



Phenomenal Self and Divided Brain¹

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Summary

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Famous experiments on patients who underwent commissurotomy, such as those conducted by Roger Sperry, perplex philosophers. These patients, whom we consider single persons, seem to have two separate streams of consciousness due to a severed *corpus callosum*. Consequently, the patient appears to be a single biological organism inhabited by two distinct psychological beings. This paper aims to explore the causes of our uncertainty about the singularity of the commissurotomy patient.

The starting point is Thomas Nagel's description of what the paper refers to as the phenomenal self. It is argued that to imagine the self without any experience is inherently impossible. Additionally, an analysis of Derek Parfit's physics exam thought experiment reveals that it is also impossible to simultaneously conceive of two separate streams of consciousness. Therefore, the reason we struggle to view the patient as a single person must stem from an assumption about the relationship between the self and the unity of consciousness.

An analysis of Tim Bayne's account suggests that this assumption frames the self as an entity that provides the unity of consciousness. The proposed revision inverts this relation: the unity of consciousness is a foundation that sustains the phenomenal self. This thesis leads to an epiphenomenalist view of the self. The result is used to interpret the commissurotomy patient as a single person. This interpretation is compared with Tim Bayne's "switch model" of the case.

Jaźń fenomenalna i podział mózgu (Streszczenie)

Słowa kluczowe:

jaźń, jedność
świadomości,
pierwsza osoba,
tożsamość osobowa,
komisurotoma

Słynne eksperymenty na pacjentach, którzy przeszli zabieg komisurotomii, takie jak te, które przeprowadzał Roger Sperry, wciąż wzbudzają zainteresowanie filozofów. Pacjent, którego traktujemy jako pojedynczą osobę, z powodu rozszczepionych półkul mózgowych wydaje się posiadać dwa oddzielne strumienie świadomości. W efekcie wydaje się pojedynczym organizmem biologicznym, zamieszkałym przez dwie istoty psychiczne. Celem artykułu jest odnalezienie przyczyn wątpliwości, że pacjenci, o których mowa, są pojedynczymi osobami.

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Artykuł upatruje tych przyczyn w subiektywnym doświadczeniu. Punktem wyjścia jest opis jaźni fenomenalnej zaczerpnięty z pracy Thomasa Nagela. Zgodnie z wysuniętą w niej argumentacją nie jest możliwe, by taką jaźń wyobrazić sobie jako pozbawioną doświadczenia. Analiza eksperymentu myślowego De-reka Parfita o egzaminie z fizyki wskazuje dodatkowo, że nie jest możliwe, by wyobrazić sobie jednocześnie dwa oddzielne strumienie świadomości. Sugeruje to, że trudność w zrozumieniu pacjenta jako pojedynczej osoby wynika z zakładanej relacji pomiędzy pojęciami jaźni i jedności doświadczenia.

Analiza stanowiska Tima Bayne'a wskazuje, że relację tę określa założenie, iż jaźń jest czymś, co jednocześnie świadomość. Dlatego praca przedstawia propozycję rewizji tej relacji: jedność doświadczenia jest fundamentem, który umożliwia jaźń fenomenalną. Ta teza prowadzi do epifenomenalizmu. Stanowisko to zostało w pracy zastosowane w interpretacji pacjenta po zabiegu komisurotomii jako pojedynczej osoby i porównane z podobnym modelem zaproponowanym przez Bayne'a.

1. The Commissurotomy Case

Many taxonomies describe different kinds of unity of consciousness, but one kind stands out as being of the greatest philosophical interest: phenomenal unity. This refers to phenomenal consciousness, famously described by Thomas Nagel as the consciousness of "what it is like" to be in a particular mental state. For instance, we know what it is like to watch a movie in a cinema, and we know what it is like to eat popcorn. However, there is yet another phenomenal state, distinct from these two, namely knowing what it is like to watch a movie while eating popcorn. It is a single, unified phenomenal state, different from watching and eating as two separate experiences.

Another kind of mental unity that phenomenal consciousness can be distinguished from is access unity, derived from access consciousness. The latter refers to the mental state's availability for use in "reasoning, reporting, and rationally guiding action" (Block 1995/2007: 160). For example, the content of a movie and the taste of the popcorn could both be available together in our cognitive systems during movie screening. Therefore, we could report, "I like the movie, but I do not like the popcorn", and rationally guide our actions by choosing to stay and watch the movie without eating.

Certain famous experiments with patients who underwent commissurotomy raised concerns as to the unity of experience. This operation, performed to prevent epileptic seizures, involves splitting the two hemispheres of the brain by severing the corpus callosum. In the classic experiment conducted by Roger Sperry (1974), the words "key ring" were shown to participants by projecting the word "key" onto the right side of both retinas and the word "ring" onto the left side. The latter feeds information to the left hemisphere's cortex, while the former is processed by the right. The left hemisphere controls speech, while the right controls the left hand. When asked to point with their left hand to the object referred to in the flashed word,

patients pointed to a key rather than to a ring. When asked what the object was, they responded that it was a ring and denied that it was a key. It was as if they were seeing different things with different hemispheres. There seems to be a “key” experience and a “ring” experience, but no unified “key ring” experience.

The “key” experience is at least available for guiding action, as the patient points to the key, while the “ring” experience is not available in this respect, since the patient does not point to the ring. However, the “key” experience does not seem to be available for reporting since the patient denies seeing the key; in turn, the “ring” experience is available for reporting, so the patient maintains that they see the ring. There does not appear to be an access-unified “key ring” experience, as the two are not simultaneously available together for “reasoning, reporting, and rationally guiding action”. Thus, access unity appears to be severed.

The apparent disruption in phenomenal unity presents a puzzle. It is possible to interpret this as a case of severed access unity, with phenomenal consciousness remaining unified (Bayne, Chalmers 2003: 38–39; Bayne 2010: chap. 9). However, this view is far from being widely accepted. It seems like a default interpretation or is even taken as a fact (Parfit 1984: 247) that there are two separately unified streams of consciousness. Consequently, some philosophers suspect (Nagel 1971: 407) and even explicitly claim (Schechter 2018) that the commissurotomy patient has two selves. If we understand the self as that which makes a piece of matter a person, then the patient may be seen as a double person—there are two individual patients, even if they share a single body.

As Daniel Dennett writes: “[s]tandard philosophical legend has it that split-brain patients may be ‘split into two selves’ but otherwise suffer no serious diminution in powers as a result of the surgery” (Dennett 1991: 424). Indeed, the patients’ behaviour seems consistent and typical beyond the experimental circumstances, excluding some time right after the surgery when the so-called callosal disconnection syndrome occurs (when a patient struggles with bimanual coordination tasks such as buttoning a shirt or following commands, understandable by the left hemisphere, with a left hand, controlled by the right hemisphere). There are examples where the unity of experience is severed much more drastically, e.g. dissociative identity disorder, or some forms of schizophrenia. However, even such a slight anomaly as in the commissurotomy case seems to intuitively lead to the dramatic conclusion that the patient is a double person.

My primary objective in this work is to explain why the “standard philosophical legend” is so compelling. Why might such a counterintuitive claim be the most intuitive interpretation? I will argue that this is due to an implicit presupposition about the relationship between the self and the unity of consciousness. Unravelling the relation between these two concepts will provide the groundwork for revising the conceptual scheme. This should enable us to understand commissurotomy patients as single persons again.

2. The Phenomenal Self

I will explore the origins of our intuitions—about commissurotomy patients being double persons—by examining our internal experience. Therefore, I will ground my inquiry in something that could be called the phenomenology of the self: how we experience ourselves from a first-person view. Thomas Nagel gives an interesting description of something akin to this:

The concept of the self seems suspiciously pure—too pure—when we look at it from inside. The self is the ultimate private object, apparently lacking logical connections to anything else, mental or physical. When I consider my own individual life from inside, it seems that my existence in the future or in the past—the existence of the same “I” as this one—depends on nothing but itself (Nagel 1986: 32–33).

I assume that Nagel describes something that we are all familiar with from our first-person experience and that any healthy reader of this paper could intuitively recognise. Such a self could be called the phenomenal self.

With the psychological approach to personal identity, such a view can be easily identified as Cartesian dualism and, following Parfit (1984: chap. 88), the self could be called the Cartesian Ego. A distinctive feature of the Cartesian Ego is its self-sufficiency and its attribute of being a self-standing entity or, in Descartes’ terms, a substance. His famous argument claims that everything could be an illusion, except the self, because any illusion or any other experience presupposes the existence of a self that “has” the experience. Therefore, a consequence of Descartes’ view is the logical possibility of a self that has never had any experience—a self that exists in complete sensory deprivation since its birth.

While the Cartesian Ego, as understood within the framework of Descartes’ theory, does not need to be imaginable, the phenomenal self somehow appears in our first-person experience in the way Nagel describes. If something can be experienced, it should also be imaginable. Thus, we should be able to imagine the experience of the phenomenal self. However, since in Descartes’ theory, the notorious sensory deprivation state is logically possible for the Cartesian Ego, if the phenomenal self were the Cartesian Ego, the experience of the phenomenal self in the notorious sensory deprivation state should be imaginable (as the phenomenal self is). We should be able to imagine a “pure” self as a self-standing entity independent of any stream of consciousness and, indeed, “lacking logical connections to anything else”. However, this cannot be the case because—as David Hume famously argued—the phenomenal self is not an object like other experiential objects. It does not appear in the phenomenal field among other experiential objects in the same way because it does not have the experiential properties that objects have. This is why the phenomenal self appears “pure”. Therefore, we cannot imagine a “pure” self in the notorious sensory deprivation state. As previously stated, what is experienced should be imaginable.

However, the phenomenal self lacks experiential properties. Therefore, the only way to imagine the self is by imagining the experience of something else—a stream of experience that is not present in the sensory deprivation state. To imagine the phenomenal self, we must first imagine a stream of experience. The notorious state of sensory deprivation is possible for the Cartesian Ego but not for the phenomenal self. Therefore, the phenomenal self cannot be the Cartesian Ego.

Nevertheless, I assume that our first-person experience allows us to grasp what Nagel refers to in the previously cited passage. The “ultimate private object” seems to lack “logical connections to anything else”, just like the Cartesian Ego. If the phenomenal self is not the Cartesian Ego, despite the former seeming to share crucial features with the latter, what could it be?

When something appears to be what it is not, we experience an illusion. However, the illusion of the “private object” does not serve as proof that the self does not exist. Even when we are under an illusion, we still experience the illusory phenomenon. It is just the illusory character of the experience that demands an explanation, which I will outline it in the fourth section.

3. Imagining Two Streams of Consciousness

The commissurotomy patient is said to have two selves corresponding to two streams of consciousness. Could we imagine two phenomenal selves in our first-person experience? In the previous section, I argued that it is impossible to imagine even a single phenomenal self without any experience. To imagine a self, we must imagine a stream of experience. Therefore, it might be possible to imagine two selves by imagining two unified streams of consciousness. Derek Parfit (1984: 246–247) attempted to do so in his thought experiment, arguing that we can imagine being in the situation of a commissurotomy patient.

In reconstructing Parfit’s thought experiment, I imagine myself taking a physics exam with a science fiction device that allows me to divide and reunite my brain. I push the button, and the device carries out its task. Because each hemisphere controls each hand separately, I can calculate in two ways: one with my left hand and the other with my right hand. Then, I push the button again, reunite my brain, and check the results, thus being able to choose a better answer from the two.

If we imagined the experiment from a third-person perspective, there would be no problem. As we observed the events, we might have seen a person push the button, calculate differently with each hand, and then press the button again. However, the external viewpoint is not what the experiment is about. Contrary to Nagel’s earlier claim, as cited, Parfit argues that we can imagine being like the commissurotomy patient—experiencing what it is like to be such a person. Therefore, I have approached it from my first-person perspective.

Nevertheless, contrary to Parfit's intentions, the experiment collapses when it is supposed to depict a situation similar to that of a commissurotomy patient. The crucial point is that the patient is unaware of any division or contradiction in their responses to the experimenter's questions. The person is nowhere near claiming the following: "I know I am giving contradictory answers, but this is how I see it". Such a claim seems impossible because the patient's left hemisphere does not know that the right one is doing something different. There is no awareness of this division.

Therefore, let me consider the experiment again with the stipulation that it should resemble a commissurotomy case. I can still push the button and divide my brain, and perhaps my two hemispheres can even perform the calculations in two different ways. Nevertheless, since the scenario must be akin to the commissurotomy case, neither of the hemispheres can be aware that it is working separately. The "left" stream of consciousness cannot even know that there is any separate "right" stream. I must not be aware that there is any inconsistency in my experience and behaviour, since the commissurotomy patient is similarly unaware. Therefore, no rational decision to push the button and reunify the brain could arise.

From my first-person perspective, I can only imagine being one branch of the divided stream and performing calculations with one hand. I cannot, from the inside, additionally imagine that there is another branch (beyond the one I am) that I am unaware of. I could do it from the outside (imagining myself to be someone I observe), but not from the inside. It would be akin to imagining the experience of not experiencing anything, which is impossible.

In summary, Parfit's experiment leads to two contradictory conclusions. First, for the situation to be commissurotomy-like, both streams of consciousness must be unaware of each other. Second, the streams must be aware of each other in order to make a decision about reunification. This inherent contradiction renders the expected results of the experiment unimaginable.

In the previous section, I argued that I cannot imagine a self without a stream of experience. In the current section, I argued that I cannot imagine having two simultaneous streams of experience, each with its own self. It turns out that I can only imagine a single self for a single stream, which is what is usually expected and allegedly undermined by "scientific facts", as both Nagel (1971: 411) and Parfit (1984: 247) point out.

For Parfit (1984: 252), the most compelling version of the idea of the unity of consciousness is the Cartesian Ego, which unifies experiences. I have rejected the possibility that the phenomenal self is the Cartesian Ego, yet the supposed double stream of consciousness remains unimaginable. Therefore, the source of the difficulty cannot lie in the concept of self, since I have not tried to imagine two selves, but only two streams of consciousness. Instead, it must pertain to the relationship between the self and the unity of consciousness, which I will address in the next section.

4. The Epiphenomenal Self

Tim Bayne proposes that any philosophical concept of a self must meet three demands.

The ownership demand is as follows: "experiences don't occur as self-standing entities, but are 'had by' selves. Selves are the things to which we ascribe conscious states" (Bayne 2010: 269). In Bayne's minimal view, the self *provides* the unity of consciousness by "having" experiences or conscious states. The relation is crucial here: the self *makes* unity; thus, because there is a self, there is also unity.

The perspectival demand is as follows: "[a] self is not merely an entity *in* the world, it is also something *for* which the world itself is an entity" (Bayne 2010: 270). The way in which the self creates unity is supposed to be highly individual. The content of the experience and the manner of unification are both unique. Such a construction can be described as a perspective on the world. Because the self is considered the very cause of the construction, it is said to be "something *for* which the world is an entity".

The reference demand is as follows: "selves are objects of first-person reflection—'I'-thoughts" (Bayne 2010: 269). The self—the thing that owns experiences, unifies consciousness and possesses a perspective on the world—is the reference object of "I". The reference demand is less critical for the purposes of my work here.

These three demands are useful here for three reasons. First, in Bayne's view, they aspire to provide a noncontroversial minimal foundation for further discussion, thereby illustrating what philosophy usually expects from the self. Second, they highlight critical binding points between the concepts of the self and the unity of experience. Third, the account proposed here is based on rejecting those three demands.

The source of the commissurotomy issue—the puzzling intuition that the commissurotomy patient is a double person—lies in this specific claim: for any experience, there must be a self that "has" the experience, which is the ownership demand. The self is supposed to unify consciousness through "having" mental states. Therefore, provided that the ownership demand holds, a single self cannot "have" two ununified experiences—"having" by the same self would unify them into a single stream. If the commissurotomy patient had a single self, and the self "had" the "key" experience and the "ring" experience, both would have to be unified into the "key ring" experience by the single self. Since the two are not unified, the supposed conclusion is that there cannot be a single self that "has" them both. Therefore, because "experiences don't occur as self-standing entities", there must be two selves to which both experiences belong separately. If the self is what constitutes a person, the supposed double self renders the patient a double person. This is how the ownership demand leads to interpreting the commissurotomy patient as a double person (it

similarly creates difficulties in cases like schizophrenia or other psychological disorders; even a healthy individual is likely to experience some disunified mental states).

A similar line of thought could be built upon the perspectival demand (Schechter 2018: 24–25). A perspective on the world can be understood as a unique way in which experiences are unified. Assuming some criteria of unity in having a perspective (for Schechter, these are access unity and awareness unity, based on the higher-order consciousness concept of David Rosenthal 1986 and 2005), the disunity between the “key” experience and the “ring” experience can be understood as symptomatic of disunity in the patient’s perspective on the world, as long as they do not meet these criteria. Since the self is not supposed to “have” a perspective on the world, and there seem to be two different perspectives in the commissurotomy patient case, it appears that there are two selves that “have” those perspectives separately. Consequently, there are two persons.

To make the patient a single person again, I propose reversing the relationship between the self and the unity of consciousness. The following metaphorical analogy can help explain the idea. The eye of a cyclone appears to be a source of a tornado. It seems as though the eye unifies atmospheric forces and creates the whole phenomenon. However, nothing at the centre could unify anything. In fact, it is the other way round: the atmospheric forces unite, and the eye appears in consequence. The eye is not a source, but rather the ultimate effect of a tornado. It is only an illusion that something at the centre is the cause of the phenomenon.

The thesis is that the unity of consciousness does not depend on the self; rather, the self depends on the unity of consciousness. The phenomenal self seems to be a self-standing entity and a source of the unity of consciousness. However, there is nothing at the centre of our experience. “The ultimate private object, apparently lacking logical connections to anything else”, “having” mental states and unifying them—is a kind of an illusion. The situation is also the reverse: the self does not “have” mental states or unify them; rather, mental states unite and constitute the system that is called the mind, and the mind “has” the self, just like a cyclone “has” the eye. Thus, the self is not a cause but rather the ultimate effect of mental unity. In other words, the self does not “have” experiences; rather, unified experiences “have” a self.

This does not imply that the self is merely a composition of mental states—a thesis known as the bundle theory of a self, associated with Hume or Ayer (1946); see a summary and discussion in Olson (2007: chap. 6). Similarly, the eye of a cyclone is not a composite entity formed by atmospheric forces. There is nothing at its centre that constitutes a composition. The illusion of a central entity depends entirely on the specific way atmospheric forces are unified. Likewise, the phenomenal self appears because mental states are unified in a particular manner. Our first-person experience is constructed in a way that creates the illusion of something at the centre of it all, and the thing could be called the self. However, there is nothing there.

The phenomenal self appears “pure” and “lacking logical connections to anything else” not because it is a self-standing mental substance independent of everything. It is “pure” because there is nothing at the phenomenal centre. This is why we cannot imagine this “pure” self in the notorious sensory deprivation state, a self without any experience. It would be like imagining the eye of a cyclone without atmospheric forces, which is impossible. There can be no self without unified experience, just as there is no eye without atmospheric forces. Therefore, we can conceive of a self only by imagining a unified stream of consciousness.

This is also why Parfit’s physics exam experiment is unimaginable. To conceive of a self, we need to imagine a stream of consciousness. However, in order to have a self, this stream must be unified. This is because the self depends entirely on the unity of consciousness. Consequently, we cannot imagine two selves or two ununified streams of consciousness, as Parfit attempts to do. In our conceivable phenomenology, we cannot simultaneously maintain unity (to maintain a self) and disunity (to be in the experimental situation). We can imagine only a single unified stream of consciousness for a single self.

It may be helpful to draw a comparison with Bayne’s concept of the phenomenal self as “the centre of phenomenal gravity”, as derived from Daniel Dennett’s (1992) idea of the self as “the centre of narrative gravity”. I do not intend to present Bayne’s account as incompatible with my proposed interpretation. On the contrary, both views share a similar core idea, as expressed in Bayne’s words: “[w]e need a notion of the self according to which the relationship between the self and the unity of consciousness is *constitutive*. [...] In other words, we need to construct selves out of streams of consciousness” (Bayne 2010: 281). This is the thesis of phenomenism, which Bayne contrasts with animalism and “neo-Lockean” accounts. However, I want to emphasise that the idea of selves being “constructed out of streams of consciousness”, which provides a common ground for both views, becomes problematic if the previously discussed three demands are to be upheld, in particular the ownership demand.

Bayne not only preserves the idea that “experiences don’t occur as self-standing entities, but are ‘had by’ selves” (Bayne 2010: 269), but he also rejects certain views on the self that do not satisfy his demand adequately (Bayne 2010: chaps. 12.2 and 12.3). If this idea is accepted, the self must be what makes one of the main aspects of the unity of consciousness possible: “[m]y conscious states possess a certain kind of unity insofar as they are all mine [...]. We can describe conscious states that are had by or belong to the same subject of experience as *subject unified*” (Bayne 2010: 9). Since the self “has” experiences, the self is the subject that establishes the unity in question.

Consequently, the self possesses a perspective on the world (the perspectival demand). Moreover, because I am the subject of experience, it is reasonable to assert that I have experiences. If the self is what possesses experiences, as the ownership

demand posits, then the self is simply the subject, and the term "I" refers to the self (the reference demand).

Bayne considers the three demands "clearly central to the notion of the self", adding: "[a]nything that might hope to qualify as a bona fide self ought to play all three roles, and anything that does play all three roles will thereby qualify as a self" (Bayne 2010: 269). The account I propose in this work may be considered as another version of the same approach of the self, specifically phenomenism, as Bayne terms it (in contrast to animalism and the "neo-Lockean" account). However, the version I proposed rejects all three of these demands. This is the crucial difference that is a matter of discussion here.

Here is Bayne's general view of a self:

De se representation isn't the exclusive provenance of explicitly self-conscious thought, but permeates consciousness through and through. [...] the conscious states evoked by the presentations of one's senses are automatically *de se*. In effect, this means that streams of consciousness [...] are constructed "around" a single intentional object. The cognitive architecture underlying your stream of consciousness represents that stream as had by a single self—the virtual object that is brought into being by *de se* representation (Bayne 2010: 289).

Given Bayne's three demands, his view must be considered in their context. It seems that the "cognitive architecture" projects the "virtual object" into our phenomenological field as a *de se* representation, constructing the experience "around" this "intentional object". Following Bayne's ownership demand, the projected "object" is supposedly the one that "has" experiences. However, since the "object" does not simply appear in our experience, that *de se* representation "permeates consciousness through and through". If this reconstruction is correct, the *de se* representation that Bayne discusses appears to be the phenomenal self. However, the reconstruction stands in contrast to my proposal.

In the view proposed in this section, a mind ("cognitive architecture") does not require any instrumental fiction ("intentional object") to unify the experience "around" it. On the contrary, the unified system of mental states constitutes what we refer to as a mind—quite similar to how cells form a biological organism. Because mental states are unified in a specific way, the phenomenal self appears as a side effect of this unity. This is how the self is "constructed out of the stream of consciousness" in the approach I propose—like the eye of a cyclone is "constructed" with atmospheric forces of the phenomenon. The "intentional object" is a kind of an illusion. There is nothing in the phenomenal centre that could "have" experiences as there is nothing in the eye of a cyclone.

One critical feature in the analogy could be used to sum up the analysis. Since there is nothing at the centre of the cyclone, there is nothing that could cause any

effects. Whatever the cyclone does is the result of atmospheric forces. Similarly, there is nothing in the phenomenal centre that could cause anything. The self does not drive a person's actions, a mental state does. For example, it is not the self that prompts a person to drink water; the mental state of thirst can cause the action. Therefore, the self is not only phenomenal but epiphenomenal. It is the ultimate effect with no further causal powers.

It could be argued that, in Bayne's view, the self—regarded as the “centre of phenomenal gravity”—is merely a “virtual object”, not an actual one. Therefore, it cannot be something that truly “has” experiences, and perhaps my reconstruction of his approach is incorrect. However, the central point of my argument does not concern the nature of the self and what it truly is. Bayne himself assumes his three demands as a starting point before he develops his “centre of phenomenal gravity” concept of the self. Likewise, my conclusion that the self is an epiphenomenon follows from my inquiry as its outcome rather than a premise. My argument addresses, first and foremost, the relationship between a self and the unity of consciousness. What comes first? Is the unity of consciousness grounded in the self, or is the self a consequence of unified consciousness? In the former case, a self “has” experience (which makes experience unified); in the latter case, experience (being unified) “has” a self. “Having” relates here only to the relation of dependence. Bayne assumes the former case in his ownership demand, whereas my proposal is the latter.

On the other hand, given that Bayne argues that we “need to construct selves out of streams of consciousness”, it may imply the self is based on the stream's unity. This could align his approach with my proposed thesis: the self does not unify consciousness, but it is the ultimate outcome of that unity. As previously mentioned, I do not intend to oppose Bayne's overall proposal. I oppose the three demands that he accepts and designates as minimal, non-controversial foundations for any theory of self, including his own. However, reversing the relationship between the concepts of a self and the unity of consciousness makes a significant difference, as the three demands appear to be commonly accepted in philosophical discourse (hence, Bayne adopts them without any substantial argument).

Before I explain how the outlined view could interpret the commissurotomy patient as a single person, I must first clarify the conceptual confusion it could potentially create.

5. A Person

It seems reasonable to assume, despite Hume's famous critique, that experiences are not self-standing entities; instead, they belong to a subject of experience. Likewise, it seems equally reasonable to conclude that two mental states from two different subjects cannot be unified unless they belong to the same subject. The idea that there are subjects of experience, and they “have” their experiences seems

irresistibly compelling. What constitutes the subject capable of experiencing something? If the phenomenal self does not "have" mental states, what then does "have" and unify them?

There is a sense in which we "have" both physical and mental states. We are biological organisms. Mental unity and physical unity are both integral parts of the same larger unity of the whole organism. However, we have the exceptional feature of being a person. While organisms have mental and physical states, the same could be said about persons. Peter F. Strawson's (1959: chap. III) famous thesis suggests that the concept of a person is logically prior to those of mental and physical states. This is how we employ this concept. A person is something that has states of both kinds. As such, persons have the proper physical and mental constitution for experiencing, thus making them subjects of experience. However, it is worth noting that Strawson quietly overlooked one point, namely non-human animals also have both physical and mental states. There seems to be no reason not to call them subjects of experience².

If we are organisms and, as such, have mental states, does this mean that the organism itself unifies mental states to provide the unity of consciousness? There is nothing that "has" parts of a body to unify them into a single organism. Being unified is an immanent feature of the whole organism and its parts. However, the organism "has" its parts in the sense that they are precisely parts of the unified system of the organism. Being unified is their innate nature.

Similarly, nothing external is required to unify our mental states. The unity of consciousness does not need an external entity to maintain it. Just as in the body, being unified must be an immanent feature of mental states that are parts of the unified system called the mind.

We are persons (or, more broadly, biological organisms) and, as such, we have mental states. Therefore, persons (or organisms) are subjects of experience. However, persons do not actively unify their mental states, just as they do not unify their physical states. There is no need for anything external to achieve this unity.

Tim Bayne's minimal demands are compelling because it is the subjects of experience, not selves, that possess these features. First, there are no free-standing experiences; instead, they belong to subjects, or biological organisms that can be persons. Animals are psychophysical systems capable of experiencing, therefore, they have experiences.

² The claim made here that we are biological organisms does not equate to the thesis of animalism, advocated by Olson (2007), Snowdon (1990), or van Inwagen (1997). The epiphenomenal self thesis does not prejudge whether only a biological organism could have the self and be a person. On the contrary, if any system could have a unified experience that maintains the self, it would be a person. Moreover, the thesis allows for the gradability of personhood. The more complex the unified mental structure is, the stronger the mental basis that maintains the self. Therefore, animals can be persons, at least to some degree. How animalism relates to those issues is unclear because the account does not address the question of what makes something a person. Olson (2007: 16) even deliberately avoids "the personhood question", as he calls it, in favour of "the question of what we are". Paleczny (2021) includes more details.

Second, perspectives on the world belong to subjects. The psychophysical nature of all animals makes a perspective dependent on both physical and mental features. Third, a person is the reference object of "I". When we say "I", we refer to ourselves, namely, the persons we are (therefore, "I" am visible and measurable, while the self is not).

This work assumes that the self is what qualifies a physical entity—such as the organisms that we are—a person. It seems to be a part of the most fundamental meaning of the term. However, it can be likened to the claim that the eye makes something a cyclone. While this could be accurate in terms of semantics—having an eye is the constitutive feature for something to be a reference object of the term "tornado"—in terms of physics, there is no physical object at the centre that could make anything. Similarly, the self qualifies something as a person in terms of semantics. Having the self is a constitutive feature that makes something a reference object of the term "person". However, in terms of metaphysics, it is the unity of consciousness that makes a person. The self is only the ultimate effect of it.

Relationships that constitute a conceptual scheme of personhood can be summarised as follows: a biological organism, or a psychophysical system capable of experience, has experiences and, in general, mental states. Unified mental states constitute the system called the mind. However, the unity has a specific structure that maintains the centre called the self. Thus, a person has a mind, and the mind has the self. The core of this scheme is mental unity. There are no persons, minds, or selves without the unity of consciousness.

6. A Single Self of the Commissurotomy Patient

The commissurotomy patient appears to be a double person due to the presupposition that there must be a self that "has" the patient's experiences. Through "having" them, the self unifies them. According to this line of thought, the unity of consciousness relies entirely on the self. Thus, even a tiny disunity creates the suspicion that there is another self that "has" the disunified experience.

The thesis introduced in the fourth section reverses the relation: the self relies entirely on the unity of consciousness. Consequently, a relatively small disunity in the commissurotomy patient's experience does not immediately demand another self to "have" a disunified experience. It opens up a possibility for interpreting the commissurotomy patient as a single person. The defect in the mental foundation may not be so profound that it could ruin the general construction of mental unity that sustains the singular phenomenal self.

This should align with what we know about the everyday lives of these patients. Outside the laboratory and beyond the initial period of callosal disconnection syndrome, they exhibit almost no difficulties in managing their daily lives. Some relatively minor

issues, like distraction, hesitation in making decisions, or short-term memory problems, do not challenge our understanding of these patients' unity of consciousness.

Nevertheless, an explanation is needed for what happens to their minds during the experiment. I will briefly outline the explanation in comparison to Tim Bayne's "switch model". He expresses the essence of his idea this way:

Rather than suppose that the patient's two hemispheres are conscious in parallel, we should think of consciousness in the split-brain as moving or switching from one hemisphere to another. Although both hemispheres can process information concurrently, they take turns supporting consciousness (Bayne 2010: 210).

Bayne's solution allows for the interpretation that the commissurotomy patient has a single self. However, assuming the ownership demand, as Bayne encourages us to do, the self should unify the patient's experiences by "having" them. Therefore, the source of the problem must be the self that incorrectly unifies the patient's experiences. It alternately unifies the left hemisphere stream at one moment and then switches to the right hemisphere stream at another.

Nevertheless, in such a model, it becomes possible that—even if diachronically, at two different points in time (first, when we ask the patient to point to the item, and second, when we ask them to answer the question)—the patient's experiences are not unified across time, they are still unified at each individual moment. Therefore, the unity of consciousness is realised differently at different times, yet continuously. Consequently, a single self could sustain this continuously realised unity.

However, as Schechter (2012) argues, a problem for such a model arises in the case of a synchronic, rather than diachronic, presence of two streams of consciousness. Some phenomena could be interpreted in this way. One example could be a person with schizophrenia who describes a voice that is currently telling them what to do; another could be a split-brain patient who reported that his left hand was plucking a lit cigarette from his mouth without his will, before he finished smoking (Joseph 1990: 29). If there are two separate streams of consciousness occurring simultaneously, and the self is responsible for unifying each stream, there must be two separate selves to unify those streams. Consequently, the commissurotomy patient would be considered a double person.

If the self is not responsible for unifying experience—so the ownership demand is rejected—and the unity of experience is considered the foundation that maintains the self, the whole issue becomes much less acute. This is because the source of the problem shifts from the self to its foundation. The disunified experience creates an unstable ground for maintaining a single self. However, even such an unstable foundation could still allow for the interpretation of this case as involving a single self. Even if some mental states somehow detach from the unified system supporting a single self, whatever remains in the system can continuously support the same self.

Even if certain atmospheric forces might break away from the rest of a cyclone, yet the remaining structure would still support the same eye. Importantly, it does not matter what mental states support the self. As long as there is a continuous existence of a unity of consciousness, there is a continuous existence of the same self (and the same person because the self is what makes a person).

The crucial difference lies in the following: in Bayne's view, the self is responsible for unifying experiences into two different streams, and "switches" between these streams depending on the circumstances. What is being "switched" is the whole unified construction: one is the left-hemisphere stream of consciousness, while the other is the right-hemisphere stream of consciousness. Therefore, Bayne accepts, in all three interpretations of the "switch model" (Bayne 2010: 214), that there are two separately unified streams of consciousness.

In the approach I proposed here, the patient's split brain and the specific laboratory conditions enter a relationship that compels the unified mental system to exchange the conscious mental states that constitute its mental unity. What is being "switched" are only mental states that are part of the unity maintaining the self, not the whole construction of unity. However, as mentioned, mental states do not matter; what is essential is maintaining the construction—the unity of consciousness—to preserve the same self.

Does this not imply that mental states detached from the construction belong to or form another stream of consciousness? If there is another stream, must there not also be another self? This possibility aligns with the view I have proposed. However, this thesis demands a more thorough exploration of whether it is metaphysically acceptable. If any detached mental state unites with another detached mental state, it is logically possible that the mental unity they generate could serve as a foundation for another self. Yet, the question becomes contentious regarding "how much" mental life is sufficient for such a foundation (like "how much" of the atmospheric disturbance is required to form the eye of a cyclone). Do any two united mental states suffice for the emergence of a self? Can a mental state exist independently of any unified mental structure? Such questions require answers to determine whether mental states, detached from the unity of consciousness, as seen in commissurotomy patients, may provide grounds for another self (further discussion can be found in Paleczny (2025)).

Nevertheless, this does not undermine the view that the commissurotomy patient remains a single person—or, at the very least, identical to the person they were before the operation. This is because, even if disconnected mental states coalesce into another stream of consciousness, they become severed from the original stream that preserves the primary patient's original self. Consequently, the newly formed stream, and perhaps the newly formed self, are not identical to the original individual. If such a scenario were to occur, it would imply not the division of a person, but rather the emergence of another person within the primary patient's body. The patient

would remain the same person by virtue of possessing the same original self. Perhaps streams of consciousness are somehow dividable, but the unity of consciousness is not (Paleczny (2025) extends the argument).

Such a situation, even if logically possible, seems to be highly unlikely. In a science fiction scenario, to obtain two selves in one body, a mad scientist would need to detach mental states and unify them independently from the unity of experience that maintains the primary self. It would not be like separating a limb from a body; rather, it would be like separating another unified organism from a primary one. There must be newly established mental unity if another self is to be brought into existence. I do not claim that this scenario is unimaginable; rather, I suggest that the epiphenomenal self makes the situation much more demanding if the expected result is a double self.

Even severe cases like schizophrenia require significantly more evidence to be interpreted as instances of a double self. No matter how many mental “bricks” are exchanged to maintain the unity of experience and how complicated the construction may be, there is always unity present. If a person with schizophrenia can describe a voice in their head, then there must still be unity that enables the patient to do it. There are still experiences shared between the voice and the patient, as the voice issues commands telling the patient what to do based on their common experiential context. The construction may be complicated and unstable, but as long as there is unity, no matter how fragile and unstable, it can still be understood as supporting the same self. If the patient’s left hand acts contrary to their intentions, behavioural unity still allows the right hand to light the cigarette and the left hand to pluck it. Both are physically and mentally complex actions that require a fundamental psychophysical unity that includes sensations of the cigarette, recognising its position, or coordination necessary for reaching for it.

Ultimately, when the commissurotomy patient points to the key, there is undoubtedly psychophysical unity at play. This unity encompasses the experiential content of the key, the understanding of the question, the behavioural unity that enables the act of pointing with the finger, and many other mental states contributing to the unity. Moreover, there must be a connection between the unity involved in the “key” experience and the unity involved in the “ring” experience, as the patient’s organism is capable of switching between the answers given to the experimenter’s questions.

If the mind is understood as a mental system constituted by unified mental states, as proposed in the fifth section, consciousness represents merely the surface of this system. This implies that unconscious mental states must be parts of the whole unity. Therefore, if something appears disunified on the surface, it does not mean that it is not unified on a deeper level. Moreover, if mental unity exists, it sustains a single self. If the unity is disrupted, the self disappears—much like the eye of a cyclone vanishes when atmospheric forces fail to coalesce. When the unity of consciousness collapses, the self ceases to exist, and the person dies.

7. A Further Controversy

The interpretation of the commissurotomy case proposed in this paper carries at least one serious implication that cannot be ignored: the issue of partial consciousness, as suggested and discussed by Susan Hurley (1998). This notion posits that the unity of consciousness is not a transitive relation.

There is unity of consciousness in the "key" experience and in the "ring" experience; however, there is no unity between the "key" and the "ring" experiences collectively. If one were to assert that there are two separate streams of consciousness in the commissurotomy patient case, the transitivity of consciousness would not need to be questioned. However, I reject this assumption. According to the view presented in this paper, what is being "switched" is not the whole unified construction, but rather the mental states that support the structure. Therefore, I also suggested that unity exists on a deeper level of the mental system, which allows the same organism of the patient to "switch" those states in response to the experimenter's questions. However, this implies a gap in the system's unity: it includes both the "key" and the "ring" experiences but does not unify them.

This consequence may not be universally accepted and demands further explanation (see Bayne 2010: chap. 9.4 for a discussion), which lies beyond the scope of this work.

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