

Article

Consciousness in Pain: A New Model for Analysing Its Transformation

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Abstract: When looking for an account that explains how pain changes consciousness, one finds that most studies in the phenomenology of pain focus either on the outcome of the change, or on how it affects the self, as a conscious object, and the self's experiences in the world of objects. This paper focuses on the mechanism of consciousness, exploring the nature of the change that pain creates in consciousness and how exactly that change occurs. The paper provides a systematic, phenomenological inquiry in three phases: one identifies three essential attributes of consciousness, another identifies three essential attributes of pain, and a third analyses the outcome of the integration between both sets of attributes. The paper demonstrates how the change wrought by pain on the self, as a conscious object, allows the self to breach its boundaries as an object, and experience being a non-object, even if only in part and temporarily.

Keywords: pain; consciousness; phenomenology; epistemology; philosophy of pain; metaphysics

1. Introduction

This paper presents a new model for analysing the integration between pain and consciousness. The analysis exposes the essence of the change that pain creates in consciousness and provides an answer to the question, how does that change affect the epistemic boundaries of the self as a conscious object. A change in or an elimination of one essential attribute of an object is enough for it not to be the same object. That is the basic premise for my argument, that the change pain creates in consciousness enables the self, as a conscious object, to breach its boundaries as an object. The self is no longer the same object with the same epistemic boundaries or conscious layout. I also argue that this change enables the self, as a conscious object, to experience being a non-object, even if only in part, in a limited manner, and temporarily.

In recent decades, most studies in the philosophy of pain, the phenomenology of pain, and its effects on consciousness, have argued that pain indeed causes a change in the conscious self. Missing from these studies is an analysis of how pain changes the epistemic boundaries of the self as a conscious object in a world of objects. This paper aims to complete the aforementioned gap. To substantiate the central argument and provide a systematic theoretical basis for analysing the integration between pain and consciousness, I first turn to Kant's discussion of consciousness in his *Critique of Pure Reason* [1], to his argument about language in his *Anthropology* [2], as well as to studies thereof, extracting three essential attributes of consciousness (int. al., [3–12]). Next, I present three essential attributes of pain, based on existing studies in the philosophy of pain and in the phenomenology of pain. I then analyse studies arguing that pain indeed creates a change in the conscious self. One such study is Pitcher's, who argued that pain acts as a form and that "to feel, or to have a pain, is to engage in a form of sense perception, that when a person has pain, he is perceiving something" [13] (p. 368); (see also [14] (p. 226)). Finally, I analyse how pain affects the self as a conscious object by explaining the integration between consciousness' attributes and pain's attributes. Analysis of the mechanism of consciousness, while in a state-of-pain, lets me provide an account of pain's essential effect on consciousness.



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The Kantian doctrine of transcendental idealism argues that the existence of things in themselves is not accessible to consciousness.¹ According to Kantian externalism, epistemic data are obtained from the products of consciousness of the phenomenal world and in accordance with the limits of consciousness. Kant's view contrasts with Frege's internalism, according to which cognitive content alone determines the meaning of phenomena [15] (p. 52). Putnam showed why Frege's position is not valid and that one must turn to the world in which the self obtains experience in order to understand epistemic data created in consciousness and know what meaning it gives to the world. To this end, Putnam formulated his argument of the Twin Earth [16] (pp.190–3); (see also [17] (pp. 699–711)).

Consciousness is limited to mere representations [1] (p. 511, A491/B519). This is consistent with my assumption that, in a state-of-pain, consciousness is limited to forming a concept of a phenomenon-of-pain, even though the state-of-pain is an internal form that intervenes in consciousness' operation.

Another reason I turn to Kant's theory is his distinction between the essential attributes of consciousness and those other epistemic components that create the illusion that consciousness is capable of transcending the boundaries of experience.² Analysis of Kant's distinction teaches us about the essential attributes of consciousness. These attributes mark the boundaries of consciousness, the epistemic boundaries of the self as a conscious object. Detecting the essential, permanent attributes of something is necessary in order to identify changes to its essence and distinguish them from changes in its contingent features. Detecting the essential attributes of consciousness and marking its boundaries is therefore necessary in order to identify any change pain creates in those attributes or boundaries. Detecting and analysing consciousness' essential attributes make it possible to show how such a change creates a new cognitive layout or epistemic state, which allows the self to experience being a non-object.

My use of Kant's theory is limited merely to identifying three attributes of consciousness and describing its operation. I do not apply any other elements of Kant's theory or positions. My discussion of pain and my theory of the integration between consciousness and pain are not based on Kant.

2. Consciousness: Essential Attributes

The Kantian doctrine of transcendental idealism is also consistent with contemporary discourse in the philosophy of mind and epistemology, endeavouring mainly to answer questions concerning the mind–world relationship (int. al., [18–23]). One main question arising in this context concerns the relationship between the attributes of consciousness and the empirical experience of the phenomenological world [24] (p. 105). The answer to this question leads to one of the dominant positions today, externalism (int. al., [6,25–28]). According to this position, one cannot restrict epistemic content to cognitions that are given a priori. The content of consciousness is dependent on interaction with the phenomenal world and on cognitions given a posteriori. It is impossible, therefore, to separate epistemic content from sensory data, received by experiencing objects in the phenomenal world.

In his *Critique*, Kant explained exactly how the aforementioned link, making possible an aptness between epistemic faculties (ABEF) and sensory data (SD) received by experiencing objects in the phenomenal world, is formed. The epistemic faculties are executed by the attributes of consciousness. It is therefore necessary, according to Kant, for ABEF, given a priori, and SD, received by experiencing objects in the phenomenal world, to be one of the attributes of consciousness. This aptness occurs thanks to other faculties of consciousness, operating to unify the multitude of SD by way of the threefold synthesis. Each synthesis Kant described is subject to time-awareness, another attribute of consciousness. Time-awareness is awareness of the temporal, procedural rule of unity which determines the order in which synthesis takes place (int. al. [29,30]). This procedural rule conducts the unification of the plurality of impressions projected in consciousness by the senses. The conduct of the procedural rule organises this plurality into a whole, joined into one sequence, one after the other. That sequence contains the data needed for the categories of

consciousness, the pure-forms, to create a meaningful concept of an object. Consciousness could not, however, have performed as an infrastructure for thought and have given meaning to a concept, formed by synthesis, if not for the context created by language, another attribute of consciousness. In his *Anthropology*, Kant argued that language expresses the existence of consciousness: “Language signifies the presence of thought and, on the other hand, the means par excellence of intellectual signification is language, the most important way we have of understanding ourselves and others. Thinking is talking with ourselves . . . it is also listening to ourselves inwardly (by responsive imagination)” [2] (p. 65).

It is now possible to point out the synthetic nature of consciousness as captured by its three essential characteristics, without which, according to Kant, consciousness is impossible: (1) ABEF and SD, (2) time-awareness, and (3) language. One reason for choosing these three attributes lies in the analysis of arguments in the literature, from which it appears that integration with pain changes or destroys the functioning of, among others, these three attributes of consciousness. Note, that my use of Kant’s theory is limited to the above elements, i.e., the three attributes of consciousness and consciousness’ operation.

3. Pain: Essential Attributes

“What makes our assertion that we feel pain true?”, asks Hardcastle, and adds, “[i]t turns out that the answer is complicated. Pain is a weird phenomenon” [31] (p. 19). Different positions regarding the definition of pain can be found in the literature, starting with that of the International Association for Study of Pain [32] (pp. 209–214). Pain has been defined as a representation [33] (p. 91); as a phenomenon [6] (pp. 148–149); as an emotion [34] (p. 303); as a state of existence [35]; and as all of the above, as Clark asked, “when you suffer pain are you suffering a sensation? An emotion? An aversion? Pain typically has all three components, and others too” [36] (p. 177). Most definitions in the phenomenology of pain indicate that the experience of pain consists of a set of modes of self-existence, physical, psychological, cognitive, and epistemic, and that the state-of-pain combines several physical and metaphysical systems (int. al., [37] (p. 230); [38] (pp. 220–221)). These systems participate in creating the phenomenon-of-pain and in experiencing it.³ “[P]ain is just a raw feel, a quale. But, as a further step, to know that we are in pain, to feel the pain qua pain, means that we have cloaked that raw feel in a conceptualization of pain, and that conceptualization has made it into our conscious awareness and we recognized it as such” [31].

Differences between positions regarding the definition of pain make defining it a complex, challenging task, occupying many scholars (int. al., [39–42]). This task requires interdisciplinary treatment, involving experts in fields other than phenomenology [36]. Some scholars therefore argue against holding one particular position regarding the definition of pain (int. al., [43] (pp. 355–356)).

This paper does not aim to define pain. It is aimed at another complex task: discovering three essential characteristics of pain, so as to analyse it as a negation of the attributes of consciousness. This task is complex but possible if one sticks with three attributes of pain, which have been discussed in other studies. To this end, I analysed many studies, starting with the father of phenomenology, Husserl [44]; continuing with contemporary studies such as those by Hardcastle [31,45,46], Jacobson [47], Pereplyotchik [48], Chapman and Nakamura [49], Rorty [10], Aydede [50], Melzack and Wall [51], Pitcher [13], and Armstrong [52]; as well as philosophical ideas focused on pain’s complex nature, such as those by Ferber [53], Siby [54], Bustan [55,56], Vetlesen [57], and Scarry [35].

According to the hermeneutic analysis of both traditional and recent studies, pain has three essential and necessary characteristics: (1) that it is subjective and private, (2) the necessity of pain-awareness, and (3) that it cannot be objectified or, in short, its intransitivity. The attributes of consciousness and those of pain make a formula, being its essential, imperative, fixed, non-contingent components. Anchored in such constant, unchanging components, one can point out and analyse the existence of changes, created in the integration between consciousness and pain.

4. Consciousness and Pain: The Change

Most studies on topic argue that pain indeed creates a change in consciousness. That change affects the existential experience of the self in the world (see int., al., [58,59]). Aydede argued for such a change based on one of Pitcher's arguments, according to which pain interferes with a form that gives meaning to the phenomenal data received in consciousness. Pain creates a change in the linguistic and conceptual responses of the self [60] (p. 500). Another argument in support of this position claims that the very attempt to explain pain through some mechanism necessitates a change in the self as a conscious being [43,58,59].

The relationship between pain and consciousness is controversial. While most scholars agree that pain creates a change in consciousness, they disagree regarding the nature of that change and its effect on self-awareness. Some argue the change pain creates is manifested in cancellation or destruction of a single attribute of consciousness, such as language, which affects, even if only in part, in a limited manner, and temporarily, the way the self, as a conscious being, experiences the world ([61,62]; [63] (esp. pp. 135–153)). Other scholars hold that pain destroys the self itself; a destruction that creates an entirely different existential experience than that experienced while pain is absent ([54] (pp. 51–74); [57]). Another group of scholars claims that the change pain creates constructs new layers in consciousness. These layers manifest in the experience of knowing the world and in the experience of knowing the self itself [64–67]. A fourth position is that of Bueno-Gomez, according to whom pain does not destroy or construct any feature of the self as a result of any change in consciousness [68]. She holds that the self is a result of various experiences accumulated during a person's lifetime, including pain.

"A fifth dimension of physical pain is its ability to destroy language, the power of verbal objectification, a major source of our self-extension, a vehicle through which the pain could be lifted out into the world and eliminated. Before destroying language, it first monopolizes language, becomes its only subject . . . becomes the exclusive mode of speech. Eventually the pain so deepens that the coherence of complaint is displaced by the sounds anterior to learned language. The tendency of pain not simply to resist expression but to destroy the capacity for speech is . . . reenacted in overt, exaggerated form" [35] (p. 54). Analysis of Scarry's argument suggests that pain changes one of the attributes of consciousness.⁴ Scarry's argument has influenced many scholars (see also, [35] (pp.19, 50–56)). Some supported it while others opposed it. I found that most scholars referring to Scarry use her argument as a basis for developing positions pointing to pain creating a process that is the opposite of destruction. For most of these scholars, pain destroys language, but builds some other component in the experience of self-existence, such as a new cognitive mechanism, a new set of patterns in consciousness, new layers of self-awareness and self-identity, or a new layer of time-awareness. Thus, for example, Biro showed, in his article on the role of metaphors in the expression of pain, that lingual failure in the expression of pain causes the development of other expressive abilities, such as invention and imagination [69] (pp. 13–26); (see also [67,70]).

Scarry did not conclude her discussion by presenting pain as an existential state that destroys language, identity, and the world. She also showed how their reconstruction takes place: after destroying language, the state-of-pain drags the self into a process of inventing a suitable language, an alternative world, and, ultimately, a self-identity and its limits [35] (pp. 162–172). Ferber, a critic of Scarry, also discussed the change pain works on language. For her, it would be a mistake to refer only to the effects of pain's violent and destructive properties. The power of pain to demand expression strengthens language and motivates it to construct other possibilities of expression for the state that the self is in while in pain. These possibilities of expression never would have existed without pain [53] (pp. 2–14).

We can express pain in ways other than speech, such as body language. The focus is not necessarily, as Scarry argued, on the inability to express pain outwardly; a limitation manifested in the destruction of language. That can be learned from Bustan's work that shifted the centre of gravity from an outward expression of pain to the limited ability to cognise it in consciousness. Her theory unites two positions regarding the change pain

creates in consciousness. On the one hand, pain creates or constructs new phenomenological connections or layers between body and consciousness, and on the other, it eliminates the preexisting ABEF and SD ([56] (pp. 261, 271); [71] (p. 305)). This aptness is one of the attributes of consciousness, and is necessary, as Kant saw, for a clear representation of a phenomenon as well as for knowing it. When in pain, this ability is changed or destroyed.

Pain changes another attribute of consciousness: time-awareness. Samuels argued that people suffering chronic pain, the sick, and the disabled have a different, limited, restrictive experience of time, compared to the general, linear experience of time those who are not in pain have. An analysis of her arguments shows that pain creates a change in the experience of time, so that it is not natural, continuous, and linear, but interrupted, distorted, and limited. She calls this different experience of time, *crip time* [72]. Similar arguments appear in both Vetlesen [57] (p. 55) and Charmaz ([73] (p. 210; [74] (pp. 168–195)), who assumed that experiences of pain are an event that amplifies or highlights a particular segment of the sequence of time-awareness through which the self experiences its being in the world; through which the self experiences phenomena in the world. If one agrees with the possibility of experiencing two layers of time, everydayness and historicity, as the Heideggerian model suggests, one can reach a clearer explanation of the *crip time* argument and accept *crip time* as an additional layer of time that the self, when in pain, experiences, simultaneously with the natural, linear sequence of time [75] (p. 304–343).

Among other scholars, Vetlesen holds that pain destroys the self itself. The nature of the change that pain imposes on the self enables it to breach its boundaries and exist in a new state: *exist as pain* (2009, pp. 52, 55). Pain destroys the self by disconnecting the existence of the self, while in the private, subjective state-of-pain, from the existence of the world outside the self [76] (pp. 22–78, 113–114). Pain limits and restricts the existence of the self in the world, reduces it, and leads to its destruction [73,74]. Pain creates an alienation between its experience and the existence of the self itself. It causes a complete individualisation of the self, to a point of a destruction of the world of meanings from which the self is composed, and thus destroys the self itself ([54] (p. 58, 71); *int. al.*, [77] (pp. 51–55); [78–81]).

Pain constructs new layers in consciousness. That gives pain a significant role in constructing data in consciousness because of its involvement in giving meaning to that data [82] (esp. pp. 174–175). That is precisely because, as Scarry argued, pain destroys language, and it constructs powerful, negative cognitive content. This content influences the meaning given to concepts from which self-identity is constructed, as well as influencing the existence of the self when in pain. Pereplyotchik assumed that pain changes the state of consciousness by constructing or re-mapping it, as well as making unique changes to its set of abilities, creating a new mechanism allowing consciousness to influence the way the self experiences pain [48] (pp. 210–220, esp. 217).

Chapman and Nakamura argued that the change pain creates is due to its active intervention in the course of consciousness' operation, which changes frequently anyway [49]. According to them, this change is reflected in the construction of consciousness. To be exact, it is the construction of self-awareness related to the physical state of the self or, in terms of this paper, related to the state of the self as an object in the world. Chapman and Nakamura presented consciousness as a complex adaptive system, which is essentially able to optimise its adaptation to the environment. To use Kant's terminology, it is essentially able to continually preserve ABEF faculties and SD. In their view, the system constantly adapts the self to its environment, while changing in accordance with disturbing inputs received from the environment or, in terms of this paper, in accordance with SD received from the phenomenal world of objects. The system changes while giving meaning to the disturbing inputs received. The meaningful content is used, as concepts, for constructing awareness of the inner state of the self and its physical state. The outcome of this adaptation or change, which occurs with every disturbing input received by the system, is a reorganisation of a set of patterns that exist in the system a priori. These patterns dictate the procedural rule by

which adaptation to the environment occurs; the order by which the data of the disturbing inputs is organised into a meaningful concept.

Chapman and Nakamura assumed that the basic unit determining how patterns are organised, and how they change the system and work, is the schema. The schema dictates what patterns to incorporate into the set, according to which the entire system will operate and change. Pain is able to affect the set of patterns which allows the system to adapt to the data received in it. Pain works to produce a new set of patterns. Thus, it determines the system's *modus operandi* and imposes an irregular or unnatural organisation of the data received in it. The change pain creates affects the meaning given to the data from which a meaningful concept is constructed. The meaningful concept, in turn, constructs self-awareness regarding the physical state of the self. The change, therefore, that pain creates in the self is manifested in the construction of a new connection or layer in consciousness, regarding the physical state of the self while in pain. When pain ceases to exist, the system always tends to reset back to its natural *modus operandi*.

Charmaz's main argument unequivocally supports the position that pain destroys the self. However, at the end of her paper on the loss of the self, she briefly discusses a contrary position, arguing that the change pain creates in the self reinforces or builds a better self-awareness. This can happen only at the end of a painful experience [74] (p. 191). If one agrees with this position, one can argue that the construction of a new epistemic boundary, of a new layer in consciousness, or of a better self-awareness is a result of the change pain creates in the conscious self. In other words, such a construction is not itself the change created in consciousness while the self is in pain; it is a result of the change the state-of-pain creates.

The arguments according to which pain constructs a new connection or layer in consciousness assume an earlier stage of destruction, failure, or elimination. Chapman and Nakamura offered one of the clearer phenomenological explanations of the source of the construction or change following such destruction. Consciousness has a tendency to reset back to its natural or normal state of operation: a state of no pain. This tendency is manifested in a change created in consciousness by the very construction of a new set of patterns, according to which it organises the data received when pain interferes with the previous set of patterns. When in a state-of-pain, consciousness works to actualise each of its attributes in accordance with the new set of patterns. This enables consciousness to cope with the change pain creates in the previous set of patterns and to actualise, as much as possible, the essence of each of its attributes.

Consciousness' continual operation as a dynamic system, constantly changing and adapting itself to the disturbing inputs received, is manifested in changes to its attributes. The changes are manifested in the use of language and in the reconstruction of the self's epistemic boundaries, world, and culture, as Scarry, Ferber, and others argued; in a new time-awareness, as Samuels argued; in a new set of patterns organising the data received in consciousness, as Chapman and Nakamura argued; or, as Bustan argued, in the ABEF and SD.

The aforementioned positions, as well as most studies in the field, show that pain does indeed create a change in consciousness, in the mechanism by which the self cognises the phenomenal world, regardless of the nature of that change. I wish to go one step back, examine the mechanism of consciousness while in a state-of-pain and give an account of the essence of pain's effect on the attributes of consciousness.

5. Consciousness in Pain: Phenomenological Analysis of Three Integrations

Rather than deciding between the aforementioned positions, I propose that each refers to a different aspect of change in or destruction of one of the attributes of consciousness. I suggest that none of these possible aspects of change or destruction necessarily occurs in every case. Each can occur partially or completely. A total destruction of the self and all its essential or contingent attributes is not mandatory for arguing that pain indeed creates a change in the self as a conscious object.⁵ In most studies of pain and self-destruction I found

references to the contingent qualities of the self, that stem from cultural, social, political influences, etc., as variables that may affect self-destruction in a state-of-pain. Thus, for example, Sivy wrote: “the Self is not an unchanging substance. . . . As the embodied and narratively sedimented way of being towards other persons and the world as such, the identity of the self is a thickly layered and dynamic formation of meanings” [54] (p. 51). Vetlesen also addresses the accidental traits that affect being in a state-of-pain: “the society in which we live and the age to which we belong equip each one of us with a vocabulary and a yardstick for communicating about pain and assessing its significance” [57] (p. 7). This paper, on the other hand, addresses features of the self that are essential and permanent.

I believe it is enough to show that in a state-of-pain something changes at least in one attribute of consciousness, even if only in part, in a limited manner, and temporarily, in order to argue that the self as a conscious object is no longer the same conscious object. Similarly, given a change in the attribute “round”, a ball is no longer a ball. Agreeing with any one of the aforementioned positions necessitates the result that pain indeed changes an attribute of the self as a conscious object. This minimal position suffices to make progress and deepen the discussion regarding consciousness while in a state-of-pain, examining how pain changes or destroys one of consciousness’ essential attributes.

Starting with the integration between pain’s subjectivity and privacy and consciousness’ ABEF and SD, one must keep in mind that consciousness is always directed towards a phenomenal object in the world, outside the self [1] (pp. 127–128, A1–A3). Pain, on the other hand, is not dependent on SD for its existence, but exists within the boundaries of the self and is directed inward. Consciousness’ direction towards objects causes a failure in its cognition of the state-of-pain, which does not exist in the world of objects. Consciousness’ essential attribute, an ABEF and SD, is inoperative when it comes to cognising the state-of-pain. This shows how the state-of-pain eliminates or destroys the operation of one of consciousness’ essential attributes and changes its epistemic boundaries, even if only in part, in a limited manner, and temporarily. If so, how does the self gain an awareness of its being in a state-of-pain?

SD is, for Kant, one of the mandatory conditions for the operation of consciousness or, more precisely, for the operation of its attribute of ABEF and SD. This attribute is actualised in consciousness’ ability to unite the multiplicity of SD, projected from objects in the phenomenal world, as well as in its ability to organise the data into a meaningful concept of an object. This organisation occurs in the threefold synthesis in accordance with an order determined by the procedural rule, sourced in the schema, and its pure-forms or categories [1] (pp. 273–274, A140–A142 / B179–B181).

Pain is, for Pitcher, expressed as a form. This form contains no SD. In a state-of-pain, therefore, no SD is projected by that state itself, since its existence does not depend on such SD, projected from experiencing objects in the world. Consciousness’ attribute, the ABEF and SD, does not operate regarding the state-of-pain itself. Consciousness is unable to unify a plurality of any data regarding this state, which Klein described as “remarkably uninformative” [83] (p. 51). Consciousness is also unable to create any meaningful concept of an object. In a state-of-pain, a failure occurs. It originates in the encounter between the subjective and private nature of pain, a nature leaving it devoid of data, and the attribute of consciousness which requires SD to be compatible with the epistemic faculties given a priori. The aforesaid attribute of consciousness becomes absent or eliminated from the course of operation. As mentioned, a change in or an elimination of one attribute of something is enough for it not to be the same thing. Thus, in the absence of one of its attributes, consciousness is not the same. Its epistemic boundaries change or, as some scholars have argued, are destroyed.

The self is able to cognise when it is in a state-of-pain, because in that state consciousness unites SD, received from given experience, as certain features of a phenomenon-of-pain, to form a meaningful concept of that phenomenon. This concept’s features are contingent, depending on the physical, psychological, cognitive, and metaphysical state of the self at the time. These contingent features, such as blood flow from an incision, the smell of

charred flesh from a burn, or the touch of a swelling patella after a fall, originate in SD fitted to consciousness' faculties. These are not features of the *state-of-pain* nor do they indicate any cognition of that state. This is because the source of meaning, which consciousness links to the features representing the *phenomenon-of-pain*, does not project compatible data for cognising the state-of-pain.

Unlike the state-of-pain, we cannot attribute essential characteristics to the phenomenon-of-pain, which will exist in every case. The subjectivity feature of the state-of-pain, for instance, expresses only this state's nature. This subjectivity is manifested in a phenomenon-of-pain, the properties of which are contingent and depend on the way the self experiences them: on the way this experience is affected by cognitive and sensory data. The multitude of features characterising a certain phenomenon-of-pain, such as a headache or pain from a knife cut, will not all exist, necessarily, in the same way in every case of pain of the same type. Some of these features may not exist at all the next time a headache or pain from a knife cut appears. It is possible that in the future similar phenomena-of-pain will be characterised by other features, and that the nature of some features may change. There is no fixed and consistent feature or series of features that characterise a certain type of phenomenon-of-pain. These features are contingent and, moreover, most of them may only occur once. The essential attributes of the state-of-pain express its nature as a state. Its accidental properties are expressed in the phenomenon-of-pain, which the self experiences at a given moment. Armstrong, Pereplyotchik, Siby, and many more researchers agreed that pain is a state that affects consciousness and allows it to recognise a phenomenon, the nature of which is different from the nature of other phenomena [48,52,54]. Despite its extraordinary effect, the existence of the state-of-pain and its ontic, phenomenological expression in the phenomenon-of-pain depends on consciousness' epistemic, a priori infrastructure. Pain's existence depends on its recognition by consciousness in such a way as to allow the self to experience the phenomenon-of-pain.

The above analysis explains the failure created in the integration between pains' subjectivity and privacy and consciousness' ABEF and SD. The analysis explains why contingent features of the phenomenon-of-pain may cause the self to have an experience of pain that is not compatible with reality, an experience discussed by many pain scholars (int. al., [84] (p. 251)). The analysis also explains the case of a person reporting pain in their leg, which was amputated months earlier, or cases of people reporting pain in specific organs despite being injured in a completely different part of their body.

As Scarry, Ferber, Vetlesen, and many other scholars argued, pain has an immediate influence on language. One of the phenomenological outcomes of the state-of-pain is the change in one's verbal experience [85]. That change is sourced in consciousness' operation and concept-forming while in pain. Analysis of the integration between intransitivity, an attribute of pain, and language, an attribute of consciousness, requires a reminder regarding the essence of these attributes. While language is always directed towards an object, the state-of-pain, which cannot be objectified, is not. Language, therefore, fails to express the state-of-pain. At this point, one can see that pain changes, eliminates, or, for some scholars, destroys language or the verbal ability to speak about pain. The reason for this lies in the intervention of pain in consciousness' operation of giving meaning to the concept it constructs.

Consciousness' ability to give meaning is actualised in the threefold synthesis. As mentioned, according to Kant, who assumed a dependence between language and other epistemic faculties, there would be no consciousness without language. Language links the meaning consciousness gives to a concept of an object, cognition of the meaning, and a given object [10] (p. 23). Without lingual infrastructure, consciousness cannot cognise or understand the meaning it gives to a concept of an object and cannot make judgment about the object. For Kant, in the absence of judgment it is not possible to cognise an object. Consciousness depends on language; is restricted by it to meaningful concepts only; and is incapable of cognising what is not an object. Even if consciousness constructs a concept of a non-object, such as a state-of-pain, it is not able to give it meaning; the linguistic

infrastructure fails in expressing it. In that state, the conscious self experiences cognition of pain, a non-object, even if only in part, in a limited manner, and temporarily.

As a form, pain intervenes in the operation of consciousness. This intervention changes the composition or combination of consciousness' categories or pure-forms, which operate in accordance with the procedural rule of the schema. Pain is expressed in an actual change in the procedural rule that sets the order according to which the plurality of impressions, projected in consciousness by the senses, is unified. Pain is expressed in a change in the composition or combination of categories according to which consciousness operates in the threefold synthesis to unify the multiplicity of SD. Pain is also expressed in the failure of consciousness' operation: it is unable to cognise the state-of-pain, a form involving no SD. Instead, consciousness unifies SD received from the phenomenon-of-pain to create a concept of a phenomenon-of-pain.

Except for contingent data received from the phenomenon-of-pain, consciousness does not receive any objective data regarding the intransitive state-of-pain; regarding its expression in form, or regarding its interference with the procedural rule. Consciousness fails to unify the plurality of data regarding the state-of-pain and cannot create a meaningful concept of an object of that state. Consciousness' conceptual ability is not actualised and its attribute, language, is eliminated or destroyed.

The destruction of language is also valid if one accepts the phenomenological argument regarding pain, according to which a concept of pain exists in consciousness a priori ([44]; see also, *int. al.*, [35,48,57,86]. Even if this concept of pain embodies some data regarding the state-of-pain, those data are not, apparently, compatible with the epistemic layout or the modus operandi of consciousness' faculties. In accepting the aforesaid argument, one agrees that the concept of pain acts as a Trojan horse, changing consciousness' attributes by intervening so as to dictate and change its operation, as well as the self's epistemic boundaries.

This second integration between pain and consciousness can be better understood, then, by taking three theoretical elements into account. One such element is Kant's given a priori categories or pure-forms, devoid of content and manifested in the schema. Another element is Pitcher's argument concerning the intervention of pain, as a form, in the operation of consciousness. The third is the basic argument of the phenomenological view, regarding the concept of pain as given a priori in consciousness.

Analysis of the third and last integration between consciousness and pain shows the effects of pain's attribute, pain-awareness, on consciousness' attribute, time-awareness, which originates, according to Kant, in self-awareness. A state-of-pain does not exist without awareness of the phenomenon-of-pain. As Perrett argued, "it seems practically impossible to say pain has emerged without my being aware of it, for my awareness seems instantaneous with the pain" [87] (p. 222).⁶ Hill claims "it is impossible for x to be in pain without x 's being experientially aware that x is in pain . . . it is impossible for x to have an experience of the sort that x has when x is aware of a pain without its being the case that x really is aware of a pain" [88] (p. 75); (see, *int. al.*, [37] (p. 221); [10] (p. 182); [89] (p. 160)). Analysing such arguments, as well as Bustan's, shows that pain-awareness, awareness of the phenomenon-of-pain, intervenes in time-awareness, which originates in self-awareness, and that the former apparently changes or partially eliminates the latter. As Bustan put it: "We are soon to realize that moments of intense anguish, the concrete unbearable realities of distress, painful events saturating our minds, can interfere with the dominating intellectual process and remain concealed during the period of their occurrence" [56] (p. 261).

An analysis of Bustan's arguments shows that an awareness of the phenomenon-of-pain interferes with self-awareness in a way that prevents the self from being aware of the essence of the state-of-pain [56] (p. 261). The intervention of pain-awareness in self-awareness allows the self to be aware of a meaningful concept of a phenomenon-of-pain; an awareness that allows the self to experience pain. It is an awareness of a phenomenon that represents a state the self is in, but the self is aware only of the contingent features of this representation, and not of the essential features of the state itself. Hill discussed

the importance of changes in awareness and showed how the changes affect knowledge and the consequent actions. He linked knowledge with its expression in language and argued that nothing can be expressed in language without awareness of what is being said: “The agent’s awareness operator is trivial: he cannot talk about sentences of which he is unaware” [90] (p. 126). In other words, it is not possible to know the essence of something and express it in language, without being aware of speech. Hill’s argument and the above analysis of Bustan’s arguments show that the change awareness of the phenomenon-of-pain creates in self-awareness, the origin of time-awareness, reduces self-awareness and restricts the self to cognising merely the phenomenon-of-pain. Applying Hill’s argument to the state-of-pain shows that without awareness of the state-of-pain it is not possible to know the essence of that state and it cannot be expressed in language.

Given a state-of-pain, there is no awareness of the essence of that state, no knowledge of that state’s nature, and no ability to express it in language. Pain-awareness restricts self-awareness, the origin of time-awareness: pain-awareness changes the operation of consciousness, driving it to construct a meaningful concept of a phenomenon-of-pain. The conscious self is only aware of the existence of pain thanks to its awareness of its phenomenal representation. That awareness says nothing more about the state-of-pain or its essence. Given a state-of-pain, there is awareness only of the concept of a phenomenon-of-pain, and even that awareness is restricted. A deeper analysis of consciousness is necessary to explain how this restriction happens.

The SD received in consciousness may not be temporal, but the flow of manifold or multiple representations projected from SD is essentially temporal. Phenomenal data are received in consciousness in a consistent, successive sequence, and therefore the procedural rule of the schema, dictating the manner in which consciousness operates, is temporal. The procedural rule dictates how multiple representations are unified in the threefold synthesis; how consciousness unifies data sequences into concepts; and how consciousness gives meaning to concepts it constructs. In constructing concepts, consciousness creates a stream of cognitions of objects and a stream of thoughts about these cognised objects in consistent sequences, one after the other. The said temporal stream is made possible by one continuous consciousness of one self or, in Kantian terminology, a necessary unity of apperception. The unity of consciousness enables awareness of the meanings of concepts and is expressed, as Kant posited, in the awareness of one unified image of an “I” and in the awareness of temporality.⁷ This image is temporal, because its origin is the faculty of imagination, from which, according to Kant, the temporal images originate [1] (pp. 256–258, B150–B155); (see also, [91]).

The unified image of an “I” has no temporal features, unlike the unity of consciousness that includes an awareness of the temporal, procedural rule. This procedural rule dictates, as stated, the order by which consciousness organises the data of multiple representations into images that join into one sequence, one after the other. An awareness of the unity of this rule is an essential attribute of consciousness, time-awareness.

Pain-awareness or awareness of the phenomenon-of-pain is directed inwards, towards the self while in pain.⁸ Kant held that the multiplicity of representations is received in consciousness from experiencing a phenomenal object [1]. In a state-of-pain, when consciousness is directed inwards, the multiplicity of representations is received from the self as an object.

Unlike pain-awareness, time-awareness, originating in self-awareness, is always directed towards cognising an object outside the self.⁹ The difference between Kant’s and Husserl’s positions regarding the phenomenology of time can be found in the subjective aspect of time-awareness. Husserl argued that this awareness is totally subjective, since its source is not in the imagination (see, [30]; see also [92]).

Integration between these two different types of awareness shows how the former limits and restricts the latter. The intervention of pain-awareness limits self-awareness while directing it towards the self alone. Pain-awareness disables awareness of the manner in which the state-of-pain, as a form, intervenes in the temporal form of the procedural rule.

The self, while in pain, is only aware of that rule, according to which consciousness unifies phenomenal, contingent data into a meaningful concept of the *phenomenon-of-pain*. Pain-awareness therefore limits self-awareness to the phenomenon-of-pain, which represents the state the self is in. Thus, pain-awareness changes the boundaries of consciousness: it limits and restricts them to contingent data regarding the phenomenon-of-pain alone. As Perret noted: “Awareness is an intentional mental state which always takes an object, pain is not . . . but if this is so, then it is also presumably an error to suppose pain and pain-awareness are one . . . insofar as awareness of pain is an instance of awareness, it should conform to this general model: i.e., the pain should be distinct from the pain-awareness” [87] (p. 222). Based on Perret’s argument, pain-awareness can be seen as a mode or form of self-awareness, the origin of time-awareness, an essential attribute of consciousness. Pain-awareness can be treated as a form that changes self-awareness. This argument makes it possible to understand how the state-of-pain or its essential attribute, pain-awareness, changes the boundaries of consciousness. Let me suggest another way to clarify that change.

An analysis of Kant’s arguments in the *Critique* reveals the essential superiority of the formal condition of time, since this form dictates the order by which consciousness unifies the multiplicity of representations into a meaningful concept of an object. It is not possible, according to Kant, to cognise something without time-awareness, without awareness of the temporal, procedural rule, which originates in a form: time. If pain, as a form, intervenes in the procedural rule that is a temporal form, then the temporal form changes and is no longer available for consciousness, which essentially requires time-awareness for its operation. The intervention of the state-of-pain in the procedural rule dictates a different order, by which consciousness unifies multiplicity into a meaningful concept. The concept constructed takes a meaning of a phenomenon-of-pain and not of a state-of-pain. Consciousness is unable to cognise the state-of-pain and is restricted to cognising the phenomenon-of-pain alone. Hence, the change is manifested in any pain-concept consciousness constructs while under the intervention of pain.

At this point, we can once again see how the boundaries of consciousness change and are restricted to cognising contingent features of the phenomenon-of-pain. The change that pain creates does not, however, eliminate the linear experience of time; the time-awareness that is essential for consciousness. Pain rather creates another layer of self-awareness, similar to that discussed by Chapman and Nakamura, or another layer of time-awareness, limited and restrictive, like that discussed by Samuels. In this sense, with the intervention of the state-of-pain in a form essential for consciousness’ natural operation, the epistemic boundaries of the self change [10] (p. 78). They change in a restrictive manner which, at the same time, enables the creation, construction, or development of another layer in the self.

This shows how pain-awareness creates a change in self-awareness, the origin of time-awareness, and how the essence of pain changes another essential attribute of consciousness, alongside the two essential attributes I discussed above: language and the ABEF and SD. The state-of-pain changes consciousness, directing it inwards, towards that state, which is private, subjective, and not an object. In that state, the conscious self experiences cognition of pain, that is, of a non-object. This is how, while being in a state-of-pain, the self experiences being in a state of a non-object, even if only in part, in a limited manner, and temporarily.

It is in that moment of change, from being without pain to being in a state-of-pain, that the self experiences being a non-object. Pain damages both the self’s epistemic and physical boundaries as an object, enabling the experience of being a non-object. It is when the self experiences the destruction or elimination of one of consciousness’ essential abilities—language, time-awareness, or the ABEF and SD—that the self experiences being a non-object. This elimination damages the mechanism of consciousness, leading to a failure in cognising and knowing the phenomenal world of objects. This is when the self’s epistemic boundaries are breached and when the self experiences being a non-object. The self experiences being a non-object when a knife cuts its finger while chopping a cucumber

for a salad. The self experiences being a non-object when it loses a limb in a car accident. The self experiences being a non-object when it suffers a liver cancer which consumes it internally. The self experiences being a non-object when it is suffering a headache or a toothache inflicting pain that wants “to consume me, have all of me, not share my consciousness, my thoughts, feelings and will with anyone or anything else . . . so that finally all that is left is pain, as the all-consuming and all-penetrating center of my life. I am pain, the pain is me, there is nothing else” [57] (54–55). When I am pain, which is not an object, I experience being a non-object, even if in part and temporarily.

The moment under discussion stimulates with consciousness’ tendency to reset back to its natural or normal state of operation, i.e., a state of no pain. This tendency is manifested in a change created in consciousness by either a construction of a new set of patterns, according to which it organises the data received when pain interferes with the previous set of patterns (Chapman and Nakamura); a construction of other possibilities of expression for the state the self is in while in pain (Ferber); a construction of new phenomenological connections or layers between body and consciousness (Bustan); a constructing or re-mapping of consciousness, setting new abilities, and creating a new mechanism (Pereplyotchik); or, as Scarry showed, after the self’s language, identity and world have been destroyed, by a process of inventing a suitable language, an alternative world, and, ultimately, a self-identity and its limits.

6. Conclusions

The above analysis of the three integrations specifies how the state-of-pain, through the three essential attributes I discussed, negates essential attributes of consciousness, as each of its attributes changes or destroys an attribute of consciousness. Following this change or destruction, consciousness is unable to cognise the state-of-pain in the same manner it cognises most objects, i.e., a manner that would have enabled judgment or knowledge regarding the essence of the state-of-pain. The self is only able, rather, to know that this state exists in the self at a given time [56] (p. 260). Each of the three integrations between pain and consciousness indicates the absence of one essential attribute of the latter. That absence creates a change in the boundaries of the self as a conscious object in the phenomenal world of objects; a change that also affects the way the self knows and experiences the world.

By presenting an analysis of the changes pain creates in consciousness and in the way the self experiences phenomena in the world, the paper uses pain as a sort of case study for the theoretical, critical a priori mechanism Kant presented in the *Critique*. The changes pain creates in the epistemic, a priori level of consciousness’ operation result in a phenomenological, a posteriori experience: in a phenomenon-of-pain the self experiences. The characteristics of this phenomenon are contingent and sourced both in cognitive content and sensory data. The latter two are both results of the self’s experiencing objects in the phenomenal world. While most phenomenologists of pain are concerned with defining pain as a complex experience, and philosophers of pain with understanding how pain affects our being in the world, as well as the outcome of the change it creates in consciousness, I gave an account of how that change actually occurs. I explored the mechanism of consciousness to analyse the essence of the change pain creates, regardless of its definition, its outcomes, or its expression in our knowledge or experience of the phenomenal world. The three integrations I presented provide analysis that is absent from existing studies. These studies discuss key positions regarding the change that pain creates in the self. Some see it as destroying a single attribute of consciousness, others as destroying the self itself, and yet others as constructing new layers of consciousness. The present analysis clarifies the nature of the integration between pain and consciousness and explains exactly how each one of pain’s three attributes changes or destroys one of the three attributes of consciousness I discussed.

A change in or an elimination of one essential attribute of an object is, as mentioned above, enough for it not to be the same object. A change in or an elimination of one

essential attribute of consciousness is enough for it not to be the same consciousness, so that its epistemic boundaries change, are breached, or destroyed. Nevertheless, to ease the reader's mind, I analysed the change or destruction pain creates in three attributes of consciousness. Accepting my conclusions respecting any one of the three integrations validates my argument regarding the essence of the change that pain creates in one of consciousness' essential attributes, as well as that pain creates a change in the self as a conscious object in a world of objects. Any change in an essential attribute of something means it is not the same thing; any change in an essential attribute of X means it is not the same X; any change in an essential attribute of consciousness means it is not the same consciousness; any change in an essential attribute of the self as an object means it is not the same self as an object. This change, affecting the boundaries of consciousness, creates a state that enables the self, as a conscious object, to breach its boundaries as an object and experience being a non-object, even if only in part, in a limited manner, and temporarily.

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Notes

- 1 According to Kantian externalism, epistemic data are obtained from the products of consciousness of the phenomenal world and in accordance with the limits of consciousness. Kant's view contrasts with Frege's internalism, according to which cognitive content alone determines the meaning of phenomena [15] (p. 52). Putnam showed why Frege's position is not valid and that one must turn to the world in which the self obtains experience in order to understand epistemic data created in consciousness and know what meaning it gives to the world. To this end, Putnam formulated his argument of the Twin Earth [16] (pp.190–3); (see also [17] (pp. 699–711)).
- 2 Analysis of Kant's argument regarding the so-called transcendental illusion shows that pointing out consciousness' essential attributes enabled him to locate the boundaries of consciousness and mark them at the limits of our experience.
- 3 "[P]ain is just a raw feel, a quale. But, as a further step, to know that we are in pain, to feel the pain qua pain, means that we have cloaked that raw feel in a conceptualization of pain, and that conceptualization has made it into our conscious awareness and we recognized it as such" [31].
- 4 Scarry's argument has influenced many scholars (see also, [35] (pp.19, 50–56)). Some supported it while others opposed it. I found that most scholars referring to Scarry use her argument as a basis for developing positions pointing to pain creating a process that is the opposite of destruction. For most of these scholars, pain destroys language, but builds some other component in the experience of self-existence, such as a new cognitive mechanism, a new set of patterns in consciousness, new layers of self-awareness and self-identity, or a new layer of time-awareness. Thus, for example, Biro showed, in his article on the role of metaphors in the expression of pain, that lingual failure in the expression of pain causes the development of other expressive abilities, such as invention and imagination [69] (pp. 13–26); (see also [67,70]).
- 5 In most studies of pain and self-destruction I found references to the contingent qualities of the self, that stem from cultural, social, political influences, etc., as variables that may affect self-destruction in a state-of-pain. Thus, for example, Siby wrote: "the Self is not an unchanging substance. . . As the embodied and narratively sedimented way of being towards other persons and the world as such, the identity of the self is a thickly layered and dynamic formation of meanings" [54] (p. 51). Vetlesen also addresses the accidental traits that affect being in a state-of-pain: "the society in which we live and the age to which we belong equip each one of us with a vocabulary and a yardstick for communicating about pain and assessing its significance" [57] (p. 7). This paper, on the other hand, addresses features of the self that are essential and permanent.
- 6 I am aware of some scholars' arguments that pain is a self-presenting mental aspect. In this paper, however, I analyse pain, following Pitcher's abovementioned argument, as a form that intervenes in consciousness' operation. I do not, therefore, treat the behavioral or psychological aspects of pain.
- 7 This image is temporal, because its origin is the faculty of imagination, from which, according to Kant, the temporal images originate [1] (pp. 256–258, B150-B155); (see also, [91]).
- 8 Kant held that the multiplicity of representations is received in consciousness from experiencing a phenomenal object [1]. In a state-of-pain, when consciousness is directed inwards, the multiplicity of representations is received from the self as an object.

- ⁹ The difference between Kant's and Husserl's positions regarding the phenomenology of time can be found in the subjective aspect of time-awareness. Husserl argued that this awareness is totally subjective, since its source is not in the imagination (see, [30]; see also [92]).

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