clarify their experiential nature. Further, we are going to address this phenomenon in more detail, and discuss its implications and possible interpretations.

Our findings seem to discard the traditional view on the self (Kant, 1781/1908), that sees the self as an entity separated from the world, immutable in its unity and coherence. As we mentioned earlier, the number of the aspects characterizing the self in the initial phases of the dissolution experiences decreases throughout the dissolution experience (see *number* in *Number and coherence of the self-elements*, in Table 20).

Daily life experiences, as well as initial phases of dissolution experiences, show the presence of a self that is a cohesive multi-elements entity, clearly distinguishable from the

world (see the whole section *Self* in Table 3, and the section *Initial phase(s)* in Table 19). Karl Jaspers (1913/1963) includes between the domains of ego-consciousness "ego-consistency ('multimodal phenomena being perceived as integrated experience')" (as cited by Lebedev et al., 2015, p. 2). In line with what postulated by Albahari (2006) and by Strawson (2009), the co-researcher perceives to be a singular, unified, and internally coherent entity in the world, with a specific personality and personal history. They experience their body *from the inside*: they identify with their body, from which they navigate the world, over which they have a point of view (in line with Bermùdez, 2018; Merleau-Ponty, 1945/2020). They are agents, and they navigate the world through their intentions, the control they are exerting, and their actions. They also experience thoughts and emotions, which are perceived as something private—that is, only *theirs*, and only experienced by them. All of this is understood as normal, usual, and default (see *Sense of normality* in Table 23). Perceiving this strong me/not-me division, they often navigate the world with a closed and antagonistic attitude.

The experiential structure of the self during the initial phases of dissolution experiences resonates with the pre-reflective self model, supported by Nave et al.'s (2021) findings as well:

> A fundamental aspect of the sense of self is its pre-reflective dimension specifying the self as a subjective knower and agent in an immediate first personal mode of embodied presence in which experience is given. The features that are often said to characterize this fundamental sense of embodied selfhood are a sense of spatiotemporal location, ownership, agency, and an egocentric, body-centered perspective. (p. 2)

In line with this, from the conduction and analysis of our interviews it is our impression that co-researchers make particular use of the presence of sense of control and agency, and sense of ownership, as clues to identify what is self and what is not. Consider, for example, this excerpt where cr. Maya describes her experience of walking during the initial phase of her dissolution experience:

> (101) I *start* moving actively, and then, from the knee down, that goes more passively. I start the movement, and then it finishes on itself. (…) Perhaps when the legs finish the step, and it goes more automatically, that seems that is less me. When I start the movement I feel like this is me, and when the legs finish it feels like a little bit of a distance. (...) I'm more the *observer* of these legs. (DE_F_1)

When, in further phases of the dissolution experience, the tension between self and world gets alleviated, what is self as opposed to world gets gradually less clear (see

Boundaries in Table 18). Some of the characteristics that were identifying the self as such are vanishing, its various aspects are losing coherence between each other (see *coherence* in *Number and coherence of the self-elements*, in Table 20), some of them are disappearing from the co-researcher's awareness (see *Awareness* in Table 23), and others are not object of the co-researcher's identification anymore (see *Sense of identification* in Table 23). Thoughts and emotions are experienced gradually away from the body, and their structure (for example, inner speech for the thoughts) gets less defined (see *Emotional qualities* and *Qualities of thoughts* in Table 19). "My thoughts wandered freely" is one of the items of the scale used by Lebedev et al. (2015) to assess experiences of dissolution (p. 4). The co-researcher cannot rely on the sense of ownership, sense of agency, sense of control, and on a shared location centered in the body (see *Sense of ownership*, *Sense of control (activity/passivity)*, and *Locus* in Tables 23 and 19) to delineate a unique, unified and coherent self. As also observed by Yaden, Haidt, et al. (2017), "in each account [of a dissolution experience], an aspect of consciousness usually taken for granted—the sense of being a bounded, separate self—is conspicuously absent" (p. 1). The first aspects that the co-researcher stops to identify with are their narrative of themselves (see *Narrative understanding of oneself* in Table 19) and their body (see *Bodily qualities* in Table 19), which they often even lose the awareness of.

In line with the absence of identification with the narrative that the co-researcher has of themselves, Tagliazucchi et al. (2016) define the phenomenon they investigate, *LSD-induced ego dissolution*, "a compromised sense of possessing an integrated and distinct personality or identity" (p. 1043). Our findings support the idea that the narrative self exists and it defines the specific person that a self *is*, that is, their personal history, and their personality—their *jīva*. As already proposed in the study by Ataria et al. (2015), it appears that the narrative self coexists with the minimal self in the initial phases of a dissolution experience and during daily life experiences, but then the narrative self gets affected, and dissolves, in the middle phases of a dissolution experience.

Differently from Nave et al. (2021), we were not expecting dissolution experiences to "accentuate the sense of the pre-reflective embodied self" (p. 24). We came to observe, as they did, how the body, gradually losing the association with *Sense of identification* and *Sense of ownership*, came to be experienced more as *Körper*$_g$ rather than as *Leib*$_g$ (Merleau-Ponty, 1945/2020) (see *Bodily qualities*, *Sense of identification*, and *Sense of ownership* in Tables 19 and 23).

While the co-researcher stops identifying with elements such as their narrative and their body, throughout the dissolution experience they get to identify with elements that previously were considered as part of the world (see *Sense of identification* in Table 23). The self, therefore, in the middle phases of a dissolution experience, dissolves in one sense, but *expands* in the other.

Towards the peak phase, however, even more self-elements, along with world-elements, disappear from the co-researcher's experiential field (see *number* in *Number and coherence of the self-elements*, in Table 20). The co-researcher experiences faint or no control and ownership (see *Sense of control (activity/passivity)* and *Sense of ownership* in Table 23). Sometimes, the self is identified with the last trace of "activity" recognizable: often a very passive act of observing, or even of simply experiencing. This goes to support our hypothesis that the sense of agency is one of the experiential clues that co-researchers use to recognize what is self. In these cases, we identified a *core self*, that is, a location in the co-researcher's experiential field that they identify with, and to which the last few self-elements correspond (see *Core self* in *5.1 Codebook*). The core self is often what is left of the self during the peak phase of dissolution experiences, and it usually has a location and a certain kind of (passive) activity. This resonates with what found by Nave et al. (2021), who wrote: "[the sense of self] was often identified with a sense of an observer, with its location narrowly contracted and centered in the head, in the chest, or alternatively, in the drifting location of attention" (p. 24).

In some of the peak phases of dissolution experiences we investigated, not even a core self is present. The only thing left of a self is a *sense of mineness* (see *Sense of mineness* in Table 19), a sense of experiencing. Therefore, our investigation shows how the presence of a minimal self (i.e., the sense of mineness), or the ipseity aspect of the experience, persists even during the peak phase of the dissolution experience, as already formulated by Ataria et al. (2015). We labeled *State of presence* (see *State of presence* in *5.1 Codebook*) a state in which the sense of mineness is the only self-element present.

We also saw how many self-elements, such as the identification with one's personality and body (see *Narrative understanding of oneself*, *Bodily qualities*, and *Sense of identification* in Tables 19 and 23), disappear throughout a dissolution experience. Does this mean that they are of *illusory nature*? We are delving thoroughly into this issue here, but we do not believe that this conclusion is the necessary outcome of our study.

To further address *Core self* and *State of presence*, it is necessary to tackle one of the most interesting findings of our study: the presence of a locus (or *self-location*, as labeled by Nave et al., 2021), and its variations throughout the length of a dissolution experience (see *Locus* in Table 19). The locus, during the initial phases of a dissolution experience, as well as during daily life experiences, is placed in the body or in its vicinity. In later phases of the dissolution experience, the locus more or less gradually moves away from the body, and loses any relation with it. In some cases, the locus remains located where the body is for the whole length of the dissolution experience, but there is no awareness of the body anymore (see *Bodily qualities* in Table 19). Similarly to what reported by Nave et al., sometimes the locus expands into space (i.e., stops being condensed in a single location and gets more dispersed, a phenomenon metaphorically similar to the process of sublimation; see (11)).

In some of the investigated dissolution experiences, as we have seen, the locus remains until the end, contributing in the conformation of a core self. However, often the locus gets fuzzier and weaker throughout the experience, sometimes disappearing altogether. The latter case brings to a *state of presence*, a state where the self is almost not distinguishable from the rest of the experiential field (see *State of presence* in *5.1 Codebook*). By this we mean that, in a state of presence, the self and the world cannot be identifiable as two distinguished entities. However, they represent two different features of the same entity, as we further address in the next subsection, *6.5.1 Core Self, State of Presence, and Sense of Mineness*. The descriptions of states of presence that our co-researchers provided are very similar to what Nave et al. (2021) write about the absence of a self-location: “What remained was often a feeling of total immersion within space, which itself mostly lacked form, directionality or other evident features apart from references of transmodal feelings of subtle movement (such as flowing, floating, vibrating)” (pp. 14-15).

6.5.1 Core Self, State of Presence, and Sense of Mineness

We can now come to better clarify the concepts of *Sense of mineness*, *Core self*, and *State of presence* (see *Sense of mineness* in *5.1 Codebook* and in Table 19, and *Core self* and *State of presence* in *5.1 Codebook*). In this subsection we address their differences, and how they relate with each other. We depict this in Figure 2.

Sense of mineness, *Core self*, and *State of presence* represent fundamental experiential categories for our study, specifically for what concerns our research interest on the sense of self (see the second research question in *4.1 Research Questions*). In our data, *Core self* and *State of presence* are the two states in which the self can be experienced at the peak of a dissolution experience. *Sense of mineness* is an experiential element present in both.

Mineness is a term adopted by Zahavi (2005). In the present thesis we understand it as a synonym of ipseity, first-personal givenness, and minimal self. Specifically, mineness refers to that aspect of experience that makes experience to be presented in a first-personal mode. In other words, the fact that I perceive my experience to be experienced *by me*. In saying *by me*, there is no reference to my identity or personality. *By me* refers to the inherent aspect of experience of being experienced by someone, specifically *by me*. Such self-referential aspect of experience represents the minimal self. Furthermore, we consider the sense of mineness as being related to witness-consciousness as well. When we talk about the sense of mineness, we remain agnostic on whether it is a characteristic of the experience, as formulated by the phenomenological tradition, or of the subject, as witness-consciousness is postulated to be.

The sense of mineness is said to be fundamentally present in any experience: no experience exists without it. The sense of mineness, however, is pre-reflectively experienced: it does not constitute the object of consciousness, but its modality. It is for this reason, we believe, that we found it difficult to gather data about the presence of the sense of mineness across the investigated daily life and dissolution experiences. Co-researchers reported on variations of the sense of mineness (see *Sense of shared mineness* in *5.1 Codebook*) and on experiences where the sense of mineness was one of the few experiential elements left (see *Core self* and *State of presence* in *5.1 Codebook*). Otherwise, our way to address the sense of mineness during interviews was to directly ask the co-researcher whether they were perceiving their experience as *their* experience, as given in the first-personal mode. *Sense of mineness* was coded inductively: being aware of the literature about the self (e.g., Zahavi, 2005), during the interviewing and the analyzing processes we specifically checked whether the sense of mineness was present.

The resulting data support the hypothesis that the sense of mineness is always constitutive of experience. When we inquired whether the sense of mineness was present, we collected positive answers, both about daily life experiences and about dissolution

experiences, in all of their phases. In daily life experiences and in the initial phases of dissolution experiences, as well as, to a certain degree, middle phases of dissolution experiences, the sense of mineness (i.e., minimal self) was just the pre-reflective, unnoticed basis of a more complex and structured self. This is in line with the view of witness-consciousness as also going unnoticed, although being present, in our usual way of experiencing (Albahari, 2006).

As we have seen, however, throughout the phases of a dissolution experience, the self loses most of its elements and characteristics, unveiling its basis. As mentioned earlier, in some of the peak phases of the investigated dissolution experiences we found a core self, and in others a state of presence. We also encountered cases in which an experience of core self was precedent to an experience of presence. However, the state of presence is not always preceded by a core self. It is our understanding that experiences where a state of presence is reached are experiences of deeper dissolution than the ones where a core self is present. The self present in *Core self* is still more structured than the one present in *State of presence*. Let us therefore further our description of *Core self*.

Core self (see *Core self* in *5.1 Codebook*) refers to the experience of the presence, in the experiential field, of a self deprived from most of its characteristics, but still identifiable as a self separated from the rest of the experiential field. *Core self* is a special category, since it refers to a pattern of presence of multiple categories: specifically, *Locus*, *Sense of identification*, sometimes *Sense of control (active/passive)*, and *Sense of mineness*. In *Core self*, the self is still a multi-elements entity. The core self, that is, what remains of the self at the peak of certain dissolution experiences, presents a locus, sometimes a certain kind of (passive) activity, and the sense of mineness. Although the co-researcher identifies with the core self, they perceive it as something different from their usual experience of self, of which it is the impoverished version. The elements present in *Core self*, the last self-elements remaining, are also understood as the most fundamental and stable constituents of the self. Consider how in the following excerpts cr. Morella and cr. Rigoberto describe their experience of the stability of the core self:

> (102) It's like just a specific location of where I am and [it has] this feeling of being grounded, like really stable. (...) Sort of something to hold onto, almost. (...) It's sort of strong and... the clearest and the non changing aspect of the whole experience. (...) It's like the circle [– i.e., the core self –] is… my *stability*, in a sense. It's like *awareness*. That *I am*, in a sense, this feeling of *being*, is the circle. But there is also like, *awareness*, of everything else, that also feels like *me*. But this circle feels more like *stable*… *me*. (DE_A)

(103) I think there's like a core of my experience, which… (...) This ball of light, you know, it changes with my experience, but this… This core stays the same. (DE_D)

Core self is a term that, although already present in literature (Gallagher, 2000; Zahavi, 2005), emerged from the co-researchers' reports. Gallagher and Zahavi use the term *core self* as a synonym of minimal self. Our *Core self* has the sense of mineness, that is, minimal self, as its fundamental characteristic, but it is not limited to it.

When they experience a core self, the co-researcher still experiences some entities of their experiential field as world. This does not happen in *State of presence*, or better: self and world cannot be identified in two (or more) different entities, but in different aspects of the same entity (i.e., the totality of the experience). In *State of presence*, the whole experiential field is experienced as a unity. While *Core self* refers to a multi-elements entity of an experience, *State of presence* refers to a whole mode of experiencing. Usually, a single quality is experienced, and the co-researcher does not perceive to be an element separated from it. This is the case, for example, of cr. Gianpaolo, who, in DE_B_1, experienced solely the color red (83). In such a state, the co-researcher experiences neutral emotions, and a complete absence of control and concerns. The co-researcher is fully immersed in their experience, and no experience of self as an entity is present. In a way, there is only the experience (that can be the experience of something: for example, of the color red, as we have seen, or of warmth). However, such experience is given in a first-personal mode: the sense of mineness, and therefore a minimal self, is still present. In this way, in *State of presence*, self and world represent different aspects, and not different entities, of the same experience. Namely, the sense of mineness, and, for example, the sense of redness.

Recapitulating, *Core self* and *State of presence* are special categories describing two different ways in which the self presents itself during the peak phase of dissolution experiences, when most of the self-elements, along with the usual structure of the self, have disappeared from the co-researcher's experience. The sense of mineness is a constitutive element of both of them. However, while in the *Core self* the sense of mineness is accompanied by a locus, a sense of identification, and, sometimes, a sense of control, in *State of presence* the sense of mineness is the only self-element left. We believe the experiences that reach a state of presence to have a higher degree of dissolution than the ones that present a core self.

To investigate a certain phenomenon, one often has to explore when it functions in unusual ways, or when its usual structure and functioning get disrupted. This is what we did investigating the experience of the self in dissolution experiences. Our findings show a self, initially a complex and coherent multi-elements entity, more or less gradually getting disrupted throughout the phases of a dissolution experience. Its various elements lose coherence, and most of them, eventually, disappear. Our results about *Core self* show how a locus, and sometimes a sense of control, are the last self-elements that the co-researcher identifies with, and the last to remain before the sense of mineness. In the cases of the deepest dissolution experiences we investigated, the sense of mineness is the only remaining aspect to identify a self.

Our findings about the persistence of the sense of mineness throughout the whole length of a dissolution experience seem to be discordant with what is supported, for example, by Ataria et al. (2015), Letheby and Gerrands (2017), and Millère (2017). They argue that the minimal self gets affected during dissolution experiences, while we found that it does not get affected. However, we believe that this discordance is due to a different understanding of the concept of minimal self: for us, the experience of mineness is enough for a minimal self to exist.

Our findings support the non-substantialist views on the self, since they support the hypothesis that the sense of mineness is a fundamental constituent of experience, and that it represents the minimal experience of self. Based on this, we can affirm that if there is experience, there is a self.

However, the experiential meaning of *a self* (i.e., how a basic self presents itself in experience) might present various possibilities. We found cases of presence of multiple selves and of shared experience (i.e., experiences in which the sense of mineness was perceived as shared). We address them, respectively, in *6.5.2 Selves* and in *6.5.3 Sense of Shared Mineness*.

6.5.2 Selves

The loss of coherence between self-elements can mean, as we have seen, that some of them are not identified as *self* anymore. However, it can also happen that the co-researcher keeps identifying them as self, and that with their lost coherence, the co-researcher comes to experience more than one self. In the present subsection we address the experience of a multitude of *selves*. Consider cr. Gianpaolo's report:

(104) [If you ask me] 'does either of these fields of experience belong to a subjectivity, or an entity, or a being', the response is going to be yes, two. There is a seeing being, and a thinking being, and then in a couple of moments there is a sensing being. So it feels like these are being witnessed by a different me. (...) The me is not unified. (...) Now, when I'm reasonably sane, experience is present to me, to one me, in a trans-modal way. It's a unity of experience, but then depending on what I'm doing I can break it down, the vision, and stuff. Here [during the dissolution experience], each modality of experience has its own observer. (...) It feels that here, right now [during the interview], the me, this trans-modal center that's observing the world, is in one location in space. Not really geometric space, in the space of my experience. Here [during the dissolution experience] it feels like the me observing the visual and the me observing the language-y thought-y bit, (...) they have a separate location in space. (...) These things, this has a separate mineness than this has. (...) [The thinking] has its own mineness, and [the visual] has its own mineness. And then the bodily also has its own mineness. (DE_B_2)

cr. Cedar describes his experience of there being two selves, one experiencing from the upper part, and one experiencing from the lower part of his body:

(105) It's hard to think about, for example…my lower part of the body, in the context of my relation to the upper environment. It seems like I can only think about the lower part of the body in relation to this [lower] environment. (...) I *am* [experiencing both of them], but I'm also… not? Yeah I mean, I'm experiencing both, but it's very… I'm not even sure if, the same s…elf is experiencing both? (...) I experience them at the same time, when I say "*I* experience them at the same time", I think there's like, in a way, two different *I*s. (...) I *have* to say that they're two selves. (...) See, even when you ask me 'how is it to be you'… When I think about it now, I *have* to think alternating between the two selves. (...) I can't think about them parallel-y. I have to think about… one after the other, sequentially. (...) It's not how I am in one, how I am in the other!, because they're… How *X* is in one and how *Y* is in the other. (...) There is this discontinuity between… *those two* and me! Because they are two, and now [during the interview] I'm not two! (...) It's hard to look from this perspective of *one* me, into two of those! (...) They were happening parallel-y! There were two of me parallel-y. (...) There's no *one* above them to say that this one was in that and in that. (...) It wasn't me who was experiencing that at the same time, it was two different *me*s! (DE_C)

6.5.3 Sense of Shared Mineness

Our data suggest that the sense of mineness, the most basic experience of a self, can vary in how it presents itself in experience. In particular, during advanced phases of an episode of dissolution, the sense of mineness can sometimes be experienced as a sense of *shared* mineness. As we defined it, it refers to the co-researcher's experience of the sense of mineness as being shared with one or more other people, or elements or dynamics, present in the co-researcher's experiential field. In other words, [it is] the fundamental experience of perceiving one's experience as presenting itself immediately as the

experience of the co-researcher and of other subject(s) of experience (see *Sense of shared mineness* in *5.1 Codebook*, and *Sense of mineness* in Table 19). Note that the sense of shared mineness does not refer to the mere impression of sharing the same time, space, and event with another entity other than the co-researcher.

While Salice et al. (2017) argue that the phenomenon of "an immediate, non-observational access to the we-action identical to the one advocated for the singular case" (p. 206) do not occur, we merely claim the possibility of the presence of a *sense* of its occurrence.

Although we do not exclude that the sense of shared mineness can be experienced with different kinds of entities as well, the cases emerged from our data involve a sense of mineness shared with other people (74, 75, 76).

The sense of shared mineness represents a particular experiential phenomenon that can occur during episodes of dissolution, and in which the sense of mineness is instead experienced as a sense of *our*ness. This phenomenon does not only tackle our main research interest, the self, suggesting that there is a different way of experiencing it—as a *we* rather than an *I*. It also addresses the somewhat opposite issue of how we perceive the other side of an experience—the *other* (we address it in *6.6 Other*). When the co-researcher is experiencing a sense of shared mineness, as we found in various episodes of dissolution, the self and the other blend in the most fundamental aspect of the self: the sense of mineness.

As addressed in *6.8 Further Studies*, we believe that the experience of multiple selves and the sense of shared mineness require further investigation.

To conclude the *6.5 Self* subchapter, our study is of crucial importance for the research and the on-going discussion on the nature of the self. Our investigation of episodes in which the self as usually experienced gets dissolved, sheds light on its experiential structure. Most importantly, it provides evidence on the most essential nature of the self, that is, what remains of the self when the rest of it is gone.

6.6 Other

In our investigation of experiences of boundaries we dealt with both sides of the division: self and world. Although our study focuses more on the experience of the self, in previous subsections of the *6. Discussion* we also addressed our findings on how the

world is perceived, both during daily life experiences and across the different phases of dissolution experiences. In the present subsection we briefly present our insights about a specific part of the world: other people. Although the experience of other people is not something that we planned to investigate at the beginning of our study (see *4.1 Research Questions*), the analysis approach that we adopted, *sequential analysis*$_g$, allowed the emergence of a new line of inquiry. This occurrence provides additional validity to the research. Namely, it proves that we did not force our assumption on the data, but instead, our results emerged from the co-researchers' descriptions.

14 out of the 18 of the investigated experiences (seven out of eight daily life experiences and seven out of 10 dissolution experiences) include the presence, physical or not, of one or more people other than the co-researcher. Following, we present the different experiential aspects involved in the experience of other people that emerged from our data. In the present thesis, we do not address them in depth. A more detailed description constitutes the object for further work.

The experiential phenomena further addressed emerged from the analysis of either daily life experiences, or dissolution experiences, or both.

First, when the presence of a person is not physical, its experience often involves a mental image: the co-researcher *mentally sees* the person involved.

Second, the experience of another person's presence can be reflected in the experience of the boundaries (see *Boundaries* in *5.1 Codebook*): a more or less clear division is experienced between the self and the other person, to delineate which is one and which is the other (6).

Third, the experience of the presence of another person can include the experience of their body in space. This can be experienced as a sense of density and solidity (see Oblak et al., 2021), as well as a sense of pressure on the co-researcher's body. As described by Kōbō Abe in *The Face of Another* (1964/1966), "The side of my body next to you was as sensitive as if it had been overexposed to the sun, and each one of my pores panted for breath like dogs sweltering in the heat" (p. 187). Consider, for example, how cr. Morella describes the physical presence of her boyfriend:

(106) It feels like there is a bit more dense feeling here on my right side, [where my boyfriend is]. (...) I feel it almost like a shadow, sort of like something pressed on the right side of my hand and my arm over here. I feel almost like there's a soft pressing on my arm and on my lower arm over here. (...) It has

> just this density, like a feeling of something being here. Sort of this pressing, but also not a bodily pressing again. It's just like, it's almost like something more dense on me, but not bodily pressed. It doesn't have the tactile quality, but it feels the same without the tactile quality. (dlE_A)

Fourth, we saw how the presence of a sense of agency and control is often associated with the self. On the opposite side, our co-researchers reported on the experience of not exerting control over what is understood as the other person (see *Sense of control (activity/passivity)* in *5.1 Codebook*). In cr. Alienora's words:

> (107) I have this feeling, like there are parts in which I cannot enter, of the other person. (...) It's a part of the environment (...) that is capable of acting outside of my control. (...) I know that I cannot move and act with the other body, which is the other person. (DE_E)

Fifth, the way in which co-researchers relate with the world often changes in specific ways when the world-element at issue is another person: the co-researcher has a specific way of attending, or attitude towards, a world-element, that is specific to the world-element being another person (see *Attitude* in *5.1 Codebook*). cr. Gianpaolo reports on this while describing his daily life experience:

> (108) [It's] primarily a visual thing. (...) Attending to a different person as if they're a person and they have a complex in their life and a point of view, I don't look at their face, I look inside of their heads. Like, not actually, but the spatial location that I'm attending to is beyond the eyes. (...) The difference between looking at someone as an object [and] looking at someone as a person is that when you look at them as an object you're literally on the surface level, but [when] you're looking at them as a person you look inside of their head. (dlE_B)

Sixth, the co-researcher can experience affordances that are specific to the presence of another person (i.e., that a world-element which is not a person could not offer; see *Affordances* in *5.1 Codebook*). In other words, the presence of another person enables affordances which are specific to the presence of another person. cr. Gianpaolo describes how the only sense of humanness that he experiences in a depiction of the Christ brings to his experience new potentials, such as the potentiality to empathize:

> (109) The humanness, the spark of life, is a quality in space. There is a difference in space that separates me and objects, and me and people. The space between me and people is… it contains different stuff, it contains different potentials. (…) Depending on the person it might contain the potential of touch, [etc.]. (…) In that moment (...) it was a specific energy in space that was coming specifically from Christ. (…) The most concrete form it took was that there was a sense of… empathy. (…) It was this immediate opportunity to feel with someone. To empathize with someone. (DE_B_1)

Seventh, when another person is present, co-researchers often report on perceiving directionalities either directed, and/or starting from the other person (see *Directionalities*

in *5.1 Codebook*). We saw how directionalities are often associated with the co-researcher's intentions. It can also happen that some directionalities are associated with the intentions that the co-researcher perceives in the other person (41).

Eighth, in describing the experience of another person being present in their experience, co-researchers often mention an atmosphere or feeling that is specific to the particular person involved (33; see *Atmosphere* in *5.1 Codebook*). This element has been reported as being difficult to describe.

Ninth, sometimes the co-researcher experiences a connection with another person. This connection contributes to the experience of the presence of the other person. In other words, since in the co-researcher's experience there is a connection, there is also someone with whom the connection is established, someone *other* than the self: (110) "you can only be connected with someone, if that someone is somebody else" (dlE_E). In cr. Alienora's words:

> (111) I felt so one with [my boyfriend]. But here's the paradoxical part! Even though I felt one with him, I still have to, at least somehow, I had to perceive and understand him as something else. Something that I was connecting with, something that I became one with. (DE_E)

Tenth and last, the presence of another person can, during episodes of dissolution, sometimes be experienced as a sense of shared mineness (74, 75, 76; see *Sense of shared mineness* in *5.1 Codebook*). We already discussed it in *6.5.3 Sense of Shared Mineness*. Notice how, in the case of episodes of dissolution, our attempts to describe both the experience of the self and the experience of the other led to the same category, *Sense of shared mineness*, where the two blend together in the experience of a *we*.

6.7 Limitations

Throughout our research, we encountered various difficulties and limitations. We address the main ones in this subsection.

Most of our co-researchers expressed difficulties in describing some aspects of their experiences. This often happened when investigating dissolution experiences. We believe that this might be due to two main reasons. First, the nature of dissolution experience is hard to express in words. Self transcendent, mystical, or non-dual experiences are often described as ineffable (Ataria, 2016). Second, because of the nature of the language, which lacks proper words to describe episodes of dissolution. Furthermore, the non-dual nature of certain states is not easily describable in a language that presupposes a dual

structure. As cr. Helena said during one interview: (112) “I realized also [that this experience] is very hard to describe in words” (DE_H).

On the one hand, co-researchers reported having difficulties in describing their dissolution experiences due to their unusual nature: (113) “*All that I am*, it feels weird to talk about this, it's difficult to describe, because… You know, without a body, and without being attached [to the world], this is like super impoverished” (DE_B_2). (114) “I don’t know, my usual senses can‘t see it, it’s hard to describe it” (DE_F_1).

On the other hand, we encountered difficulties in describing aspects that co-researchers perceive as normal, basic, so usual that it is hard to notice and describe them. We found this as typically characterizing the experience of the self in daily life experiences. When asked to further describe his point of view during his daily life experience, cr. James said: (115) “It’s just so implicit!, like… It’s very hard to describe, it’s just normal! It’s just normal. I’m used to it” (dlE_G).

Although this was mainly reported in relation with daily life experiences, also dissolution experiences present elements and characteristics so basic to experience, that they are hard to describe. This is commonly the case of a minimal sense of self (see Albahari, 2006). As reported by cr. Rigoberto: (116) “[It is something fundamental to experience.] Some kind of ego, or like, minimal self… It’s very hard to describe” (DE_D).

We believe that the sense of self, one of our main interests in this inquiry, represents a difficult aspect to address in phenomenological interviews—and to research in general (Nave, 2021). As beautifully put by David Chalmers (1996),

> one sometimes feels that there is something to conscious experience that transcends all [the] specific elements: a kind of background hum, for instance, that is somehow fundamental to consciousness and that is there even when the other components are not. This phenomenology of self is so deep and intangible that it sometimes seems illusory, consisting in nothing over and above specific elements. (...) Still, there seems to be something to the phenomenology of self, even [if] it is very hard to pin down. (p. 10)

However, we believe that investigating both episodes of dissolution and the experience of the self, although challenging, is not impossible. It can become easier, and deeper levels of description can be reached, with a greater experience of interviewers and

interviewees. Furthermore, we think that dedicating even more interviews to the investigation of a single experience would result in more detailed reports.

Greater experience in investigations on the experience of the self and dissolution experiences might lead to more operationalized and standardized ways of conducting interviews on these topics (as in Parnas et al., 2003). If we specified better our method, it could be used for further studies, to go more in depth or investigate different aspects of experience. For example, our study lacks an analysis of the degree of dissolution present in the investigated experiences, such as those presented in Nave (2021). Furthermore, once better defined, our method would be more easily intersubjectively discussed, and our findings would be more easily reproducible. Our research would therefore be more accessible, and it would more easily access an inquiry shared by more researchers.

We believe that the empirical investigation of dissolution experiences and of the experience of the self during episodes of dissolution would benefit from a higher degree of interdisciplinarity. Although our study is focused on the experiential aspect of the phenomena at issue, the inquiry of additional dimensions would provide a more complete picture. Adopting empirical phenomenology as the only empirical methodology is a limit that we hope to address in further studies.

The nature of our study allowed us to conduct only a limited amount of interviews, on a limited amount of experiences. Furthermore, our investigation would have benefited from a bigger, and more variegated, sample. Collaboration from more co-researchers in the coding process would have guaranteed a higher validity to our findings.

6.8 Further Studies

We believe that our work opens the way for many further investigations, in different directions. In this subsection we are presenting some of them.

We plan to address the various limitations of our study. In particular, we intend to adopt an empirical methodology with a higher degree of interdisciplinarity, opting for a neurophenomenological approach. Furthermore, we aim to enlarge our sample, to investigate a greater number of experiences, and to conduct a greater number of interviews for each experience. More co-researcher could take part in the analysis process.

In addition to meditation, psychedelics, nature, art, intimacy, and psychopathology, more contexts in which dissolution experiences have been reported could be included—for example, sleep and dreams (Alexander, 1988), and the overview effect (Yaden et al., 2016). Additionally, different further studies could focus solely on one specific context. We think that this might be particularly relevant for those contexts in which, differently from meditation and psychedelics, dissolution experiences are not largely scientifically investigated yet: in particular, nature, contact with art, and intimacy.

Research institutes connected to cognitive science such as Mind & Life (https://www.mindandlife.org/) and Mind & Life Europe (https://www.mindandlife-europe.org/) have recently shown growing enthusiasm for the investigation about the relationship between humans and nature. In occasion of the Mind & Life and Mind & Life Europe Summer Research Institutes 2021, the principal investigator presented two posters about an ongoing project, solely on dissolution experiences in nature (Caporusso, 2021a, 2021b). Aims of the study are to provide a comprehensive literature review on the phenomenon, to investigate the phenomenology of dissolution experiences in nature, and to explore possible connections between such experiences, mental health, and green behavior. To this end, we plan to integrate phenomenological interviews with psychological questionnaires on mental health and green behavior. The findings are supposed to be interpreted through the contextual framework of the ongoing discussion within ecopsychology (Roszak et al., 1995). The study has the further concern of investigating whether dissolution experiences can be initiated volitionally, for example through specific gestures or attitudes. We believe that this is of interest not only relatively to the context of nature, but to dissolution experiences in general.

In addition to that, our investigation on dissolution experiences that occur in contact with art could be furthered. Phenomenological interviews could be conducted on experiences of perceiving and/or creating art. Such experiences could be induced, rather than selected from the co-researchers' past. The investigation could adopt a focus on the self/world distinction, providing an innovative perspective on the study of the perception and the creation of works of art. Supposedly, not all of the experiences would represent episodes of dissolution: the phenomenological investigation would inquire on the frequency and the elements contextual to dissolution experiences occurring in contact with art. During the experience, physiological and neuroimaging techniques could be implemented (for a neurophenomenological study where both phenomenological

interviews and physiological techniques were used, see Roder et al., 2020), as well as eye tracking (for a study in which an eye tracker is used to investigate the experience of observing works of art, see Reitstätter, 2020).

Furthermore, we propose a research focused specifically on dissolution experiences in intimacy. This study could have a different focus than the one presented in this thesis: instead of the experience of the *self* in dissolution experience, it could focus on the experience of the *other* in dissolution experiences. The emergence, in our study, of interesting insights on the experience of others (meant as other people) showed the relevance of the investigation of dissolution experiences in the research about how we experience others. We think that it would be fruitful to continue in this direction, and we think that research on the topic could be integrated to the work on the experience of *presence* (Oblak et al., 2021; Oblak et al., 2022), and to the research carried out by Dan Zahavi and colleagues at the Center for Subjectivity Research of the University of Copenhagen about *we experiences*—that is, experiences of being part of a social structure formed by more than one individual ("what it means to feel, think, and act as part of a we" (Center for Subjectivity Research, 2021)).

Another context that we believe important to investigate further is psychopathology. This could be done in two different directions: a further inquiry into the differences that we found between the experience in the context of psychopathology and the others, and a study with the intent of implementing gestures to prompt dissolution experiences in the context of psychopathology.

Our investigation on the experience of the self in episodes of dissolution opened new lines of inquiry: experiential phenomena that emerged from our data, such as the experience of multiple selves and the sense of shared mineness, need to be further studied.

Furthermore, we believe that it would be interesting to investigate further the relationships that emerged between some of our categories, for example between the narrative understanding of oneself and a specific way of presentation of thoughts. We observed that when the narrative understanding of oneself is present, thoughts are often experienced as positioned at the back of the head and in the form of inner speech.

Our study shows how specific experiential categories (first and foremost, the perceived self/world boundaries) *change* throughout the phases of a dissolution experience. In a

further investigation, we plan to focus on the experience of change, using the example of dissolution experiences to inquire into its nature. This would be relevant because the concept of change is often left undefined, or vaguely defined, in various disciplines, and in particular "to our knowledge, (...) no empirical phenomenological study aimed at an accurate phenomenological description of how it is to experience change per se" (Kolenik & Caporusso, 2021). Our exploration is going to be based on the exploratory neurophenomenological single case study on change in mood conducted by Tine Kolenik together with the principal investigator (2021).

We found it extremely interesting to investigate the experience of the self in daily life experiences, and we believe that a more in-depth investigation on the topic should be conducted. We discovered that dissolution experiences often occur during our daily life, in line with the graduality of the phenomenon of dissolution experiences supported by other researches (Dor-Ziderman, 2016). We think that it would be relevant to explore this further.

Differently from other studies (e.g., Nave et al., 2021), we did not address the specific degree of dissolution of the investigated experiences. The method to assess the degree of dissolution developed by Nave et al. could be adopted and used to investigate how dissolution experiences are present in daily life, but also if different contexts generally present different degrees of dissolution.

We wish to conduct a more comprehensive interpretation of our findings through a specific framework. Specifically, we believe that Bayesian models and the predictive processing framework would be particularly fitting (e.g., see Limanowski & Blankenburg, 2013). Consider how Millière (2017) argues that the specific disruption of the self occurring in dissolution experiences "is consistent with Bayesian models of phenomenal selfhood, according to which the subjective structure of conscious experience ultimately results from the optimization of predictions in perception and action" (p. 1).

7. Conclusion

In this final chapter, we set forth a conclusion to the present thesis, summarizing our work and its main implications.

We defined dissolution experiences as experiential episodes during which the individual experiences a change in their self boundaries, that is, the perceived delineation between the self and the world (i.e., non-self), such that this distinction becomes fainter or

less clear. This can in some cases lead to a feeling of unity with the world or elements of it.

Descriptions corresponding to this definition can be found in both academic and non-academic literature, provided by different schools of thought around the world and different traditions which have investigated consciousness from the most ancient years. Different names are used to address dissolution experiences, such as *self transcendent experiences* and *ego death*. The existing literature on dissolution experiences focuses on two main features of these episodes: a dissolution, or transcendence, of the self, and a sense of unity with the world. We decided to focus our study mainly on the first aspect: on the experience of the self during dissolution experiences. Furthermore, literature reports non-dual states to be experienced at the peak of episodes of dissolution.

Most of the resources on dissolution experiences address episodes of dissolution as occurring in a sole context: for example, dissolution experiences that occur in the context of meditative practices only. We introduced literature about dissolution experiences occurring in six different contexts: art, nature, love and intimacy, psychopathology, the use of psychedelic substances, and meditation. Different strands of literature usually utilize a different terminology. Our pilot study supports the hypothesis that dissolution experiences that occur across different contexts represent the same kind of phenomena. By this we mean that they present the same experiential structure.

We then focused on the aspect of dissolution experiences that we are interested in the most: the experience of the self. We provided an overview of the literature, and of the current discussion, on what the self is (or is not), and on how it is experienced. Different views on the self are the non-self, substantialist, and non-substantialist ones. Different theories and notions, like the *narrative self* and the *minimal self*, delineate the self differently, or delineate different aspects of it. We specifically addressed what the literature tells us about how the self is experienced during daily life experience, and during dissolution experiences. Phenomenologists argue that every experience is fundamentally characterized by the *sense of mineness*. The same is held by Hinduists about the similar concept of *witness-consciousness*. In certain interpretations, the sense of mineness and witness-consciousness represent the most essential experience of the self. Although in daily life experiences they would be accompanied by a complex, multi-elements experience of the self, at the peak of dissolution experiences they would represent the only self-element left.

We proceeded to describe our pilot study. After that, we presented our main study: an empirical phenomenological study on dissolution experiences, with a focus on the experience of the self during episodes of dissolution. For a comparison, the study also involves the investigation of daily life experiences. Our research questions were: *RQ1) how are dissolution experiences characterized experientially, compared to daily life experiences?; RQ2) how is the self experienced throughout a dissolution experience, compared to how it is experienced in daily life experiences?* We conducted in-depth phenomenological interviews on 18 experiences: eight daily life experiences, and ten dissolution experiences. The investigated dissolution experiences occurred across six different contexts: art, nature, love and intimacy, psychopathology, the use of psychedelic substances, and meditation. To do so, we collaborated with eight co-researchers. We conducted the interviews adopting an approach based on the micro-phenomenological interviewing method, and we conducted the analysis of our data following the general guidelines for qualitative research. The various phases of the study respect criteria of validity.

The codebook we developed and the explanation of its structure can be found in the results section. Most importantly, the state of the high-level category *Boundaries* reflects the delineation between the groups of categories *Self*, *World*, and *Interaction between self and world*.

We then discussed and interpreted our findings. Although two of the investigated daily life experiences qualify as dissolution experiences (i.e., episodes of dissolution occurred in two out of the eight investigated daily life experiences), the other six daily life experiences are experientially comparable to the initial phases of a dissolution experience, where the dissolution is not present yet.

We described how the various experiential elements emerged from our data present themselves differently in experience across the various phases of an episode of dissolution. In particular, we subdivided dissolution experiences in: initial phase(s), middle phase(s), peak phase, and final phase(s), and for each of them we presented the state of *Boundaries*, *Self*, *World*, and *Interaction between self and world*. In the initial phase(s) of an episode of dissolution, the self/world boundaries are strong and clearly defined, and the interactions between self and world reflect this division. Both the self's attitude and the world's atmosphere are closed and antagonistic. The co-researcher perceives to be active and in control, and can sometimes experience unpleasant emotions.

In the middle phase(s), the co-researcher lets go of control. Their attitude becomes more open and friendly, as the atmosphere of the world, which is often also familiar and trustworthy. The boundaries start to soften and blur, and the self/world dynamics of interactions reflect it. The co-researcher perceives to be more passive, and their emotions are usually pleasant. In the peak phase of a dissolution experience, the boundaries reach the maximum dissolution relative to the specific episode. Often, it does not make sense to talk about the dynamics of interaction between self and world, the self's attitude, and the world's atmosphere anymore, since self and world are hardly distinguishable, at this point. There is no experience of control, and the co-researcher's emotions are usually of neutral valence. After the peak phase, the co-researcher's experience more or less gradually goes back to being comparable to that of the initial phase(s).

We argued that the dissolution experiences that occurred across different contexts all present comparable experiential structures. The most significant difference was found in how the world was perceived during the experience that occurred in the context of psychopathology, compared to the others.

Our main findings on the experiential structure of dissolution experiences include the gesture of trusting the world and letting go of control. We found that in the great majority of the dissolution experiences we investigated, phases of more advanced dissolution are preceded or accompanied by: the sense the world can be trusted, and the letting go of the control exerted by the co-researcher. This process can be more or less volitional, and more or less explicit. Our findings about the gesture of trusting the world and letting go of control resonate with recent findings of Nave et al. (2021).

We found that in daily life experiences, as well as during the initial phases of dissolution experiences, the self is experienced as a complex, coherent multi-elements entity. In further phases of episodes of dissolution, the self-elements decrease in number and lose coherence between each other. The identification with a personality and a history, and with a body—and their presence altogether—are the first to disappear from the co-researcher's experience. We found that often, in advanced phases of dissolution, what is left of the self is only a *core self*: an entity that usually presents a location, a sense of (passive) activity, and a sense of mineness, and with which the co-researcher identifies. In even more advanced states of dissolution only the sense of mineness, between all the self-elements, is present. The co-researcher experiences a state of almost non-duality, which we called *state of presence*.

Our findings discard the classical interpretation of the self, which sees it as an unchanging entity, separated from the world. They support a non-substantialist view on the self, instead of a substantialist or non-self one. Furthermore, they support the hypothesis that the ipseity-aspect of experience, that is to say, its sense of mineness, is a fundamental aspect of all experience. Therefore, they suggest that whenever there is experience, an experience of self is present. In some cases, the co-researcher experiences the presence of multiple selves, a phenomenon associated with the loss of coherence between self-elements. In other cases, the fundamental experience of the sense of mineness—the minimal form of experience of the self—is experienced as being shared (i.e., one's experience presents itself immediately as the experience of the co-researcher and of other subject(s) of experience).

Although the experience of the presence of other people was not meant to be the main focus of our study, our data provided interesting insights on the matter, which we therefore briefly addressed.

We then delineated the main limitations of our study, and the further studies that we think could and should follow ours.

We believe that our study is relevant mainly for the following reasons. It is relevant for the research on dissolution experiences: in particular, it demonstrates that the separated lines of research on dissolution experiences that occurred across different contexts can be unified. It provides a terminology that addresses all the different kinds of dissolution experiences. The experiential nature of episodes of dissolution is further clarified, without it being bounded to a singular context, and providing a focus on the experience of the self. Furthermore, the findings relative to *Trusting the world / Letting go* provide important insights both for the research on dissolution experiences, and for psychopathology research. Our study is also relevant for the research and the on-going discussion on the nature of the self. By investigating episodes in which the self, as it is usually experienced, is affected, our study sheds light on how the self might be structured. Most importantly, it shows what remains of the self when most of it is gone, providing insights for the inquiry about the nature of the self, and its experience.

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Glossary

Advaita Vedānta: "Advaita Vedānta is one version of Vedānta. Vedānta is nominally a school of Indian philosophy, although in reality it is a label for any hermeneutics that attempts to provide a consistent interpretation of the philosophy of the Upaniṣads or, more formally, the canonical summary of the Upaniṣads, Bādarāyaṇa's Brahma Sūtra. Advaita is often translated as 'non-dualism' though it literally means 'non-secondness'" (Menon, n.d.).

Affordances: As written by James J. Gibson (1972), "the affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. (...) I mean by [the noun affordance] something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment" (p. 127). Charles D. Laughlin and C. Jason Throop (2009) elaborate: "The development of knowledge about the world is a process of interaction in which things in reality afford the experiencing animal particular qualities relative to the animal's ability to model its environment. That means that the affordances of things in the world depend upon the physiological structure of the animal." (p. 145).

Attentional disposition: In Nave et al. (2021), "the category of attentional disposition (...) reflects the way participants were disposed towards objects of perception. It encompasses the

broadness of the scope (or aperture) of attention, being wide or narrowly focused, as well as its temporal dynamics, that is, the extent to which the orientation of attention was stable or dynamic" (p. 9).

Atman: In Advaita Vedānta, self. "Consciousness understood as the ground of every individuated being" (Ram-Prasad, 2011, p. 221).

Attribute categories: Each attribute category describes an attribute that can refer to multiple basic categories. An attribute category also describes the overall experience of that attribute. This can come in two forms. First, the co-researchers might provide a description of the overall experience of that attribute during a certain phase of an experiential phase. Second, the descriptions of how a specific attribute category is experienced relative to different basic categories might provide an overview of the general way the attribute category is experienced.

Basic categories: Experiential categories grouped in the groups of categories *Self*, *World*, and *Interaction between self and world*. Each basic category describes an experiential element or dynamics.

Beat generation: "In the 1940s and 50s, a new generation of poets rebelled against the conventions of mainstream American life and writing. They became known as the Beat Poets—a name that evokes weariness, down-and-outness, the beat under a piece of music, and beatific spirituality. At first, they organized in New York City, Los Angeles, and San Francisco. By the 1950s, poets at the heart of the movement had settled in the Bay Area, especially in neighborhoods near Beat poet and publisher Lawrence Ferlinghetti's bookstore, City Lights" (Poetry Foundation, n.d.).

Bracketing: In phenomenology, putting aside "everyday assumptions and convictions about the experienced world" (Kordeš & Demšar, 2018, p. 222) in observing the latter.

Brahman: In Advaita Vedānta, supreme reality. "Consciousness as the universal and singular basis for all reality" (Ram-Prasad, 2011, p. 220).

Categories: Collections of data that share similar characteristics; generic concepts used to label groups of data (see Flick, 2018).

Codebook: Instrument of qualitative research. The product of the process of labeling that enables the grouping of several elements under one concept (Flick, 2018). In the present thesis, a list of the developed categories, groups of categories, and subcategories, comprehensive of a description, examples, and possible considerations for each of them.

Coding: The process of developing and assigning descriptive categories to lines of the text, or parts of the qualitative data, being analyzed. In Flick's words (2018), "the process of developing codes, categories and concepts" (p. 454).

Co-researchers: "Participants as co-researchers refers to a participatory method of research that situates participants as joint contributors and investigators to the findings of a research project. This qualitative research approach validates and privileges the experiences of participants, making them experts and therefore coresearchers and collaborators in the process of gathering and interpreting data" (Boylorn, p. 599).

Core self: Used by Gallagher (2000) and Zahavi (2005) as a synonym of *minimal self*. See *for-me-ness*, *first-personal-givenness, ipseity*, *minimal self*, *mineness*, and *witness-consciousness* in *Glossary*. For our definition, see *Core self* in *5.1 Codebook*.

Cosmic consciousness: "A higher form of consciousness than that possessed by the ordinary man" (Bucke, 1905, p. 1). In the present thesis, the term is used as a synonym of dissolution experiences.

Daily life experiences: Experiential episodes that the participant would not, at least in absence of a more in-depth phenomenological observation, consider particularly meaningful, strongly emotionally charged, or in any relevant way different from what is experienced as *usual*. Daily life experiences amount to *normative experiences*.

Descriptive experience sampling: "Method [to explore inner experience that] uses a random beeper to cue people to observe moments of their inner experience as they move through their natural environments" (Hurlburt & Heavey, 2006, p. viii).

Diachronic dimension (of experience): The temporal or dynamic dimension of the experience, that is, its unfolding in time (Petitmengin, 2006, p. 248). See also *synchronic dimension (of experience)* in *Glossary*.

Diachronic unity of the self: The experience of the stability of the self through time (Zahavi, 2014; see also Fuchs, 2017).

Dissolution experiences: Experiential episodes during which the perceived boundaries between self and world (i.e., non-self) become fainter or less clear. This is usually accompanied by a sense of unity with the world or elements of it.

Duality: The property of there being, "for some particular domain, (...) two fundamental[—and fundamentally different—]kinds or categories of things or principles" (Robinson, 2020).

Ego: Concept similar to *persona* and used in contrast with *self*, seen as "the transcendent phenomenon of (...) ipseity" (Sartre, 1943/2018, as cited in Zahavi, 2005, p. 115). "Higher-level, reflective self-consciousness" (Fuchs, 2015, p. 326).

Ego dissolution: "Dissolution of the sense of self and the loss of boundaries between self and world" (Millière, 2017, p. 1). In the present thesis, the term is used as a synonym of dissolution experiences.

Ego death: "Loss of the separate self" (Harrison, 2010, p. 40). In the present thesis, the term is used as a synonym of dissolution experiences.

Empirical phenomenology: "Empirical research on lived experience" (Kordeš, 2016, p. 375).

Episodes of dissolution: See *Dissolution experiences* in *Glossary*.

Epoché: Also referred as *bracketing* or *phenomenological reduction*, the act of suspension of judgment while observing one's experience (see Husserl, 1950-2020).

Existential feelings: Existential feelings "amount to ways of relating to the world as a whole. (...) [They] are variants of a non-localized, felt sense of reality and belonging, something that all intentionally directed experiences and thoughts presuppose" (Ratcliffe, 2020, pp. 1-2). Existential feelings are understood as bodily feelings that form the pre-intentional structure of experience.

Final phase(s) (of a dissolution experience): The phases of a dissolution experience that come after its peak, and where the elements characterizing the dissolution decrease or disappear altogether. See also *initial phase(s) (of a dissolution experience)*, *middle phase(s) (of a dissolution experience)* and *peak phase (of a dissolution experience)* in *Glossary*.

First-personal-givenness: Of experience, to be given to the experiencer in a first-personal mode. See *core self*, *for-me-ness*, *ipseity*, *minimal self*, *mineness*, and *witness-consciousness* in *Glossary*.

For-me-ness: As Zahavi (2017) explains, "episodes characterized by a subjective what-it-is-likeness are not merely episodes that happen to take place in a subject, regardless of whether the subject is aware of them or not. Rather, the what-it-is-likeness of phenomenal states is properly speaking a what-it-is-like-for-meness. On this view, experiential processes are intrinsically conscious and hence self-revealing. They are characterized by an inherent reflexive (not reflective) or pre-reflective self-consciousness in the weak sense that they are like something for the subject, i.e., in virtue of their mere existence, they are phenomenally manifest to the subject of those experiences" (p. 4). For-me-ness constitutes the "distinctly different acquaintance with our own experiential life than with the experiential life of others (and vice versa), and that this difference obtains, not only when we introspect or reflect, but already in the very having of the experience" (p. 8). See *core self*, *first-personal-givenness, ipseity*, *minimal self*, *mineness*, and *witness-consciousness* in *Glossary*.

Haiku: In Gabriel Rosenstock's definition (2019), an haiku is "one-breath poetry, traditionally seventeen syllables (5-7-5), now increasingly practiced outside Japan as a free-style form, usually in three lines. It owes its impact and inspiration to a meditative

flash in which he/she who experiences the haiku moment merges suddenly with perceived phenomena" (initial unnumbered pages).

Higher-level category: It describes the general way in which the experiential field, and therefore other aspects of experience that are made present to an individual's consciousness, are structured. It structures the co-researcher's experiential field in groups in which the categories and subcategories are divided.

Inductive-deductive approach: The complementar adoption of an inductive approach (starting from the data to develop a theory) and of a deductive approach (testing a theory against the data).

Initial phase(s) (of a dissolution experience): The phases chronologically at the beginning of an episode of dissolution, when the elements characterizing dissolution experiences are not strongly present yet. See also *final phase(s) of a dissolution experience*, *middle phase(s) (of a dissolution experience)*, and *peak phase (of a dissolution experience)* in *Glossary*.

Intentionality: "In philosophy, intentionality is the power of minds and mental states to be about, to represent, or to stand for, things, properties and states of affairs" (Jacob, 2019).

Intercoder validation: Measure of agreement on the coding between two or more coders.

Ipseity: The self-givenness or self-referentiality that fundamentally characterizes consciousness, and that represents the most basic form of self is to be found (see Zahavi, 2005). See *core self*, *for-me-ness*, *first-personal-givenness, minimal self*, *mineness*, and *witness-consciousness* in *Glossary*.

Jīva: In Advaita Vedānta, persona. "Through its egoity (...) the empirical consciousness in the locus of every individuated being" (Ram-Prasad, 2011, p. 221).

Körper: Body as object (see Merleau-Ponty, 1945/2020).

Leib: Lived body (see Merleau-Ponty, 1945/2020).

Lived space: "Lived space may be regarded as the totality of the space that a person pre reflectively 'lives' and experiences, with its situations, conditions, movements, effects and its horizon of possibilities—meaning, the environment and sphere of action of a bodily subject. This space is not homogeneous, but [centered] on the person and his body, [characterized] by qualities such as vicinity or distance, wideness or narrowness,

connection or separation, attainability or unattainability, and structured by physical or symbolic boundaries that put up a rigid or elastic resistance to movement" (Fuchs, 2007a, p. 426).

Micro-phenomenology: "An interview method which enables us to bring a person, who may not be trained, to become conscious of his or her subjective experience, and describe it with great precision" (Petitmengin, 2006, pp. 230-231).

Middle phase(s) (of a dissolution experience): The phases of a dissolution experience between the initial phases and the peak phase of the experience, where the elements characterizing dissolution experiences start to be more strongly present, but not yet as strongly as they will later be in the experience. See also *final phase(s) of a dissolution experience*, *initial phase(s) (of a dissolution experience)*, and *peak phase (of a dissolution experience)* in *Glossary*.

Mineness: "The fact that the experiences are characterized by a first-personal givenness that immediately reveals them as one's own" (Zahavi, 2005, p. 124). See *core self*, *for-me-ness*, *first-personal-givenness, ipseity*, *minimal self*, and *witness-consciousness* in *Glossary*.

Minimal self: "Phenomenologically, (...) a consciousness of oneself as an immediate subject of experience, unextended in time" (Gallagher, 2000, p. 15). The "experiential sense of self" (Zahavi, 2005, p. 106). See *core self*, *for-me-ness*, *first-personal-givenness, ipseity*, *mineness*, and *witness-consciousness* in *Glossary*.

Narrative self: "The open-ended construction of one's own personal identity shaped by social and cultural factors" (Milliére, 2017, p. 10).

Non-self theories/views on the self: The non-self theories deny the existence of the self (Siderits et al., 2011).

Non-substantialist theories/views on the self: The non-substantialist theories do not see the self as a substance: it does not encompass properties that might involve variation, like agency (Siderits et al., 2011).

Objective indicators: In a (micro-)phenomenological interview, indicators "(both for the person speaking and for the person listening) which enable the identification of [the embodied and the disembodied] utterance positions" (Petitmengin, 2006, p. 257).

Oceanic feelings: As rephrased by Freud, feelings of "an indissoluble bond, of being one with the external world as a whole" (as cited in Saarinen, 2014, p. 4). They "come in two distinct forms: (1) as transient episodes that consist in a feeling of dissolution of the psychological and sensory boundaries of the self, and (2) as a relatively permanent feeling of unity, embracement, immanence, and openness that does not involve occurrent experiences of boundary dissolution" (Saarinen, 2014, p. 3). In the present thesis, the term is used as a synonym of dissolution experiences.

Over-soul: In Ralph Waldo Emerson's production, the transcendent oneness between the individual (and humanity), God, and nature, for which "everything is connected, everything is one" (Manzari, 2012, p.1). Concept inspired by the platonic *anima mundi* (world soul). In the present thesis, the term is used as a synonym of dissolution experiences.

Overview effect: "Overwhelming emotion and feelings of identification with humankind and the planet as a whole" prompted by the experience of "viewing the Earth from space" (Yaden et al., 2006, p. 1).

Panismo (or sentimento panico della natura): A sentiment of joyous communion with nature (Treccani, 2020) where the self shifts to the background, immersing itself into nature. Concept present in the Italian literary production between the 19th and the 20th century.

Pantheism: "At its more general (...), the view that God is identical with the cosmos, the view that there exists nothing which is outside of God (...). All that distinguishes a pantheist from an atheist is *feeling*; a certain emotional reaction or connection that we feel to the universe" (Mander, 2021). Term deriving from the Greek roots pan (all) and theos (God).

Peak experiences: "In the humanistic psychology of Abraham Maslow, (...) moment[s] of awe, ecstasy, or sudden insight into life as a powerful unity transcending space, time, and the self" (American Psychological Association, n.d.). In the present thesis, the term is used as a synonym of dissolution experiences.

Peak phase (of a dissolution experience): The phase of an episode of dissolution in which the elements characterizing dissolution experiences are the most strongly present. See also *final phase(s) of a dissolution experience*, *initial phase(s) (of a dissolution experience)*, and *middle phase(s) (of a dissolution experience)* in *Glossary*.

Persona: In contrast with the concept of "self" (see *core self* and *minimal self* in *Glossary*), it refers to "the nature of my personal character or personality, a personality that evolves through time and is shaped by the values I endorse and by my moral and intellectuals convictions and decisions" (Zahavi, 2005, p. 129).

Phenomenological interview(s): A kind of qualitative interview in which the interviewee is guided to report on the phenomenology of the investigated episode or phenomenon.

Phenomenology: "A philosophical movement originating in the 20th century, the primary objective of which is the direct investigation and description of phenomena as consciously experienced, without theories about their causal explanation and as free as possible from unexamined preconceptions and presuppositions" (Spiegelberg & Biemel). "Phenomenology, as [Husserl] articulated in the early 1900s, would turn toward 'the things themselves,' toward the world as it is experienced in its felt immediacy. Unlike the mathematics-based sciences, phenomenology would seek not to explain the world, but to describe as closely as possible the way things first arise in our direct, sensorial experience" (Abram, 1996/2017, p. 35).

Pre-reflective (consciousness): "An awareness we have before we do any reflecting on our experience; (...) an implicit and first-order awareness rather than an explicit or higher-order form of self-consciousness" (Gallagher & Zahavi, 2021).

Psychotic disorders: "Schizophrenia and other primary psychotic disorders are [defined as being] [characterized] by significant impairments in reality testing and alterations in [behavior] manifest in positive symptoms such as persistent delusions, persistent hallucinations, [disorganized] thinking (typically manifest as [disorganized] speech), grossly [disorganized behavior], and experiences of passivity and control, negative symptoms such as blunted or flat affect and avolition, and psychomotor disturbances" (International Classification of Diseases, 2022).

Samadhi: In Hinduism, Buddhism, Jainism, Sikhism, and yogic traditions, "the one mental state humans can achieve where the dichotomy of subjective and objective breaks down" (DeGracia, 2015, p. 6).

Satellite dimensions: Dimensions of experience including "information [that] includes the description of the context in which a certain experience takes place, the description of theoretical knowledge, as well as the beliefs or judgments that we may have in relation to what has been narrated" (Valenzuela-Moguillansky & Vásquez-Rosati, 2019, p. 126)

Schizophrenia: "Schizophrenia and other primary psychotic disorders are [defined as being] [characterized] by significant impairments in reality testing and alterations in [behavior] manifest in positive symptoms such as persistent delusions, persistent hallucinations, [disorganized] thinking (typically manifest as [disorganized] speech), grossly [disorganized behavior], and experiences of passivity and control, negative symptoms such as blunted or flat affect and avolition, and psychomotor disturbances" (International Classification of Diseases, 2022).

Second-person research: A "dialogical co-research" (Kordeš, 2016, p. 379), where the principal investigator collaborates with a co-researcher to explore the co-researcher's experience.

Selection bias: Bias introduced when the selection of data or participants is not carried out randomly.

Self-transcendent experiences: As defined by Yaden, Haidt, et al. (2017), "transient mental states marked by decreased self-salience and increased feeling of connectedness" (p. 1). When the individual is in such mental states, "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'" (Yaden, Haidt, et al., 2017, p. 1). In the present thesis, the term is used as a synonym of dissolution experiences.

Sense of agency: "The sense that I am the one who is causing or generating an action. For example, the sense that I am the one who is causing something to move, or that I am the one who is generating a certain thought in my stream of consciousness" (Gallagher, 2000, p. 15). For our definition, see *Sense of agency* in *5.1 Codebook*.

Sense of boundaries: "The fundamental experience of being an 'I' (self) separated from the 'world' (nonself)" (Dor-Ziderman et al., 2016, p. 1).

Sense of ownership: In Gallagher's understanding (2000), "the sense that I am the one who is undergoing an experience. For example, the sense that my body is moving regardless of whether the movement is voluntary or involuntary" (p. 15). For our definition, see *5.1 Codebook*.

Sense of self: "The (perhaps sometimes elusive) feeling of being the particular person one is" (Siderits et al., 2011, p. 3).

Sequential analysis: In the analysis phase, the process of constantly testing assumptions and to be open to new insights and, if necessary, revisions throughout the process (Charmaz, 2014).

Special categories: Each special category refers to an experiential state emerging from a pattern of presence of basic and attribute categories. In other words, each special category generally corresponds to the presence of certain basic and attribute categories, and to the way they present themselves, in the co-researcher's experiential field.

Subcategories: Categories internal and subordinate to basic categories.

Substantialist theories/views on the self: The substantialist theories see the self as a substance that bears properties and qualities, and being conscious is one of them (Siderits et al., 2011).

Synchronic dimension (of experience): The non-temporal dimension of specific moments or phases of the experience, that is, the "specific configuration of the interviewee's experiential space (...) associated with each of [those] moments" (Petitmengin, 2006, p. 248). See also *diachronic dimension (of experience)* in *Glossary*.

Synchronic unity of the self: The sense that all the different things that we are experiencing in a specific moment in time are experienced by the same, singular subject.

Transcendentalism: "19th-century movement of writers and philosophers in New England who were loosely bound together by adherence to an idealistic system of thought based on a belief in the essential unity of all creation, the innate goodness of humanity, and the supremacy of insight over logic and experience for the revelation of the deepest truths" (Britannica, The Editors of Encyclopaedia, n.d.b).

Witness-consciousness: For Advaita Vedanta, experiences come and go, but they all share the property of being witnessed, of being experienced. This property is named *witness-consciousness*. And it is in this experiencing that the self lays. Witness-consciousness is a "feature of the subject that observes the experiences" (Albahari, 2009, p. 68), their "*modus operandi*" (Albahari, 2006, p. 7). See *core self*, *for-me-ness*, *first-personal-givenness, ipseity*, *mineness*, and *minimal self* in *Glossary*.

World: In the present thesis, understood as "non-self". "The challenge of 'selfhood' qualifies everything beyond the boundaries of the organism as foreign and somehow opposite: as 'world', within which, by which, and against which it is committed to

maintain itself. Without this universal counterpart of ‘other’, there would be no ‘self’” (Jonas, 1968, as cited in Fuchs, 2017, p. 303).

Tables

Table 1

Co-Researchers and Relative Daily Life and Dissolution Experiences

Co-researcher: Code and made-up name	Daily life experience: Code	Dissolution experience(s): Code(s)
(A) Morella	dlE_A	DE_A
(B) Gianpaolo	dlE_B	DE_B_1, DE_B_2
(C) Cedar	dlE_C	DE_C
(D) Rigoberto	dlE_D	DE_D
(E) Alienora	dlE_E	DE_E
(F) Maya	dlE_F	DE_F_1, DE_F_2
(G) James	dlE_G	DE_G
(H) Helena	dlE_H	DE_H

Note. "dlE" refers to a daily life experience and "DE" refers to a dissolution experience.

Table 2

Contexts of Occurrence of the Investigated Dissolution Experiences

Context	Number of dissolution experiences per context	Dissolution experience: Code
Art	2	DE_B_1
		DE_D
Meditation	2	DE_A
		DE_F_2
Nature	2	DE_C
		DE_F_1
Use of psychedelic substances	2	DE_E
		DE_G
Love and intimacy	1	DE_H
Psychopathology	1	DE_B_2

Table 3

High-level category Boundaries During the Initial Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
	Boundaries	Strong and clearly defined. Their experience is understood as normal, usual.

Table 4

Self-Categories During the Initial Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
Self		The co-researcher is aware of it. Its experience is understood as normal, usual.
	Locus	The co-researcher is aware of it, and identifies with it. It is in or close to the body. It corresponds to *Point of view/control*. Its experience is understood as normal, usual.
	Sense of mineness	Present, usually unnoticed.
	Point of view/control	The co-researcher: is aware of it, and identifies with it. It is in or close to the body. It corresponds to *Locus*. Its experience is understood as normal, usual.
	Bodily qualities	The co-researcher: is aware of it and of its boundaries, is in control of it, owns it, and identifies with it. Its experience is understood as normal, usual.
	Emotional qualities	The co-researcher: is aware of them, is in control of them, owns them, and identifies with them. They might be experienced as unpleasant.

Table 4 Continued

Group/kind of categories	Categories	State of the category
	Qualities of thoughts	The co-researcher: is aware of them, is in control of them, owns them, and identifies with them.
	Narrative understanding of oneself	The co-researcher is aware of it, and identifies with it.
	Attitude	Often closed and antagonistic.

Table 5

World-Categories During the Initial Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
World		The co-researcher is more or less clearly aware of it. Its experience is understood as normal, usual.
	World clarity	High inside of the bubble, low outside.
	Unity of the world-elements	Either the world is experienced as a unity with low clarity, or as formed by different elements, some of which have high clarity.
	World finitude	Finite.
	Atmosphere	Often closed and antagonistic.
	Affordances	Limited.

Table 6

Interaction Between Self and World-Categories During the Initial Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
Interaction between self and world		
	Immersion	Often low. A high-level understanding of the situation is maintained.
	Directionalities	Clearly present, often associated with intentions.
	Dynamics of interaction	Dynamics that emphasize the distinction self/world are often present.

Table 7

Attribute Categories During the Initial Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
Attributes		
	Awareness	The co-researcher is aware: of most of the elements that refer to the self, of the space where they are, and of the situation in which they are.
	Sense of control (activity/passivity)	The co-researcher is in control: of their body, of their emotions and thoughts, and of their intentionality. They feel to be more active than passive.
	Sense of ownership	The co-researcher is the owner: of their point of view/control, of their body, of their emotions and thoughts, and of their attitude.
	Sense of identification	The co-researcher identifies with: their locus, their point of view/control, their body, of their emotions and thoughts, and of their attitude.
	Sense of normality	All the aspects of the experience are generally understood as normal, usual.
	Number and coherence of the self-elements	A high number of elements related to the self is present in the co-researcher's experience. These elements have a high degree of correspondence (at least spatial) between each other.

Table 8

High-Level Category Boundaries During the Middle Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
	Boundaries	Less clear, start to disappear.

Table 9

Self-Categories During the Middle Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
Self		The co-researcher is less aware of it.
	Locus	The co-researcher is aware of it, and identifies with it. It moves away from the body. It might not correspond anymore to *Point of view/control*.
	Sense of mineness	Present, usually unnoticed, sometimes perceived as shared.
	Point of view/control	The co-researcher is less or not aware of it, and does not or identifies less with it. It moves away from the body. It might not correspond anymore to *Locus*.
	Bodily qualities	The co-researcher: is less or not aware of it and of its boundaries, is less or not in control of it, feels less or does not feel like they are its owner, and does not identify with it anymore.
	Emotional qualities	The co-researcher: might or might not be aware of them, is not in control of them, feels less or does not feel to be their owner, and does not identify with them. They are experienced as pleasant.
	Qualities of thoughts	The co-researcher: is less or not aware of them, is not in control of them, feels less or does not feel to be their owner, and does not identify with them.
	Narrative understanding of oneself	The co-researcher is less or not aware of it, and does not identify with it anymore.
	Attitude	Open and friendly.

Table 10

World-Categories During the Middle Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
World		The co-researcher is either more or less clearly aware of it.
	World clarity	The clarity increases.
	Unity of the world-elements	The unity increases.
	World finitude	The world starts to be, or is, perceived as infinite.
	Atmosphere	Open and friendly. Often familiar.
	Affordances	The world offers more affordances.

Table 11

Interaction Between Self and World-Categories During the Middle Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
Interaction between self and world		
	Immersion	The level of immersion increases. A high-level understanding of the situation is less or not present in the co-researcher's experience.
	Directionalities	Less clearly present, and less clearly associated with intentions.
	Dynamics of interaction	Dynamics that diminish the distinction self/world are present.

Table 12

Attribute Categories During the Middle Phase(s) of a Dissolution Experience

Group/kind of categories	Categories	State of the category
Attributes		
	Awareness	The co-researcher is less aware of the elements that refer to the self, or of a smaller number of them. They are also less aware of the space where they are, and of the situation in which they are.
	Sense of control (activity/passivity)	The co-researcher is less in control: of their body, of their emotions and thoughts, and of their intentionality. They feel to be more passive than active.
	Sense of ownership	The co-researcher feels less, or does not feel, to be the owner: of their point of view/control, of their body, of their emotions and thoughts, of their attitude, and of their intentionality.
	Sense of identification	The co-researcher identifies with their locus. They identify less, or do not identify, with: their point of view/control, their body, their emotions and thoughts, their attitude, and their intentionality.
	Sense of normality	The experience is not understood as normal anymore.
	Number and coherence of the self-elements	Both the number of elements related to the self present in the co-researcher's experience and their degree of correspondence between each other begin to decrease.

Table 13

Higher-Level Category Boundaries During the Peak Phase of a Dissolution Experience

Group/kind of categories	Category	State of the category
	Boundaries	Dissolved.

Table 14

Self-Categories During the Peak Phase of a Dissolution Experience

Group/kind of categories	Category	State of the category
Self		Present at its minimum.
	Locus	The locus might be absent from the co-researcher's experience. When it is present, it does not relate with the body and it does not correspond to *Point of view/control*.
	Sense of mineness	Present, sometimes perceived as shared. In some cases, the only self-element present.
	Point of view/control	It might be absent from the co-researcher's experience. When it is present, it does not relate with the body and it does not correspond to the locus.
	Bodily qualities	Not experienced.
	Emotional qualities	The co-researcher: might or might not be aware of them, is not in control of them, does not feel to be their owner, and does not identify with them. They have a neutral valence.
	Qualities of thoughts	Not experienced.
	Narrative understanding of oneself	Not experienced.

Table 14 Continued

Group/kind of categories	Category	State of the category
	Attitude	Not experienced, or open and trusting.

Table 15

World-Categories During the Peak Phase of a Dissolution Experience

Group/kind of categories	Category	State of the category
World		The co-researcher is not aware of the world as something separated from the self anymore.
	World clarity	Very high clarity of one element or dynamics, while the others disappear.
	Unity of the world-elements	High unity.
	World finitude	Infinite.
	Atmosphere	Not experienced, or open, familiar, friendly, and trustworthy.
	Affordances	Just be, simply experience.

Table 16

Interaction Between Self and World-Categories During the Peak Phase of a Dissolution Experience

Group/kind of categories	Category	State of the category
Interaction between self and world		
	Immersion	High. No high-level understanding of the situation, or observation of the experience, are present.
	Directionalities	Directionalities and intentions are not present.
	Dynamics of interaction	Self and world are not divided anymore, therefore no interaction between the two is present.

Table 17

Attribute Categories During the Peak Phase of a Dissolution Experience

Group/kind of categories	Category	State of the category
Attributes		
	Awareness	The co-researcher is not aware: of most of the elements that refer to the self, of the space where they are, and of the situation in which they are.
	Sense of control (activity/passivity)	The co-researcher does not experience control.
	Sense of ownership	The co-researcher does not experience ownership.
	Sense of identification	The co-researcher identifies with: the experiencing itself (*Sense of mineness*), and sometimes with a locus or core self.
	Sense of normality	The experience is understood as unusual, special.
	Number and coherence of the self-elements	A low number, or none, of the elements related to the self is present in the co-researcher's experience. These elements do not present coherence between each other.

Table 18

Higher-Level Category Boundaries Throughout the Phases of a Dissolution Experience

Initial phase(s)	Middle phase(s)	Peak phase
Strong and clearly defined.	Less clear, they start to disappear.	Dissolved.

Table 19

Self-Categories Throughout the Phases of a Dissolution Experience

Category	Initial phase(s)	Middle phase(s)	Peak phase
Locus	The co-researcher identifies with it. It is located in or close to the body.	The co-researcher identifies with it. It moves away from the body, or is less related to it.	When present, the co-researcher identifies with it, and it does not relate with the body.
Sense of mineness	Present, and usually unnoticed.	Present, usually unnoticed, and sometimes perceived as shared.	Present, and sometimes perceived as shared. In some cases, the only self-element left.
Point of view/control	The co-researcher identifies with it. It is located in or close to the body, and it often corresponds to the locus.	The co-researcher does not identify, or identifies less, with it. It moves away from the body. It might not correspond anymore to the locus.	When present, it does not relate with the body and it does not correspond to the locus.
Bodily qualities	The co-researcher: is aware of the body and of its boundaries, is in control of it, owns it, and identifies with it.	The co-researcher: is less or not aware of the body and of its boundaries, is less or not in control of it, feels less or does not feel like they are its owner, and does not identify with it anymore.	Not experienced.

Table 19 Continued

Category	Initial phase(s)	Middle phase(s)	Peak phase
Emotional qualities	The co-researcher: is aware of the emotions, is in control of them, owns them, and identifies with them. They are experienced in or close to the body. They can be experienced as unpleasant.	The co-researcher: might or might not be aware of the emotions, is not in control of them, feels less or does not feel to be their owner, and does not identify with them. They are experienced farther away from the body. They are experienced as pleasant.	The co-researcher: might or might not be aware of them, is not in control of them, does not feel to be their owner, and does not identify with them. Their location is not relative to the body. They have a neutral valence.
Qualities of thoughts	The co-researcher: is aware of the thoughts, is in control of them, owns them, and identifies with them. They are experienced in or close to the body, and they present a defined structure (often inner $speech_g$).	The co-researcher: is less or not aware of them, is not in control of them, feels less or does not feel to be their owner, and does not identify with them. They are experienced farther away from the body. Their structure is less defined.	Usually not experienced.
Narrative understanding of oneself	The co-researcher is aware of it, and identifies with it.	The co-researcher is less or not aware of it, and does not identify with it anymore.	Not experienced.
Attitude	Often closed and antagonistic.	Open and friendly.	Not experienced, or open and trusting.

Table 20

Special Attribute Category Number and Coherence of the Self-Elements Throughout the Phases of a Dissolution Experience

Initial phases	Middle phases	Peak phase
A high number of elements related to the self is present in the co-researcher's experience. These elements have a high degree of coherence (at least spatial) between each other.	Both the number of elements related to the self present in the co-researcher's experience and their degree of coherence between each other begin to decrease.	A low number (sometimes only the sense of mineness) of the elements related to the self is present in the co-researcher's experience. Either very low coherence, or high coherence between the very few self-elements left.

Table 21

World-Categories Throughout the Phases of a Dissolution Experience

Category	Initial phases	Middle phases	Peak phase
World clarity	High clarity inside the bubble, low outside.	The clarity increases.	Very high clarity of one element, the others disappear.
Unity of the world-elements	The elements inside the bubble are experienced as separated from the rest. Outside of the bubble, the world is a blurred unity.	The unity increases.	High unity.
World finitude	Finite.	The world starts to be, or is, perceived as infinite.	Infinite.
Atmosphere	Often closed and antagonistic.	Open and friendly. Often familiar and trustworthy.	Not experienced, or open, familiar, friendly and trustworthy.
Affordances	Limited.	The world offers more affordances.	Affordance of just be, simply experience.

Table 22

Interaction Between Self and World-Categories Throughout the Phases of a Dissolution Experience

Category	Initial phases	Middle phases	Peak phase
Immersion	Often low. A high-level understanding of the situation is maintained.	The level of immersion increases. A high-level understanding of the situation is less or not present in the co-researcher's experience.	High. No high-level understanding of the situation is present.
Directionalities	Directionalities, often associated with intentions, are present between self- and world- elements.	The directionalities, and the respective intentions, are perceived less clearly or more faintly.	No directionalities, nor intentions, are perceived anymore.
Dynamics of interaction	Dynamics that emphasize the distinction self/world are often present.	Dynamics that diminish the distinction self/world are present.	None, since self and world are not divided anymore.

Table 23

Attribute Categories Throughout the Phases of a Dissolution Experience

Category	Initial phases	Middle phases	Peak phase
Awareness	The co-researcher is aware: of most of the elements that refer to the self, of the section of the world inside of the bubble, and of the situation in which they are.	The co-researcher is: less aware of the self-elements or aware of a smaller number of them, less aware of the situation in which they are, and aware of more world-elements.	The co-researcher is: not aware of most of the elements that refer to the self, not aware of most of the world-elements, and not aware of the situation in which they are.
Sense of control (activity/passivity)	The co-researcher feels to be in control, especially of the self-elements. They feel more active than passive.	The co-researcher experiences a decreased sense of control. They feel more passive than active.	The co-researcher does not experience control. Sometimes, they feel passive.
Sense of ownership	The co-researcher is the owner of all the self-elements.	The co-researcher feels less to be the owner of the self-elements, or feels to be the owner of less self-elements.	The co-researcher does not experience ownership.
Sense of identification	The co-researcher identifies with all of the self-elements.	The co-researcher identifies less with the self-elements, or identifies with less self-elements. They might start to identify with some elements that were previously world-elements.	The co-researcher might identify with the whole experiential field, or sometimes with a core self, or locus.

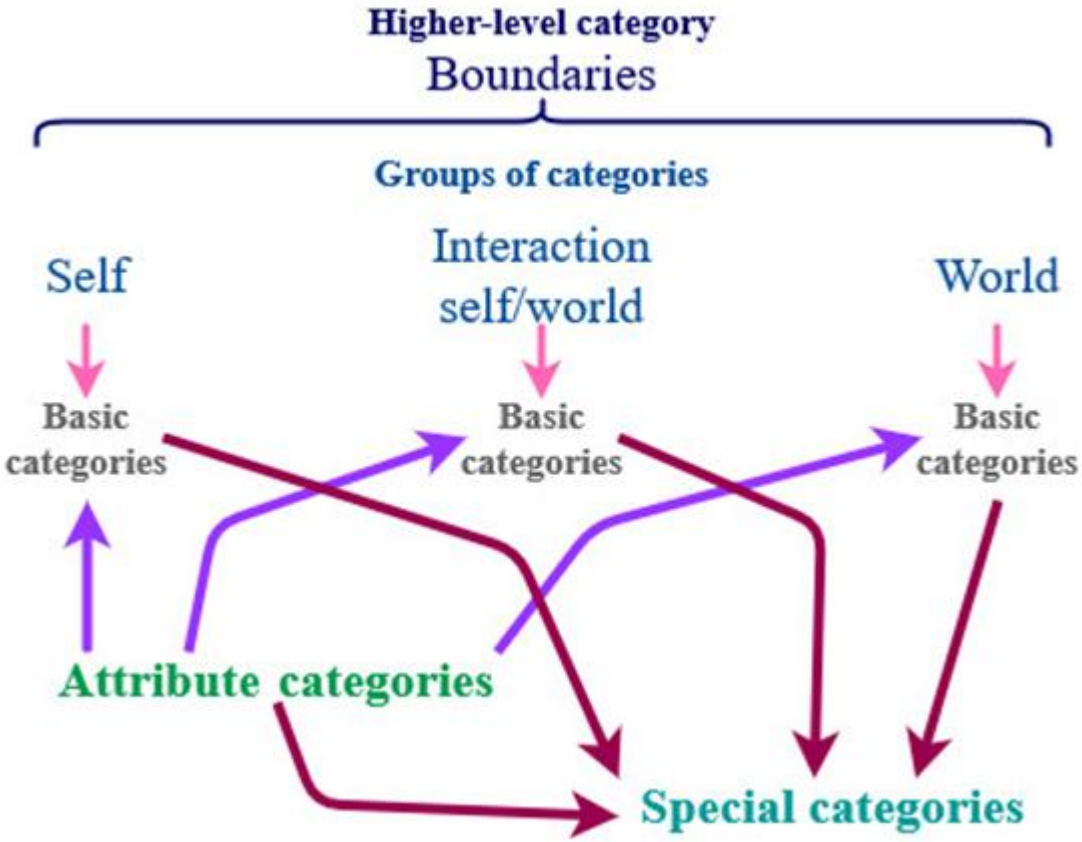
Table 23 Continued

Category	Initial phases	Middle phases	Peak phase
Sense of normality	All the aspects of the experience are generally understood as normal, usual.	The experience is understood as out of the norm, unusual.	The experience is understood as extraordinary, special.

Figures

Figure 1

Structure of the Codebook

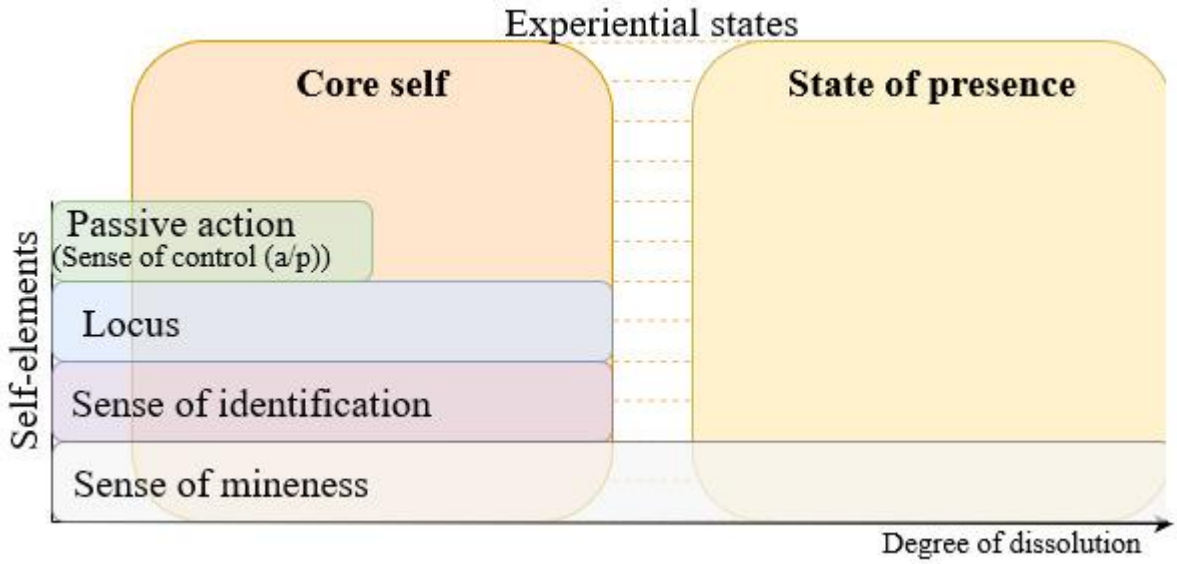


Legend

- In **bold**: Classifications of categories;
- Not in bold: Specific names of categories or of groups of categories;
- In dark blue: Higher-level category;
- In light blue: Groups of categories;
- In grey: Basic categories;
- In green: Attribute categories;
- In blue-green: Special categories;
- : Reflects, is representative of;
- : Contains;
- : Refers to;
- : Forms.

Figure 2

Core Self, State of Presence, and Sense of Mineness at Different Degrees of Dissolution



Questo è l'Isonzo
E qui meglio
Mi sono riconosciuto
Una docile fibra
Dell'universo

Il mio supplizio
È quando
Non mi credo
In armonia

—Giuseppe Ungaretti, I Fiumi