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## ***The Metaphor of Dissociation: Teleological, Phenomenological, Structural, Dynamical***



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### **Abstract**

Dissociation as used in psychology and psychiatry is a troubled conceptual metaphor. The main problems include conflicting definitions and a lack of internal consistency of some of these formulations. Trying to mend the situation, Van der Hart, Nijenhuis and Steele (2006) revisited Janet's original definition of dissociation, and referred to it as "structural dissociation of the personality". This term is not meant to suggest that "structural dissociation" involves a particular kind of dissociation as is sometimes thought. To prevent or repair further misunderstanding, in the present article I highlight four inherent features of dissociation of the personality: teleological, phenomenological, structural, and dynamical. The article also aims to bridge some metaphors that are commonly described and understood as dichotomies, implying dualisms that plague philosophy, science, and clinical practice. For example, personality is understood as an organism-environment system, involving subjects and "objects" (that may be other subjects) as co-dependent and co-constitutive partners. Regarding matter (brain/body) and mind as attributes of one substance reflects an attempt to avoid the problems of philosophical (substance) dualism, as well as the one-sidedness of philosophical materialism and idealism. The generation, maintenance, and elaboration of dissociation is analyzed in terms of causing, that is, the mutual manifestation of a network of reciprocal powers. The joint analyses involve an enactive approach to life, and intend to achieve further conceptual clarity and consistency of the metaphor of dissociation.

*Key words:* dissociation, causing, conflict, teleology, phenomenology.

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## Sommario

*La metafora della dissociazione: teleologica, fenomenologica, strutturale, dinamica*

La dissociazione così come viene utilizzata in psicologia e psichiatria è una metafora concettuale dibattuta. I problemi principali comprendono la presenza di definizioni che confliggono e la mancanza di una consistenza interna di alcune di queste definizioni. Nel tentativo di sistemare questa situazione, Van der Hart, Nijenhuis and Steele (2006) hanno rivisto la definizione di dissociazione originariamente proposta da Janet, e l'hanno descritta come una "dissociazione strutturale della personalità". Questa definizione non intende suggerire che la "dissociazione strutturale" implichi un particolare tipo di dissociazione, come talvolta si pensa. Per prevenire o correggere ulteriori incomprensioni, nel presente articolo metto in risalto quattro caratteristiche intrinseche della dissociazione della personalità: teleologica, fenomenologica, strutturale e dinamica. L'articolo mira anche a colmare alcune metafore che sono comunemente descritte e intese come dicotomie, implicando dualismi che affliggono la filosofia, la scienza e la pratica clinica. Ad esempio, la personalità è intesa come un sistema organismo-ambiente, che coinvolge soggetti e "oggetti" (che possono essere altri soggetti) come partner co-dipendenti e co-costitutivi. Riguardo alla materia (cervello/corpo) e alla mente come attributi di una sostanza, si riflette un tentativo di evitare i problemi del dualismo filosofico (di sostanza), nonché l'unilateralità del materialismo filosofico e dell'idealismo. La generazione, il mantenimento e l'elaborazione della dissociazione vengono analizzati in termini di causa, cioè, della mutua manifestazione di una rete di poteri reciproci. Le analisi congiunte comportano un approccio attivo alla vita e mirano ad ottenere ulteriore chiarezza concettuale e coerenza della metafora della dissociazione.

*Parole chiave:* dissociazione, causa, conflitto, teleologia, fenomenologia.

*Our thoughts about the universe are guided by metaphors. A metaphor apt in one context can mislead in another. The trick is to understand a metaphor for what it is and limit its application accordingly.*  
(John Heil, 2012, p. 124)

*Pragmatically considered, concepts or thoughts can be regarded as nothing other than affordances that offer (or solicit us to) possibilities to follow one path or another as we engage in thinking.*  
(Shaun Gallagher, 2017, p. 195)

Whereas objects like the body can be divided, consciousness cannot. Any division of consciousness in parts presupposes consciousness of the parts and of their relationship. Any attempt at dividing consciousness, thus, results in an endless regress. Must this mean that the mind is indivisible? As René Descartes (1984, p. 86) thought,

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«... there is a great difference between the mind and the body, inasmuch as the body is by its very nature always divisible, while the mind is utterly indivisible. For when I consider the mind, or myself in so far as I am merely a thinking thing, I am unable to distinguish any parts within myself; I understand myself to be something quite single and complete... As of faculties of willing, of understanding, of sensory perception, and so on, these cannot be called parts of the mind, since it is one and the same mind that wills, and understands, and has sensory perceptions...

By contrast, there is no corporeal or extended thing that I can think of which in my thought I cannot easily divide into parts; and this very fact makes me understand that it is divisible. This one argument would be enough to show me that the mind is completely different from the body...».

The philosopher apparently experienced his mind as an integrated whole. More, he presumably never encountered an individual with a dissociative disorder, or else he would have found clear evidence that the mind is divisible, albeit in a different way than physical objects. Thinking that the body but not the mind is divisible, Descartes concluded that the two are fundamentally different substances. This (philosophical) substance dualism raises the question how the substances can be related at all, and if so, in what way.

Baruch Spinoza's take on the issue was radically different. He defined a substance as that which is "self-caused", "in itself", and «conceived through itself – in other words, that of which a conception can be formed independently of any other conception» (Spinoza, 1677, Part I, Definitions I and III). Since substances thus defined cannot affect each other, body and mind cannot be different substances, but are different conceptions (or "attributes") of a singular substance. Being attributes of a singular substance, matter (e.g., [parts of] the brain/body) does not cause the mind and the mind does not cause matter.

Spinoza further held that like matter mind is divisible. In Deleuze's (1988, p. 19) phrasing of Spinoza's insights,

«[t]he order of causes is defined by this: each body in extension, each idea or each mind in thought are constituted by the characteristic relations that subsume the parts of that body, the parts of that idea. When a body "encounters" another body, or an idea another idea, it happens that the two relations sometimes combine to form a more powerful whole, and sometimes one decomposes the other, destroying the cohesion of its parts. And this is what is prodigious in the body and the mind alike, these sets of living parts that enter into composition with and decompose one another according to complex laws [according to Spinoza, the mind includes numerous parts (1677, Part II, Proposition 15)]. The order of causes is therefore an

order of composition and decomposition of relations, which infinitely affects all of nature».

Consistent with Spinoza's formulations concerning the divisibility of the mind, Janet (1889, 1907, 1911) defined dissociation as the existence of two or more different «systems of ideas and functions that constitute personality» that are insufficiently integrated among each other (1907, p. 332). The concept of dissociation became largely rejected in the beginning of the 20<sup>th</sup> Century when it became empirically established that dissociative systems were not completely independent structures (Messerschmidt, 1927-1928). Grounded in a misreading of the metaphor of "dissociation" as a form of "splitting" (i.e. total separation, implying non-interference), this type of research was compromised from the start. Janet never thought of dissociation as an act that resembles cutting a single living earthworm in two parts that henceforth exist as two independent worms.

The concept of dissociation was to have a difficult life. As Nijenhuis and Van der Hart (2011, p. 417) summarized,

«Since the 1980s, many, often contradictory conceptualizations of dissociation have been proposed. These conceptual revisions generally were simultaneously overinclusive and underinclusive compared to the original idea. The notion of dissociation of the personality often was lost. Somatoform (i.e., sensorimotor) manifestations of dissociation were commonly seen as conversion or somatization symptoms, and are currently sometimes described as "functional neurological symptoms". Positive symptoms of dissociation such as intrusions of traumatic memories were generally excluded from the domain of dissociative symptoms and recategorized as posttraumatic stress symptoms. Moreover, in contemporary psychology and psychiatry, the term "dissociation" pertains at least to (1) symptoms, (2) a presumed cause of symptoms, including a presumed function such as psychological defense (cf., Cardeña, 1994), and (3) normal and pathological alterations in consciousness, including hypnosis. It often remained unclear which of these possible uses was intended, and in most empirical and clinical studies the term in fact went undefined (see Van der Hart *et al.*, 2004, for a critique)».

Trying to regain conceptual clarity, Van der Hart, Nijenhuis, and Steele (2006) proposed to return to Pierre Janet's original characterization. They coined the term «structural dissociation of the personality» to emphasize that dissociation involves a division of a whole system (i.e., "personality") in particular subsystems or parts. The phrase «structural dissociation» led some to think that there are additional forms of dissociation, thus continuing the

conceptual troubles we sought to resolve (see Nijenhuis, 2015; Nijenhuis and Van der Hart, 2011a,b).

In an extended search for clarity and wisdom (Nijenhuis, 2015, 2017), I tried to correct the flawed idea that structural dissociation is but one kind of dissociation. To this end, I detailed that the concept of “dissociation” (as used in psychology and psychiatry) includes (at least) four intrinsic characteristics: teleological, structural, dynamical, and phenomenological. The term “intrinsic” indicates that the four occur together and depend on each other.

A characterization and understanding of “dissociation of the personality” demands clarity regarding commonly used but problematic dichotomies «bedeviling modern philosophy and science» (Vörös and Bitbol, 2017, p. 31). The mind-matter (e.g., body, brain, parts of the brain, physical particles) contrast is only one of the thorny oppositions. Some others include matter versus matter (body-brain), organism versus environment, cause and effect, subject versus object, subjective experience and objective knowledge, and mental content (an “it”, say a feeling, a thought, a memory) versus mental action (a “process leading to it”, here the action of feeling, thinking, remembering), and thinking versus feeling. As to classification, there are the contrasts PTSD-dissociative disorders, and conversion disorders-dissociative disorders. In Nijenhuis (2015, 2017), I thus grappled with these complex issues.

The aim of the present article is to describe the indicated characteristics of dissociation in a condensed form. In this context, I will briefly address some ways to overcome dualistic concepts that hinder a solid understanding of dissociation. These ways relate to an enactive non-dualistic approach to science and life.

## Bridge Notions

To approach the “three-dimensionality” of phenomena commonly thought of as being two-dimensional, Francisco Varela developed several «conceptual evocations» (inspirational metaphors) of «non-duality» (Cohen Varela, 2002; Varela, 1979, Vörös and Bitbol, 2017). He was not the first who felt a need to “bridge” dualities, to achieve non-duality. For example, Spinoza formulated a subject-object *relativity*. As he wrote,

«[t]he idea of every mode, in which the human body is affected by external bodies, must involve the nature of the human body, and also the nature of the external body» (1677, Part II, Proposition XVI).

He also noted that,

«... the ideas, which we have of external bodies, indicate rather the constitution of our own body than the nature of external bodies» (Corollary II to Proposition XVI).

William James (1878, p. 17) highlighted that,

«[t]he knower is an actor, and co-efficient of the truth on one side, whilst on the other he registers the truth which he helps to create».

Arthur Schopenhauer (1958, Vol. II, p. 13) bridged the contrast of matter and mind:

«It is just as true that the knower is a product of matter as that matter is a mere idea of the knower».

Varela (1979, p. 275) noted,

«... although the world does look solid and regular, when we come to examine it there is no fixed point of reference to which it can be pinned down; it is nowhere substantial and solid. The whole of experience reveals the co-dependent and relative quality of all knowledge».

Reiterating Spinoza, Schopenhauer and James' insights, he thus postulated that subjects and objects always occur together, depend on each other, and constitute each other (also see Northoff, 2003).

One implication is that "objects" (that may be other subjects) and constellations of "objects" do not have a fixed meaning. Agents must *make meaning*, and commonly do this in terms of what they *can do* with the objects or other subjects (Dewey, 1934; Husserl, 1989). In this light, objects *afford* subjects to regard, signify, and use them in particular ways (Gibson, 1977). Affordances of the object, that is, involve the actions that individuals can in principle perform regarding the object. For example, we humans can sit on a wooden chair, but we can also use it as a stair, fuel, a weapon, or an object to illustrate the concept of "four". A chair can also remind us of a particular individual or bad things happening to us while sitting in the chair, etc. When the object pole involves another subject, the first subject can relate to the involved other subject in numerous ways as well. The kind of relationship that will be enacted depends on the first subject's present needs and desires, and depends on the affordances of the second subject from the

perspective of the first subject. For example, a patient will relate to a therapist in a particular session in ways that are strongly influenced by the patient's needs and desires, as well as by the affordances that the therapist brings to the situation as the patient experiences or sees them.

This intrinsic connectivity or relativity of subjects and "objects" that crucially include other subjects inspired Timo Järvillehto (1998a,b, 1999a,b) to suggest that it is in many contexts (e.g., philosophy, psychology, biology) most useful to think of a living organism and this organism's world as an organism-environment system. This view reiterates insights of, among others, Spinoza (1677), Schopenhauer (1819/1958, 1844/1958), James (1878), Von Uexkull (1934/2010), Dewey (1934), and Varela, Thompson and Rosch (1993). The concept of organism-environment system can be seen as a "conceptual evocation" that bridges subjects and their material and social world, their Umwelt. In this light, dissociation of the personality does not involve a particular division of an individual, but a division of an organism-environment system.

## Metaphors

The concepts of "dissociation" and "trauma" are scientific and clinical metaphors. We humans frequently invent and abundantly use metaphors (from Greek *metaphora*, a transfer) to make sense of phenomena that might be much harder for us to describe, understand, and handle without these aids, if this would be possible for us at all. For example, the previous sentence includes several metaphorical terms, such as "make sense", "harder", "describe" (etymology: *de-scribere*, to write down), "phenomenon" (etymology: that which appears or is seen), "under-stand" (etymology: to stand or be firm in the midst of), and "handle".

It is commonly said that metaphors are "figures of speak". "Figure of speech" – a metaphor itself – suggests that metaphors are not literally true, but only address some features of the object, subject or event they are intended to "catch". They are abstractions, and abstractions involve partial consideration (Locke, 1690/1978) of a subject matter. More than a figure of speech and partial consideration, metaphor actually appears to be a central cognitive means for abstract conceptualization and reasoning (Johnson, 2010).

Creating a metaphorical concept, we parse and signify the world in a particular way. As Ludwig Wittgenstein (1953) emphasized, we can capture the world in millions of ways, none of which is a priori better than the others. This thought led him to abandon the idea of the existence of given, natural

categories. He replaced it by the insight that any distinction and categorization is man-made according to some (necessarily human) point of view, principle, or interest, hence artificial.

According to Lakoff and Johnson (1980, 1999), we humans create general cognitive structures including metaphors that are intimately related to our principled embodiment (e.g., “make”, “write down”, “stand firm among”, “handle”). We thus have kinesthetic image schemas that stem from bodily experiences, such as the “container” schema (as in the mind as container), the “part-whole” schema (as in dissociative parts of the personality as a whole system), a “source-path-goal” schema (as in will-action-goal fulfillment), and more.

We may also judge that two subjects, objects, or events belong to one class, when they bear a particular “family relationship” or when they are akin to a “prototype” (Rosch, 1977). As we do this, we must not forget that our criteria (boundaries) for family membership or similarity to a prototype tend to be context-dependent. In many cases, the value of applied criteria lies in their usefulness. For example, we may say that “a Rembrandt” and the patches of paint that a toddler put on paper are both “paintings” in contexts that afford liberal boundaries on the concept. A proud mother will gladly call her child’s product a “painting” at a pleasant family gathering. But she might be far less inclined to refer to the product as a painting at a serious art exhibition, when in urgent need of the piece of paper, or when involved in showing a specimen of “an A4”.

Boundaries for family membership or similarity to a prototype can be fitting, too relaxed, or too strict *in reference to the role we want to them to play*. For example, a clinician may judge that a dissociative part counts as an “apparently normal part” (ANP), because this part like a prototypical ANP primarily longs and strives to fulfill desires of daily life, while also longing and striving to avoid dissociative “fragile emotional parts” (fragile EP) and the associated traumatic memories this EP recurrently reenacts (Nijenhuis, 2015, 2017; Van der Hart *et al.*, 2006; see below). Another clinician may object that the involved dissociative part feels really anxious at times, and therefore must count as a fragile EP (see below). The first clinician may rebut that ANPs can be anxious at times, so that being occasionally anxious does not qualify as an exclusion criterion for being a member of the ANP family or quite similar to a prototypical ANP. Moreover, this clinician may add, emotionality as such is insufficient for EP family membership. As discussed below, every dissociative part is guided by needs and desires, hence by affects.

Ross (2014) objected that Nijenhuis and Van der Hart's (2011a,b) criteria for "dissociative parts of the personality" are too strict and actually useless. Speaking as a clinician, he sees much merit in regarding "ego-states" in patients assessed with borderline personality disorder (BPD) as dissociative parts. I rejoined that "ego-states" do not involve their own phenomenal conception of self and that inclusion of an own phenomenal experience of self, world and self-as-a-part-of-this-world is what distinguishes dissociative parts from "ego-states" and moods (Nijenhuis, 2015c, 2017, see below). This distinction is clinically and scientifically most useful. For example, it is clinically required for distinguishing BPD and dissociative disorders, and scientifically for exploring psychobiological differences between individuals with dissociative parts and individuals with mood swings.

### **A General Definition of Dissociation**

As the Merriam-Webster online dictionary teaches, dissociation involves the idea of division of a whole in two or more parts. It is:

1. the act or process of dissociating or the state of being dissociated:
  - a: the process by which a chemical combination breaks up into simpler constituents; especially: one that results from the action of energy (as heat) on a gas or of a solvent on a dissolved substance;
  - b: the separation of whole segments of the personality (as in multiple personality disorder) or of discrete mental processes (as in the schizophrenias) from the mainstream of consciousness or of behavior with loss of integrated awareness and autonomous functioning of the separated segments or parts;
2. the process by which some biological stocks (as of certain bacteria) differentiate into two or more distinct and relatively permanent strains; also: such a strain.

The definition of the metaphor of dissociation includes apart from the "part-whole" schema many other metaphors such as "act", "process", "breaking up", "constituents", "separation", "mainstream", "personality", and "segments". The multitude may further illustrate the major role that metaphors play in human thought.

According to Merriam-Webster, dissociation can thus stand for the *act or process* of dis-associating, dis-connecting, or dis-coordinating elements,

segments, or strains from a whole. It can also denote the *result* of this act, which is the existence of insufficiently associated, connected, or coordinated segments or parts of a whole.

While we can distinguish between acts, processes and results, we should not overlook that acts and results are reciprocally related. For example, mental acts and mental contents are like two sides of a coin. Feelings, thoughts, memories, and behaviors take the acts of feeling, thinking, remembering, and behaving. Dissociation, then, is an inherent act *and* result. If individuals are dissociated, they have engaged in the act of dissociating, and if they effectively engage in this act, they will become dissociated.

It may further be said that definitions of acts tend to refer to processes. For example, the *Oxford English Dictionary's* main definition of act is “take action, do something”, and action stands for “the fact or process of doing something, typically to achieve an aim”. The dictionary defines “process” as “a series of actions or steps taken in order to achieve a particular end”. The general definition of “act” and “process”, thus, are circular. The concepts are defined by reference to each other. This said, “process” can also stand for «a series of mechanical or chemical operations on (something) in order to change or preserve it”.

But even if “act” is regarded as something that a living agent does, and “process” is seen as something relating to machines or machinery, the two may be intimately connected. If one’s preferred metaphysics says that living organisms are in the last analysis explained by physical particles or quantum fields and the things these particles or field can do, all actions are mechanical. If one rather believes that what we may regard as physical is actually a projection of the human mind, mechanical processes are acts.

As mentioned above, one can alternatively assume that there exists a singular substance with infinite attributes. These attributes include two properties or powers we humans know: matter and mind. Being different properties of a single substance, matter and mind are inherently related, and cannot be explained in each other’s terms. One cannot “reduce” consciousness to neurons or neuronal activity, or matter (e.g., neurons) to minds, just as one cannot “reduce” the weight of an object to its color.

On this view, “acts” or “actions” denote something living organisms do to accomplish their aims. They basically long and strive to get what they experience or regard as useful, to get rid of or avoid what they perceive as harmful, and to leave alone what is insignificant to them. This threefold affectivity and interest characterizes all forms of life, from the simplest to the most complex. The term “process” best stands for things that machines

or machineries do, or what is treated like a machine or machinery. Inasmuch as one regards the body or brain as a machine or treats them like machines, one can talk of bodily, brain and neural “processes”.

### **Causes, Results, Causing**

Causes and results (consequences) are commonly seen as sequential and separate events: An object, subject, or event A, the cause, affects another object, subject, or event B, which leads to a result C. C follows when agent A influences recipient B leading to C, for example a change in B. More than sequential, this portrayal suggests that the relationship between affecting agent A and affected recipient B is asymmetrical.

The received view may be mistaken (Heil, 2012). It may well be that the cause and the effect stand in a symmetrical and ongoing relationship, rather than in an asymmetrical and sequential and relationship. For example, one might be tempted to think that stirred water possesses an “active” power to dissolve salt, and that salt includes a “passive” power to be dissolved by stirred water (cf. Locke, 1690/1978). However, a closer examination will reveal that saline water is due to an *interaction* of certain chemical features of water and certain chemical features of salt that is ongoing for some time. In this sense, there is a symmetrical and continuous cooperation of two powers, A (water affecting salt) and B (salt affecting water) to bring about a result C (a saline). The water and the salt possess *reciprocal powers*, and salt dissolving in water is a *mutual manifestation* of these dispositions.

Heil (2012) refers to a cooperation of causal and reciprocal powers as *causing*. As he puts it puts it, «causing is where the action is» (p. 120). I may manage to push a broken car for some time. However, this will only work for me when the pavement is solid and flat, when I am sufficiently energetic and motivated, when my feet feel fine, when the person behind the wheel steers straight, etc. This simple example may suffice to communicate that causing commonly involves the mutual manifestation of numerous reciprocal powers.

Psychotherapy can serve as another example of symmetrical and non-sequential causing. The patient and the therapist must include the power to affect each other, or else there will be no therapeutic causing. What the patient and therapist do and say is influenced by their reciprocal powers or dispositions, and their interaction and relationship are mutual manifestations of these dispositions.

The involved ongoing relational co-dependency and co-constitution

precludes asymmetrical statements such as «exposure therapy for trauma is efficacious» or «the therapist exposed the patient to his traumatic memories». The efficacy of a therapeutic intervention is determined by reciprocal powers of the patient and of the therapist/therapeutic interventions. For example, the therapist may long and strive to bring a patient's traumatic memory to the patient's attention. There will be "exposure" inasmuch as the patient longs and strives to listen to the therapist's words and to take them to heart. When the patient is scared and engages in some form of mental avoidance, there will not be a causing of "exposure". For example, the patient may become hazy or even faint, change the topic of conversation, merely listen to the narrative's words in an emotionally flat manner, or imagine that the narrative does not apply to him or her.

Therapy as causing requires more than a cooperation of the patient's dispositions and the therapist's powers, more than the mutual manifestation of these dispositions. The endeavor is also dependent on, and influenced by a host of additional powers, such as a fitting institutional setting, institutional and (sub)cultural practices and rules, financial options, and family influences. Therapy, then, takes continuous symmetrical causing and involves a network of reciprocal powers.

What is more, this causing more often than not affects the causing partners. Therapy affects the patient *and* the therapist. The therapist may long and strive to support the patient, physically and/or psychologically. The support commonly affects the patient in a particular way, be it more or less positive (i.e., useful) or negative (i.e., harmful) way. This physical or psychological effect will affect the therapist, who will react to the patient's reaction, etc. The therapy may also affect others such as family members or other patients who hear about the therapy and its effects. Supporting someone else takes many players to tango.

Causing as a causal network applies to one person harming another person no less. Individual A may long and strive to harm individual B. This objective will only be achieved in so far as B includes the disposition to become harmed by A's actions. Moreover, B's actions will affect A in return. Like other events, an adverse event involves a causing consisting in the mutual manifestation of A and B's individual's powers.

For example, B may possess the power to simply shrug her shoulders in response to A's remarks that A really intended to be insulting and condescending. It might be that she is not interested in or dependent on A's opinion of her. This result may leave A frustrated, perhaps particularly when his similar actions worked well on individuals C and D. B's

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indifference does not mean that B is indifferent to verbal attacks. Had an individual C – B’s lover, partner, mother, or son- voiced the words B might have felt devastated and have reacted accordingly. The examples illustrate that

«one and the same power is capable of manifesting itself differently with different kinds of reciprocal partner» (Heil, 2012, p. 121).

To extend the present line of reasoning, events are not traumatizing in and of themselves. For example, a particular car crash may traumatize individual A but not individual B, although A and B were passengers in the same car. Whether or not an event traumatizes a person is dependent on numerous powers, some of which concern powers of the individual who lives the event.

The idea that causal relationships commonly bring about change overlooks that in many cases the causing actually serves stability. Stability does not come for free. It results from an ongoing causing that takes the cooperation of a network of reciprocal powers. The stability of a construction (e.g., a “house” constituted by an arrangement of upright placed playing cards, or a real house, which involves a large set of firmly connected and properly arranged elements) depends on an ongoing cooperation of various powers, such as the properties of the building elements, their connectivity, the powers of the surface on which the house stands, gravity, wind strength, and the general environmental climate. In the case of stability, cause and effect are concomitant.

### **Dissociation: A Lack of Integration?**

It is not uncommon to say that a result is due to a lack. For example, many people would agree that scurvy is due to a lack of Vitamin C, that a building is bound to collapse in the absence or lack of strength of crucial parts of the construction, that a lack of competent leadership will ruin a company. Several authors, me included, have conveniently stated that dissociation is commonly due to a lack of integration (but they and I have said a lot more than this) or can be caused by a lack of emotional caretaking in early childhood.

However, strictly speaking absences cannot cause anything. As Heil (2012, p. 127) put it,

«... what you have is not an absence's stepping in and producing a particular kind of effect, but a different collection of reciprocal powers yielding a different kind of manifestation. An absence is not an entity, not a something with properties providing it with distinctive powers».

Scurvy, a collapsing building, and bankrupt companies are not caused by an absence but by a mutual manifestation of reciprocal powers. For example,

«[i]f vitamin C is not on the scene, bodily states manifest themselves differently than they would in concert with vitamin C» (Heil, 2012, p. 129).

The body is not malfunctioning, but is doing precisely what a body does when vitamin C is not available. Likewise, dissociation as act or process is not brought about by an absence, be it a lack of integration, a lack of emotion regulation, or a lack of inhibition of “the emotional brain” by prefrontal brain structures. The causing rather involves a cooperation of manifest reciprocal powers.

Apart from this, it is in many contexts not very useful to say that an outcome is due to something absent. It is often more helpful to state the actual causing. For example, it is commonly more useful to say that the car rolls fine, grace to the interaction of the smooth road, the quality of the tires and the rest of the car, and the driver's skills, than to explain that the smooth ride is due to the absence of holes in the road, big stones blocking the way, technical defects of the car, limitations of the driver, earthquakes, or whatever else that does not apply currently.

In this light, the challenge is to find and formulate the reciprocal, cooperating powers that (can) bring about dissociation, and that (can) maintain, elaborate, intensify, weaken, and end it (Nijenhuis, 2015, 2017; Van der Hart *et al.*, 2006).

### **Dissociation: Change and Stability**

The causing of dissociation of the personality involves the co-existence and cooperation of a set of powers. Organisms will only engage in dissociative acts when they long and strive to get a dissociative result, and they must have a talent, a disposition for these acts. These and other powers bring about a more or less extensive decomposition of a previous set of relationships among elements of a system, as well as a recomposition of the system's constituting elements.

Whereas the whole system may become recomposed in many ways, dissociation is not a random affair. As discussed below, the to-become-dissociated system includes dispositions that increase the probability that the system becomes recomposed in a particular way. This said, dissociative parts are not hidden pre-existing compositions of systemic elements that pop out under the right circumstances. They must be *brought forth* or *enacted*.

The short-term or long-term stability of the resulting dissociative structure (i.e., the dissociative parts and their relationships) takes work. This stability takes a power, longing and striving of the resulting whole system (to remind, dissociation does not involve total separation of a system) and the various created dissociative parts to keep the attained dissociative recomposition intact. A single, scattered, or intermittent act or process will not suffice to accomplish this result. The involved dissociative act(s) or process(es) must be *continuous*, or else there will be a different causal network generating different manifestations. Maintenance of dissociation is a job without breaks.

### Causing in the Case of Human Dissociation

If what has been said so far is on the right track, bringing about a particular dissociation of the personality takes a causing involving a network of cooperating causal powers. This network includes but is not limited to

1. a longing of an existing living whole (system) (a) to divide itself in two or more living parts (subsystems of that whole), or (b) to prevent existing living unities (systems) from becoming a more integrated (superordinate) living system;
2. a disposition (latent power) of the involved whole (in the case of 1a) or existing unities (in the case of 1b) to accomplish ambition 1a or 1b; this disposition includes a generic latent power to divide (uncouple), as well as the latent power to become or remain divided *in a particular way*;
3. a striving (manifest power) to realize aim #1a or #1b;
4. a longing of the evolving dissociative parts to at least preserve and in some cases to elaborate their existence;
5. a disposition to attain ambition #4;
6. a striving to realize aim #4.
- 7.

A few remarks are in order.

Dissociative actions may divide a previously existing whole based on a longing as in the case of 1a. It may also be that the system is dissociative to start of with as in the case of 1b. The latter can apply to young children whose personality is still to become an integrated whole. Ontogenesis is generally speaking a development toward increased integration. #1b may nonetheless involve a recomposition of a child's existing "dissociative" personality.

Once erected dissociative subsystems possess their own powers. They basically work for themselves and have no choice in this regard: No one is doing the job for them. There is no CEO leading the project (Nijenhuis and Van der Hart, 2011a). Expressed in technical terms, dissociative living systems are *operationally autonomous* (Nijenhuis, 2017). Systems are autonomous when their constituent operations or actions «(i) recursively depend on each other for their generation and their realization as a network, (ii) constitute a system as a unity in whatever domain they exist, and (iii) determine a domain of possible interactions with the environment» (Thompson, 2007, p. 44; Varela, 1979, p. 55; see also Thompson *et al.*, 2005). As operationally autonomous subsystems of a whole living organism-environment system, at least some of the evolved dissociative parts may long and strive to become more elaborate (Van der Hart *et al.*, 2006).

The actual causing includes more than the collaboration of #1 – #6. Given subject-object (that may be other subject[s]) relativity, dissociation pertains to subject and object as inherently coupled poles. In this article, I will not say much about the object pole, for example, about traumatizing events. It should be clear, though, that the object pole is a major ingredient of the causing. See Nijenhuis (2015) for a discussion of the concepts and facts of traumatic experiences, traumatic events, traumatizing events, and the generic concept of trauma. I only remark here that these various concepts should not be relegated to either subject or object. For example, trauma is neither a mere feature of an event, nor a mere feature of an individual undergoing this event. Trauma is more fruitfully seen as a subject-object coupling.

## **Teleological Dissociation**

The idea that the causing of dissociation prominently involves various longings and strivings requires elucidation. The clarification is particularly needed in view of contemporary psychology's talk of and emphasis on conceptual metaphors like "cognition", "regulation", "information", "information processing", and "mechanisms". This psychology leaves major *why* and *what* questions open, or so I fear: Why do we think at all? Why do we tend to think in

particular ways on some occasions, and quite differently on other occasions? Why and what do we “regulate”? It does not help much to say that we regulate emotions inasmuch as it is not clear what “emotions” are or why organisms have emotional and bodily feelings in the first place. What is “information”, exactly? Why do we “process information”? Why do we include “mechanisms”? And if we are machines (e.g., computer-like information processing devices, why do we care about ourselves and others? How can “mechanisms” help us understand why and what it is like to feel happy, sad, scared, angry, what is it like to enjoy a sunset, what is it like to think a beautiful or horrible thought, what is it like to move, have a body, be neglected, maltreated or abused, exist as a group of dissociative parts?

### **Will and Primary Affectivity**

As Spinoza (1677), later Schopenhauer (1819, 1844, 1889), and much later others (e.g., Barbaras, 1999; Jonas, 1992; Kull, 2000; Weber and Varela, 2002) clearly recognized, organisms are basically need and desire. Needs are unconscious and desires conscious “appetites” or longings, but are not essentially different (Spinoza, 1677). Spinoza (1677, Part III, Definition of the Affects, Definition I; p. 104) held that

«[d]esire is man’s very essence, inasmuch as it is conceived to be determined, from any given affection of it, to do something».

What we humans like other living organism primarily do is engage in actions and passions that promote our preservation (Spinoza, 1677, p. 76). We engage in an action, when we have a strong influence on a causing, and in a passion when this influence is weak. Continuously longing and striving to preserve our own existence, we are primarily and affectively interested in ourselves. Every form of life lives its life.

Schopenhauer (1889, p. 217) even argued extensively that, need and desire, or what he called the will

«gives all things, whatever they may be, the power to exist and to act».

Hence the will precedes and guides the organism’s behavior and cognition:

«[I]n all animal beings the will is the primary and substantial thing; the intellect, on the other hand, is something secondary and additional, in fact, it is a mere tool in the service of the will» (Schopenhauer, 1844, p. 205).

One might think that Spinoza and Schopenhauer's ideas on longing and striving are relics of the past. One might also object that nature does not long and strives to realize preset end-goals. However, Spinoza and Schopenhauer did not advocate this version of teleology (*telos* stands for goal, end, purpose). The rejection of this version does not oblige the rejection of the idea that living organisms have purposes according to values encountered in the making of their living (Weber and Varela, 2002). Living organisms are sense-making agents. They do not passively meet a world, but actively constitute themselves and strive to maintain their self-generated existence (Jonas, 1992). Thus,

«... the very ground of our existence is originally teleological and as such, in the ongoing coupling with the world brings forth meaning and categories. Teleology thus is not only a necessary mode to think the living; the “teleological circle” is a real mode of being and is the only possible way for organic life to exist» (Weber and Varela, 2002, p. 111).

### **Action Systems**

Panksepp and Biven (1998; Panksepp and Biven, 2012) suggested that basic affects are the core of psychobiological action systems that mammals have developed during their evolution. In their words, these «primal affects are internal evaluative processes that promote survival» (Panksepp and Biven, 2012, p. 480). Other authors have similarly proposed that mammals include evolutionary derived action systems that precede, support, and constrain learning (Bolles, 1970; Bolles and Fanselow, 1980; Carver and Scheier, 2000; Fanselow and Lester, 1988; Lang, Bradley and Cuthbert, 1998; Liotti, 2004, 2006; Timberlake and Lucas, 1989).

Action systems are for achieving something that is subjectively experienced and known to be attractive, pleasurable, or interesting, as well as for avoiding or getting rid of something that is subjectively experienced and known to be painful, dangerous, or disgusting. The common point is survival: longing and striving to get what is *useful* to the organism, what serves survival, to get rid of or avoid what is *harmful*, what threatens survival, and to leave the *useless* alone (Spinoza, 1677).

Basic needs and desires guide what an organism senses, perceives, thinks, feels, remembers, and does. The organism's various wills and associated action systems should thus not be seen as longings and systems subservient to psychological “functions” such as perception, emotion, and memory. Rather, needs and desires integrate the actions of perceiving, feeling, thinking, remember

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and moving in the service of goal attainment (Hurley, 1988; Järvillehto, 2001a). They can be seen as systemic attractors (Nijenhuis, 2015, 2017).

## **Conflicts of Will**

Particularly in humans, the will is not simple but has become highly differentiated:

«the more complicated the organization becomes in the ascending series of animals, the more manifold do its needs become, and the more varied and specially determined the objects capable of satisfying them, consequently the more tortuous and lengthy the paths for arriving at these, which must now all be known and found» (Schopenhauer, 1844, p. 205).

Having many different affectively charged interests, we humans can enjoy and suffer life in many different ways. We long to eat, drink, relax, sleep, explore, have sex, have and raise children, attach to them and to others we love and need, socialize, and more. We also experience a need and desire to defend ourselves when our physical and/mental integrity is at stake, and we hunger for reunion with those we love and need when they have abandoned us. While needs and desires can be compatible or even synergistic, they can also be incompatible and contrary. In Spinoza's (1677, p. 104) poignant words,

«... by the word desire I understand any of man's strivings, impulses, needs, and volitions, which vary as the man's constitution varies, and which are not infrequently so opposed to one another that the man is pulled in different directions and knows not where to turn».

Particularly complex organisms can include contrary modes of longing and striving, manifesting as ambivalences if not polyvalences. Healthy individuals mostly overcome these struggles. They manage integrate apparent opposite longings in some fruitful way, or have the power to restrain some of their longings and strivings without major loss. Others have less power of action and are under to influence of one need or desire to the serious expense of others.

For example, individuals with agoraphobia are so strongly guided by defensive longings and strivings that other major needs and desires remain unfulfilled. The phobia commonly prevents them from enjoying an outdoor professional, social and cultural life. Individuals with borderline personality disorder or an "ego-state disorder" recurrently alternate between different modes of longing and striving. Although the involved modes can be quite

different in several regards, this, as will be discussed below, does not imply that these individuals have a dissociative disorder.

Individuals with a dissociative disorder have used and continue to use their power to generate and maintain or further develop two or more dissociative parts. One characteristic of dissociative parts is that they are primarily guided by their own (set of) longings and strivings, and all that comes with these. I refer to this feature as *teleological dissociation*.

The most common form and simple form is one prototypical dissociative part that longs and strives to attain goals of daily life. This “apparently normal part” (ANP) is at the same time longing and striving to avoid feeling, knowing, and realizing traumatic memories and a dissociative fragile emotional part (fragile EP) that recurrently reenacts these memories, and intrudes on, or can intrude on associated with these memories. I have called this prototypical EP fragile to emphasize that this part fears becoming destroyed (“taken to pieces”), and not to suggest that these EPs are “weak” (Nijenhuis, 2015, 2017). Some fragile EPs are fighters indeed.

For example, take an individual with PTSD. Having survived the traumatizing event, as ANP they wish to continue their previous life, but as fragile EP reenact the traumatizing event in the form of flashback, nightmares, or even more profound ways. The disorder endures when ANP does not integrate the fragile EP and the traumatic memories (i.e., sensorimotor and affectively charged ways of reenacting the traumatizing event). The disorder is resolved when ANP and fragile EP become integrated (for a more detailed description see Nijenhuis, 2015).

There is another simple form of dissociation, one that presumably characterizes the beginning of a complex dissociative disorder in a context of maltreatment or abuse by a parent, a close other relative, or a significant (other) caretaker. In this case, the child longs and strives for attachment to the traumatizing individual when this person is not maltreating or abusing her. But the child will long and strive to defend herself when she becomes seriously maltreated or abused. Attachment is a profound psychobiological need, and so is defense. How can the child integrate these different longing and strivings, particularly when they address the same and exceptionally important person? One way to navigate the deep conflict of needs and desires is to develop and ANP who can remain attached, believing that her mother is good, that she, the child, deserved the maltreatment or abuse. As ANP the child may also practice forgetting the terrible events that happened to her. Guided by attachment, the mother is a desirable subject to the child. As fragile EP the child undergoes these events, and will not forget them. She will rather remain focused on the

traumatic experiences and will tend to reenact them from time to time. Guided by mammalian defense, the mother will be a dangerous object.

Controlling EPs are another prototypical EP (Nijenhuis, 2015, 2017). The predominant longing and striving of these dissociative parts is self-determination. For space, controlling EPs are not discussed here.

As formulated above, the causing of the involved dissociation encompasses a network of interacting causal powers. These powers include but are not limited to the existence of incompatible needs and desires (daily life wills, the will to attach vs. the will to defend), the child's dissociative power, the dissociability of opposite longings and associated action systems (within action system integration is stronger than between action system integration), the mother shifting between being and acting "relatively safe" and "very dangerous", influences of the family and society.

### **Structural Dissociation**

Dissociative parts are parts of a whole that Janet described as the individual's personality. Allport (1961) defined personality as «the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought». The term "psychophysical" denotes that the personality includes systems that are mental as well as physical. More than psychophysical, they are also social.

As mentioned above and detailed elsewhere (Nijenhuis, 2015), mind and matter can with Spinoza (1677) be fruitfully seen as two different attributes or properties of one substance or system: nature. Attributes are that which «the intellect perceives as constituting the essence of substance» (1677, Part I, Definition IV). Spinoza also held that a substance is self-caused, in itself, and conceived through itself. He also held that substance and property are intrinsically related: A substance is a bearer of properties, and properties are modes or ways a substance is. Heil (2012) reaches the same conclusion regarding substances and properties. On Spinoza's metaphysics, mind does not cause matter (as in idealism) and matter does not cause mind (as in materialism). To reiterate, mind and matter are attributes, not substances. Since substances are in themselves, they cannot cause each other, or the one the other. Biological, psychological, and psychosocial phenomena, thus, are not the dynamic causes of each other. They rather involve different ways of conceiving a living biopsychosocial system as a unity.

Whereas this unity influences and is influenced by the individual's environment, there is more than this interaction. As detailed elsewhere (Nijenhuis, 2015, 2017; Northoff, 2003; Spinoza, 1677; Schopenhauer, 1844/1958), and as

mentioned above, there are good reasons for saying that the brain, the body, and the environment are *intrinsically* related: The one co-occurs with, co-depends on, and co-constitutes the others. For example, the brain and the body of living organisms always occur together, and depend on each other as well as constitute each other. Similarly, subjects (living organisms) and objects (world) are at all times coupled in particular ways. As Järvillehto (1998, p. 321) suggests,

«... in any functional sense organism and environment are inseparable and form only one unitary system ... The organism cannot exist without the environment and the environment has descriptive properties only if it is connected to the organism ... Mental activity is activity of the whole organism-environment system, and the traditional psychological concepts describe only different aspects of organization of this system. Therefore, mental activity cannot be separated from the nervous system, but the nervous system is only one part of the organism-environment system».

Subjects and objects are thus aspects of a singular system. In this light, a living individual is an embodied and minded organism-environment system. This whole system can be analyzed in terms of its psychological, psychosocial, biological and material features. It includes a host of subsystems (atoms, molecules, cells, networks of cells, nervous system, mind, etc.). The subsystems include those that co-determine his or her characteristic ways of being, i.e., characteristic *modes* (longing, striving, feeling, moving, perceiving, conceiving [thinking], behaving).

Structurally considered, dissociative parts, then, are particular subsystems of an organism-environment. They are subsystems that are crucially involved in the causing of the involved individual's characteristic modes of longing and striving. These modes or ways of being encompass characteristic kinds and ways of longing and striving, including characteristic ways of feeling, sensing and moving, perceiving, conceiving, thinking, etc. Dissociative parts, that is, include their own subject-object couplings.

## **Phenomenological Dissociation**

Our subjective experience and idea of who we are – our “I” – is not pre-given. We must bring forth our phenomenal (i.e., subjectively experienced) “I”, or else it will be nonexistent. For example, we lose our cherished “I” in a dreamless sleep. We must continuously enact being a particular “I”, just as we must continuously enact our experience and conception of the world and our self-as-a-part-of-this-world (Metzinger, 2003; Nijenhuis, 2015, 2017).

Moreover, there are good reasons for holding that our “I” is not the cause of our actions, but the result of particular actions (Loevinger, 1976; Metzinger, 2003).

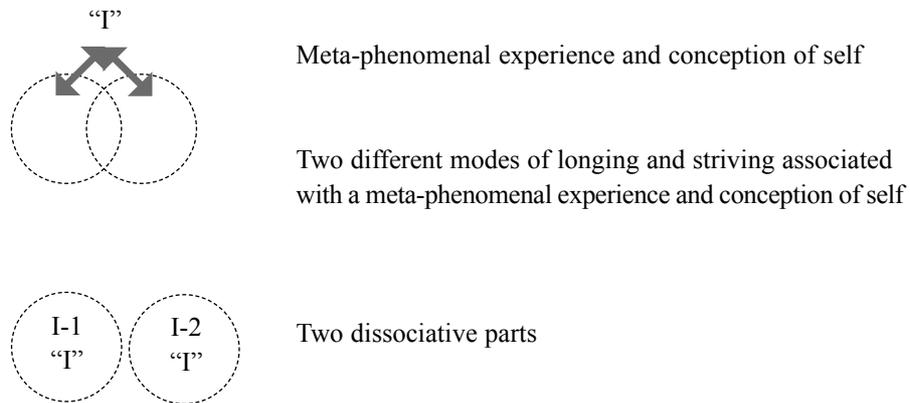
Our “I” involves our first-person experiences, crucially including our bodily experiences (Metzinger, 2003; Schopenhauer, 1819/1958, 1844/1958; Spinoza, 1677). Our embodiment provides a perspectival anchor. From this first-person perspective we can relate to ourselves, others, and things. This relating is also enacting. Enacting “I-me, myself, mine” relationships, we engage in a quasi-second-person perspective. This perspective involves phenomenal judgments (e.g., “I feel this is my hand”). Enacting “I-You” relationships, we engage in a second-person perspective. This perspective also involves phenomenal judgments (e.g., “I like you”). The third-person perspective pertains to our “physical” or “technical” judgments. Engaging in this perspective, we bring forth “I-Object” relationships (e.g., “I sit on a chair”, “I judge that there are quantum particles”). By engaging in the quasi-second-person, second-person, and third-person perspective we can bridge “I”, “me”, “myself”, “mine”, “you” and “things”.

When we include powerful but contrary modes of longing and striving that we fail to integrate, we tend to alternate between them (e.g., “I, John, want to marry Maria/I want to stay a bachelor”). Should we regard John’s different modes as dissociative parts? Should we regard alterations of mood and behavioral patterns that characterize individuals with BPD as expressions of dissociative parts? Should “ego-states” count as dissociative parts? Are remarked before, some feel they do (e.g., Ross, 2014), but this would seem to leave the concept of “dissociative parts” without constraints, hence basically useless (Nijenhuis, 2017).

Fluctuating modes or ways of being do not imply that we thereby link the different modes with a substantially different phenomenal conception of self. For example, despite their shifting modes of longing and striving, individuals with borderline personality will regard himself as the same self at a meta-level. Their overarching phenomenal conception of self will remain intact.

Clinical and scientific concept must have boundaries. To be viable and useful metaphors, they are in need of one or more specific features that set them apart from “moods”, generic “modes”, “states”, or more specifically “ego-states”. The feature that distinguishes dissociative parts from these other ways of being (i.e., moods, etc.) is that dissociative parts enact their own phenomenal experience and conception of self, world, and self-as-a-part-of-this-world (Nijenhuis, 2015, 2017, Nijenhuis and Van der Hart, 2011a,b). They bring forth their own first-person, perspective. Since the other person perspectives hang on the thread of the first-person perspective, dissociative parts also enact their own quasi-second-person, second-person, and third-person perspective as well.

*Fig. 1 – Modes of Longing and Striving versus Dissociative Parts*



### **Dynamical Dissociation**

Dissociative parts (in Figure 2, P1 and P2) can relate to each other in various ways.

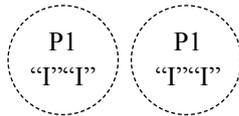
They may not experience and know each other (Figure 2.1). This does not imply that they are totally unrelated (split). For example, they have a body in common, speak the same language, have particular skills in common (newly formed dissociative parts commonly do not need to learn to stand and walk).

It may also be that P1 experiences and/or knows P2, whereas P2 does not experience and/or know P1 (Figure 2.2).

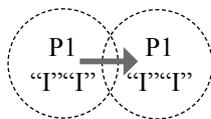
P1 and P2 may also more or less extensively, intensively experience and know each other (Figure 2.3). Inasmuch as these relationships exist, they can be of various kinds. For example, the parts may unilaterally or bilaterally like, hate, be ashamed of, be disgusted of each other. They may cooperate, or P1 may long and strive to cooperate with P2, whereas P2 is not interested in this cooperation, is scared of it, or is told by a third dissociative part, P3, to ignore or destroy P1.

Fig. 2 – Possible Relationships between Dissociative Parts

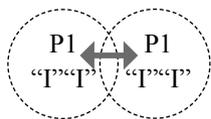
2.1



2.2



2.3



Some illustrations may be helpful at this point.

1. ANP does not experience and know fragile EP and fragile EP's traumatic memories. ANP therefore denies he was abused, whereas fragile EP may reenact the traumatic memories. Fragile EP may feel hopelessly abandoned by ANP.
2. ANP does not know fragile EP, but is occasionally intruded on by a scared fragile EP. ANP does not grasp the intrusions as intrusion of a dissociative part, and may refer to them as panic attacks.
3. ANP and fragile EP have learned to cooperate in treatment, but ANP becomes overwhelmed when fragile EP reenacts traumatic memories. That is, ANP's power of action is insufficient to integrate (i.e., synthesize, personify and presentify (Janet, 1907; Nijenhuis, 2017, Van der Hart *et al.*, 2006) traumatic memories associated with fragile EP. Fragile EP may not have the power of action to reenact the traumatic memories in a narrative or limited form. However, with ANP's and the therapist's help, fragile EP have succeed in developing a sense of the actual present (time, place). Fragile EP and ANP may have developed a restricted entrance to each other's phenomenal experience and conception of self, world and self-as-a-part-of-this-world.
4. ANP and fragile EP succeed in gradually integrating traumatic memories that fragile EP hitherto reenacted in a sensorimotor and highly affectively

charged manner. ANP's gradual integration of the memories alleviates fragile EP, with the additional effect that fragile EP starts to feel rejected less by ANP. Due to fragile EP's beginning relaxation, ANP starts to overcome her phobia of fragile EP.

In this frame, the goal of phase-oriented treatment of dissociation involves raising dissociative parts' power of action as quickly and profoundly as possible. When the power of action of the involved dissociative parts is relatively high, there is no need to raise this power much before attempts at integrating traumatic memories can be undertaken. Many patients with PTSD have a relatively high power of action, so that they can with adequate therapeutic assistance, integrate traumatic memories. This work often implies the integration of ANP and fragile EP.

Patients with more complex dissociative disorders and intense attachment conflicts may need a more gradual approach. They tend to include dissociative parts with low power of action. For example, these parts may have quite limited skills to handle conflicts, intense bodily and emotional feelings, and limited skills to reduce the intensity of the involved feelings. Some of them engage in actions that substitute for actions such as self-mutilation, suicide attempts, and substance abuse. Dissociative parts of these patients may be very phobic of each other, and their ANPs may be intensely phobic of bodily and emotional feelings, and traumatic memories. In these circumstances, therapists better help dissociative parts to raise their power of action in these various regards, before attempts are undertaken to integrate traumatic memories.

## **Discussion**

The present analysis of dissociation is grounded in the metaphysical idea – a conceptual evocation – that mind and matter are different attributes of a singularly existing substance. Attributes are essences of this substance as we humans conceive them. We experience and know the attributes mind and matter. Being attributes, matter and mind are not each other's cause. The substance bears infinite properties, and properties involve the substance's ways of being. These ways of being are referred to as modes (of the substance). Modes relate to needs and desires.

This perspective bridges the concepts of mind and matter (brain, rest of the body, objects, events). It resists the temptation to think that the mind can

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be found in the brain, as cognitivists and many neuroscientists believe or hope. In cognitivism,

«... the mind is like software running on hardware encompassing (primarily) the brain and (secondarily) the rest of the body. Correspondingly, cognition is said to consist of an algorithm-based manipulation of brain-instantiated symbols, that represent discrete features of a mind-independent (pre-existing) world» (Vörös and Bitbol, 2017, p. 34)

The enactive approach rather seeks to bridge mind, brain, rest of the body, and the environment. Bridging subject and object it holds that living organisms are embodied (Spinoza, 1677, Varela, Thompson and Rosch, 1993) and environmentally embedded. In contrast to cognitivism,

«... the idea of embodiment denotes that the mind and cognition are not so much a matter of skull-encased “computations of symbolic representation” (Varela, 1992), but rather a matter of recurrent, practical engagement of the whole, living organism with its environment» (Vörös and Bitbol, 2017, p. 34)

The enactive approach emphasizes that in order to experience and know themselves, other selves, and the material world, individuals must *act by handling*, and must *make sense* of themselves and their world (Varela, 1999; Weber and Varela, 2002). In this perspective, living organisms bring forth or *enact* a self in action as well as a world and the relationship of this self and this world, and signify these. This enactment takes more than a mind and a brain. It takes a minded body and an embodied mind embedded in a material and social world. «A path is made by walking on it» (Zhuang Zi, ca. 369-286 BC). And walking is not only in the feet and legs, just like flying is not in the wings (Thompson, 2014) and the mind is not hidden in our brain.

One implication is that the mind is not situated in «a computer between the ears». Normal and abnormal forms of desiring, experiencing, perceiving, thinking, and behaving cannot be situated “in” the individual, “in” the brain, or “in” some part(s) of the brain. They rather involve particular systems of relations. Like behavior, mind comprises and depends on the intrinsic relations of the subject and the object (environment). This view of mind is not new but can be found in the works of several ancient and more contemporary holders of an enactive perspective (e.g., Dewey, 1934; Gallagher, 2017; Mead, 1934, 1968; Noë, 2009; Schopenhauer, 1819/1958, 1844/1958, Spinoza, 1677; Varela *et al.*, 1993). Dissociation (like trauma), then, cannot be “reduced” to (parts of) the brain. Considered under the

attribute of matter, dissociation inherently pertains to a dance of an individual's brain, his or her body and his or her material world. Considered under the attribute of mind, dissociation is an enactive relational affair that involves an amalgam of environmentally embedded sensorimotor, affective perceptual, cognitive, and behavioral actions guided by a set of opposite primordial needs and desires.

Mental contents and mental actions are two sides of a coin (Spinoza, 1677). One cannot have a thought without thinking, or a feeling without feeling. In the same vein, one will not have an integrated experience and conception of self without recurrently experiencing and conceiving oneself and integrating the involved experiences and conceptions. And since meaning is not given to living organisms, they must persistently enact it.

Dissociation as manifesting in dissociative disorders involves a division in subsystems or parts of an individual's personality understood as a minded and embodied organism-environment system. The latter conceptual evocation bridges individuals and their world, that is, subjects and objects.

Whole organism-environment systems and dissociative, partial organism-environment systems can be conceived and studied under the attributes of mind (in psychology, psychotherapy) and matter (in biology, neurology, neuroscience, physics). It is a challenge to bridge these two approaches. For example, one may study the structural and functional characteristics of the brain in dissociation, and indirectly link these features with an analysis of dissociation's mental features. The bridging takes an approach that Varela (Varela, 1996) referred to as neurophenomenology.

Neurophenomenology is the scientific longing and striving to combine a third-person approach (measuring the operations of neurons) and a first-person approach (exploring the phenomenal experiences and conceptions of self, world, and self-as-a-part-of-this-world of the owner of the measured brain; examining what it is like to have these experiences and conceptions). Neurophenomenology also takes an analysis of the individual's quasi-second person perspective. This perspective concerns that which a first-person judges to be his or her own ("me", "myself", "mine"). A feel for and understanding of an individual's first-person and quasi-second person perspective can be enhanced by means of engagement in an empathic relationship, that is, an empathic second-person perspective, such as psychotherapy. The inclusion of the empathic second-person perspective serves to assist first-persons power in enhancing the clarity of their first-person and quasi-second-person perspective.

The neurophenomenological study of individuals with a dissociative

disorder, then, includes the neurophenomenological study of dissociative parts and their interrelationships. It is important to measure neural activation patterns for different dissociative parts. However, this measurement is rather meaningless inasmuch as it remains unknown or disregarded what the involved parts were longing and striving for during measurement, what they were aspiring, feeling, thinking, remembering, and what it is like to have these desires, feelings, thoughts, etc.

But neurophenomenology has its own limitations in that it does not consider our fundamental embodiment (Spinoza, 1677, Varela, Thompson and Rosch, 1993). A more complete science and clinical understanding of humans and dissociative individuals, then, must take their embodiment aboard.

An essential feature of dissociative parts is that they enact and reenact *their own* phenomenal experience and conception of self, world, and self-as-a-part-of-this-world. This feature sets dissociative parts apart from modes of longing and striving that the individual associates with a single (metaconception) of self, world, and self-as-a-part-of-this-world. Dissociative disorder, then, are commonly grounded in conflicts of contrary primordial and evolutionary derived needs and desires.

The four features of dissociation can be linked with Aristotle's classic division of material, efficient, formal and final causes.

Material causation of dissociation pertains to the material objects and material relationships that make up the whole organism-environment system and the various dissociative parts. They include relevant physical particles that fundamental physics proposes, atoms, molecules, cell, groups of cells, neural networks, etc. Teleological dissociation capture dissociative parts' final causes, that is, their various and often conflicting longings and strivings. Dynamic dissociation involves efficient causation. This kind of causation consists in the powers of the organism-environment system as a whole and of the dissociative parts to erect, maintain and perhaps elaborate a division of the whole in parts. It captures within-part as well as between-parts dynamics. Structural dissociation addresses formal causation. It concerns the formal, structural (i.e., systemic) features of the different dissociative parts and of their formal relationships.

Phenomenological dissociation involves the division of the whole organism-environment system considered under the attribute of (conscious) mind. It speaks to teleological, dynamical and structural features of dissociation, and helps to provide an answer to the question, "Who Does What And Why?".

- “Who” addresses structural dissociation, that is, the dissociative parts as subsystems of a whole organism-environment system, as well as the phenomenology of these parts. This phenomenology captures the dissociative parts’ experiences and conceptions of self, world, and self-as-a-part-of-this-world. “Who” also concerns an answer to the question “what it is like” to be a particular dissociative part, since only first subjects can answer the question.
- “What” addresses the within-parts and between-parts actions and passions, hence pertains to dynamical dissociation.
- “Why” concerns teleological causation.
- “Does” stands for mental and behavioral enaction.

Thus understood the formula “Who does What and Why?” can serve as a guide of the scientific study and treatment of individuals with a dissociative disorder. In fact, this science and this therapy are enactive affairs themselves. Science does not concern a miraculous view from nowhere, the endeavor does not hang on a skyhook. It crucially involves scientists’ desires, affects, interests, talents and limitations as embodied and affective first persons embedded in their personal and professional world. These features apply to therapists and clinicians no less. Will and affect to the bone, clinicians and patients engage in a dance, continuously affecting each other in the act (Nijenhuis, 2017). Like dissociation, this dance includes teleological, phenomenological, structural and dynamical features.

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