Experiential Awareness: Do You Prefer *It* to *Me*?

Abstract

In having an experience one is *aware* of having it. Having an *experience* requires some form of *access* to one's own experience, which distinguishess phenomenally conscious mental states from other kind of mental states.

Until very recently Higher-Order (HO) theories were the only game in town aiming at offering a full-fledged account of this form of awareness within the analitical tradition. Independently of any objections that HO theories face, First-Order (FO) theories need to offer an account of such an access to become a plausible alternative.

My aim in this paper is twofold. In the first place, I want to wide the logical space of the discussion among theories of consciousness by offering a distinction, orthogonal to that between FO and HO theories, between what I will call self-involving and mental-state-involving theories and argue in favor of the former one. In the second place, I will present the basics of a characterization of such a self-involving theory in first-order terms.

1 Subjective Character

Conscious experiences have a subjective dimension, undergoing them feels some way or, borrowing Nagel's expression *it is like something for the subject of experience* to undergo them. When I look at the red apple close to my computer, there is *something it is like for me* to have this experience. The *way it is like for me* to have the experience is the phenomenal character of the experience.

Theories of consciousness aim at offering a comprehensive account of phenomenal character. One interesting way of facing this task is a divide and conquer one (Kriegel (2009); Levine (2001)) that begins by making a conceptual distinction between two components of phenomenal character –the qualitative character and the subjective character– and the two assotiated problems.

A theory of qualitative character accounts for *what it is like* for me to undergo the experience, the concrete way it feels to undergo it. In this sense, the qualitative character is what distinguishes the kind of experience I have while looking at my red apple from the one I have while, say, looking at a golf course. On the other hand, a theory of subjective character explains what it is like *for me* to undergo the experience. It abstracts from the particular way having different experiences feel and concentrates on the problem of what makes it the

case that having a conscious experience feels at all. Hence, the qualitative character is what makes a state the kind of phenomenally conscious state it is and the subjective character what makes it a phenomenally conscious state at all (Kriegel (2009)). [1]

Conscious experiences differ in a relevant sense from other kind of states. Conscious experiences are not states that merely happen *in me*, states that I merely "host", as the beating of my hearth or subpersonal states, but states that are *for-me*. This is the problem of the subjective character of the experience. In having a conscious experience as of a red apple I am not merely aware of some features of the apple but also somehow AWARE[2] of my experience. As Kriegel presents the idea:

> [W]hen I have my conscious experience of the sky, I must be aware of having it. In this sense, my experience does not just take place in me, it is also for me. (Kriegel, 2006, p. 199)

It is often assumed that we can understand any form of awareness as some form or other of representation. I will grant this assumption and focus on the kind of representation required to make sense of the subjective character of the experience. Conscious experiences require a certain form of self-representation. My aim in this paper is to explore the logical space for understanding the required sense of self-representation and the problem of the subjective character of the experience in such a way.

The expression *self-representation* is ambigous between two senses: it can mean i) representation of the state itself or ii) representation of the self. This distinction allows me to build a distinction, orthogonal to the well known distinction between first-order and higher-order (introduced in section 2.1), between mental-state involving theories (i) and self-involving theories (ii).

In section 3 I will vindicate the *self-involving* view and in section 4 I will present the basics for an understanding, in naturalistic compatible terms, of self-involving representation without the need of higher-order representation.

2 The Logical Space for Experiential Awareness.

2.1 First-Order (FO) vs. Higher-Order (HO) Theories

Until very recently HO theories were the only game in town aiming at offering a full-fledged account of experiential awareness within the analitical tradition.

[1] This paper focuses on the subjective character and remains neutral on the relation between the subjective and qualitative character (for instance, on whether one of them constitutively depends on the other) and on theories of qualitative character. It is perfectly compatible with the distinction that there are no states that exhibit qualitative character while lacking subjective character, as I believe is the case.

[2] In what follows, I will use 'experiential awareness' and 'AWARENESS' with capital letters interchangeably to refer to this second relation, distinguishing it to the former and making clear that there is no need for them to be the same kind of relation.

Based on the idea that a conscious state is a state whose subject is AWARE of being in (Lycan (2004); Rosenthal (2005)), HO theorists explain the difference between conscious and non-conscious states by appealing to a higher-order AWARENESS. Conscious states are the objects of some kind of higher-order process or representation. There is something higher-order, a meta-state, in the case of phenomenal conscious mental states, which is lacking in the case of other kind of states. The kind of representation that is required by the theory makes a basic difference among different HO theories. The main concern is whether higher order states are belief-like or perception-like. The former are called Higher-Order Thought (HOT) theories (Gennaro (1996); Rosenthal (1997, 2005)) the latter Higher-Order Perception (HOP) or 'inner-sense' theories (Amstrong (1968); Carruthers (2000); Lycan (1996)). According to the former theories, when I have a phenomenally conscious experience as of red I am in a mental state with certain content, call this content RED. For this mental state to be phenomenally conscious, there has to be, additionally, a HOT targetting it, whose content is something like 'I am seeing RED.' On the other hand, HOP theories maintain that what is required is a (quasi-) perceptual state directed on the first-order one, and making me thereby AWARE of it.

Many philosophers since Aristotle (Caston (2002)) have opposed to HO theories. Among them it is worth mentioning philosophers in the phenomenological tradition (Brentano (1874/1973); Husserl (1959); Merleau-Ponty (1945); Sartre (1956); Zahavi (2005)). They are, however, mainly interested in the structure of conciousness and are not very interested in reductive theories of consciousness (explaining consciousness in non-conscious terms). According these views, experiential awareness or self-representation should be better understood in first-order terms and not as something conferred by another state, as in HO theories.

However, FO theories have typically focused on the problem of qualitative character and being blaimed by their opponent of either ignoring the problem of subjective character or failed to offer a comprehensive account of it.

Consider, for example, Tye's popular PANIC theory (Tye (1997, 2002)). According to Tye, phenomenal character is constituted by representational content of a certain kind. Concretely, he characterizes this content as PANIC: Poised, in the sense that it is available to first-order belief-forming and behavior-guiding systems; Abstract, meaning that the intentional content is not individuated by the particular things represented; and Non-conceptual in the sense that it is not structured into concepts.

Granting the possibility of non-conscious, abstract and non-conceptual intentional content,[3] Poised is presumably the part of the theory responsible for the distinction between phenomenally conscious states and other kind of states and therefore the part responsible for accounting for the subjective character of the experience. The difference between conscious and non-conscious mental states is a difference in functional role: the former but not the latter is available to first-order belief-forming and behavior-guiding systems. PANIC maintains

[3] See Merikle and Daneman (1999) for a review of the empirical evidence in favor non conscious perception.

that the content of the mental state should not be accessed but accessible. But Poised, as some philosophers have noted (Burge (1997); Kriegel (2009)) cannot be the right kind of property that accounts for self-awareness because the latter is something occurrent/manifest and the former a mere dispositional property.

An alternative to HO would have to be able to construct self-representation in first-order terms.

2.2 Self-Involving (SI) Vs. Mental-State-Involving (MSI)

It is, independently of the former debate, ambiguous how we should unpack self-representation. The expression 'M is self-representational' can mean either:

1. M represents itself.
2. M represents the self.

The following two quotes of Brentano illustrate respectively the two senses:

> [Every conscious act] includes within it a consciousness of itself. Therefore, every [conscious] act, no matter how simple, has a double object, a primary and a secondary object. The simplest act, for example the act of hearing, has as its primary object the sound, and for its secondary object, itself, the mental phenomenon in which the sound is heard. Brentano (1874/1973, pp.153-154)

> [T]he mentally active subject has himself as object of a secondary reference regardless of what else he refers to as his primary object. (Brentano (1874/1973, pp. 276-277), also quoted Kriegel (2003))

I will call 'self-involving' (SI) those theories that maintain that a sense of self is required to characterize the correctness conditions –the content– of experience and 'mental state-involving' (MSI) those theories that maintain that it is merely the state itself what enters the content of experience.[4]

The distinction between MSI and SI is clearly orthogonal to the one between FO an HO theories. The following chart presents some theories and their position in the debate.

	MSI	SI
HO	Carruthers (2000); Gennaro (1996)	Rosenthal (2005)
FO	Brentano (1874/1973); Kriegel (2009) Merleau-Ponty (1945); Sartre (1956)	Husserl (1959); Zahavi (2005)

Tab. 1: The logical space of self-awareness

[4] These positions are sometimes referred to in the literature as 'non-egological' and 'egological'. I prefer the name 'self-involving' to 'egological' because I prefer to avoid the unnecessary, and often confusing, connotations of the term 'ego'.

The FOSI position has been defended by some philosophers in the phenomenological tradition like Zahavi and Husserl.[5] These authors, as I mentioned above, are interested in the structure of consciousness but not in a reductive explanation of it and theories of consciousness within the analitical tradiction have paid much less attention to this position.

HO theories, on the other hand, have been deeply studied. It is well known that they face some serious objections (Block (2007a, 2011, forthcoming); Caston (2002); Kriegel (2009); Neander (1998); Sebastian (forthcoming); Shoemaker (1968)), but it is also true that HO theoriest have tried to rejoin them (Brown (2011); Rosenthal (2005, 2011a,b); Weisberg (2011)) and most of them still remain controversial. It is beyond the purpose of this paper to evaluate these arguments and their rejoinders. I will focus on the discussion between MSI and SI theories –a discussion that has been ignored or pushed into the background– and in making plausible a first-order account of self-representation in naturalistic compatible terms.

3 SI Vs. MSI

3.1 The Phenomenological Observation.

The subjective character of the experience is a property all, and only, phenomenally conscious experiences have in common. In that sense, it accounts for what makes an experience a conscious experience at all. This common element is manifest in our conscious experiences. To a first approximation, the best way to point out to this common element is, I think, by similarieties.

Experiences as of different shades of red are more similar, phenomenologically speaking, between them than with regard to an experience as of green. But they are also in sense similar and differ phenomenologically from, say visual experiences of forms, like a visual experience as of a square. And it seems that, in a sense, the phenomenal character of all visual experiences is, in a sense, similar. The same is true for other modalities: tactile experiences have something in common, the same for auditory experiences, visual experiences, taste experiences, pains, orgasms, etc; and all experiences have something phenomenological in common. They are, so to speak, marked as my experiences. Phenomenally conscious experiences happen *for me* (the subject that is having the experience) in an immediate way, they are implicitly marked as *my* experience. All conscious experiences have in common, their distinct first-personal character: a quality of for-meness or me-ishness (Block (2007a); Kriegel (2009)).

The idea of qualities of the experience being presented to the subject that undergoes such an experience is introduced by Tyler Burge (2007) as follows:

> *Phenomenal consciousness in itself involves phenomenal qualities being conscious for, present for, the individual*[...] I think that this relation can be recognized *a priori*, by reflection on what it is to be

[5] The claim that Husserl maintains a self-involving position is controverial. See Zahavi (2005), especially chapter 2.

> phenomenally conscious. *Phenomenal consciousness is consciousness for an individual.*(ibid. p.405, my emphasis)

I am going to call *the phenomenological observation*, the observation that, in phenomenally conscious experiences, phenomenal qualities are presented to the individual of experience, as Burge maintains, or that they are "marked as my experiences" as I presented it in the previous example.

The phenomenological observation suggests that a certain form of self is constitutive of the phenomenal character of the experience; in having an experience, a quality is presented to oneself. If experiential awareness is to explain the subjective character (nemly, what makes a state a phenomenally conscious state at all), then it has to explain this first-personal character that, the phenomenological observation suggests, is common to all and only phenomenally conscious mental states. Hence, if experiential awareness is to be unpacked as a form of representation, then the content of the experience is not merely that such-and-such is the case, but that such-and-such is presented to the subject that enjoys the experience. As Peacocke (MS) puts it, it is in the nature of the experience that it's correctness conditions concern the subject that is having the experience.[6] The content of the experience is *de se* (Castañeda (1966); Chisholm (1981); Lewis (1979)).[7]

3.2 FO-MSI

First-Order Mental-State-Involving theories have been proposed in the phenomenological tradition by Brentano (1874/1973); Merleau-Ponty (1945); Sartre (1956).[8] In the analytic tradition, Uriah Kriegel (2009) has recently developed a neo-brentanian reductive theory according to which my conscious experience of the apple is a state that represents certain features of the apple and also the state itself.[9]

[6] Ideas along these lines can be found in Frank (2007); Zahavi (2005)

[7] Understanding the content of the experience as *de se* content offers two further advantages:

First, as Egan (2006), following Shoemaker (1994, 2000), shows, it offers a proper characterization of the content of the experience that makes compatible representationalism and the empirical evidence in favor of shifted spectrum Block (2007b).

Second it offers an understanding of the sense of unity among my experiences that make them essentially different to others experiences from my point of view.

[8] There is, nonetheless, substantial disagreement among these theories. Brentano maintained that the experience I undergo when I hear a certain sound has both, the sound and the hearing, as their objects. On the other hand, Merleau-Ponty or Sartre disagree and argue that my AWARENESS of my experience is not an awareness of it as an object. Although the idea of representing something not as an object may seem obscure at this point, I think we will be able to make sense of it after presenting the centered world semantics for *de se* content in the next section.

[9] The idea of self-representation might appear contradictory at first glance. Kriegel, however, unpacks this idea in a way compatible with naturalistic theories of mental content. To this aim, Kriegel introduces the notion of indirect content and makes use of the mereological ditinction between complexes and sums. Roughly, the difference between mereological sums and complexes is that the way parts are interconnected is not essential for the former but it is for the latter. Kriegel concludes that a phenomenally conscious state, M, is a complex state that has two states, M^* and $M^\diamond$, as proper parts, such that M^* represents $M^\diamond$ directly and

MSI theories fail to satisfactorily account for the phenomenological observation. I have suggested that what is phenomenologically manifest is the presence of the qualities of experience *for the subject*, the phenomenal character is self-involving: what my experience reveals is that both the apple and myself are constitutive of the content of the experience (the content is SI in opposition to merely MSI). The content of my experience is not merely that such and such is the case, but that such and such is presented to myself. In phenomenally conscious experiences I do not merely attribute certain properties to the object causing the experience, I attribute to myself being presented with an object with these properties.

Kriegel concedes that the phenomenological observation reveals these facts, but denies that they are constitutive of phenomenal consciousness. What is constitutive of a phenomenally conscious mental state is having a content like 'this mental state is occurring' and not something like 'I am in this mental state'.

> If I were to make another unpedestrian phenomenological assertion, I would say that my current experience's pre-reflective self-consciousness [experiential awareness] strikes me as egological [self-involving] –that is a form of peripheral self-awareness. My peripheral awareness of my current experience is awareness of it as mine. There is an elusive sense of self-presence or self-manifestation inherent in even a simple conscious experience of the blue sky. It is less clear to me, however, that this feature of peripheral inner awareness [phenomenal character] –its being self-awareness and not mere inner awareness [SI and not merely MSI]– is constitutive of the phenomenology.Kriegel (2009, p. 177)

Kriegel holds that whereas the experience is self-involving in normal human adults, this fact is not constitutive of the phenomenology. Experiential awareness is "often egological but not constitutively so." (ibid. p.178). He thinks that infants' and animals' experiences lack this feature. If phenomenal consciousness is essentially self-involving then Kriegel's neobrentanian condition (a state representing itself) does not suffice for an experience to have subjective character.

I see no pre-theoretical reason for maintaining that infants' and animals' phenomenally conscious experiences differ in this respect from mine and are not SI. It seems to me that a certain form of self is essential for an account of the phenomenal character of experiences: it is phenomenologically manifest that my experiences are somehow experiences of *mine* and not that they represent themselves. Kriegel could claim that my consideration is due to the fact that I am a human adult and human adults' experiences are SI. He could further claim that, on the other hand infants' or animals' experiences are not SI because of the highly cognitive demand that that would require. In the sequel, however, I

M indirectly in virtue of representing one of its proper parts. M is not a mere mereological sum of $M^{\Diamond}$ and M^{*}, but a mereological complex.

The difference between HO and Kriegel's FO theory depends on the distinction between complexes and sums, a distinction upon which one might cast reasonable doubts.

will offer a notion of SI under which it is intuitive that infants and animals may have that kind of states.

Furthemore, if the content of the experience is not SI it is unclear how can we come to construct the kind of *de se* believes that seem to be justified just by having an experience and independetly of any knowledge about ourselves, like my believe that 'I see an apple'.[10]

My aim in the remaining of the paper will be to make sense of the idea of self-involving representation in first-order terms to offer an alternative to HO theories.

4 Sketchs for a Self-involving Theory

Self-Involving theories have their roots in Husserl's writings. However, there hasn't been, to the best of my knowledge, any attempt to elaborate on these ideas in naturalitic compatible terms.

When I was presenting the phenomenological observation, I noted that I experience my experiences as mine, it is *for-me*. In having an experience I attribute to myself the property of being presented with an entity with certain features. The experience is about the apple and in a sense about myself.

There is a big difference between the sense in which the two elements are represented. The apple is represented as an object of the experience, whereas I am not represented as an object in my experience but as the subject of it. This is precisely what the *de se* content amounts to: my experience represents both the apple as an object and myself as a subject.[11] This distinction can be illustrated by noticing that whereas I can be mistaken about what is represented as object (I can hallucinate a red apple, suffer an illusion and see a green apple as red or even believe that the broken arm is not *mine*), it is not plausible to maintain that I can be mistaken about the fact that I am the one undergoing the experience. As Wittgenstein (1958, p.67) suggests: "To ask 'are *you* sure it is you who have pains?' would be nonsensical."[12]

When I have a visual experience as of an apple I do not see anything beyond the properties of apple, the apple is present to *me*, and that is what the experiential awareness has to explain. The content of my experience is not merely that such and such is the case, but that such and such is presented to *myself*. What requires further clarification is the fact that the content of phenomenally conscious experiences is *de se* content and how a mental state comes to have such a content.

Let me first get clear about what does it mean that the content of the experience is about myself *as a subject*, about the idea of *de se* content.

[10] The kind of knowledge that, for instance, Lewisian's Gods (Lewis (1979)) lack and which existence condition are usually expressed through the metaphor of a point of view.

[11] Compare it with the"two different uses of the word 'I' (or 'my')," that Wittgenstein (1958) calls "the use as object" and "the use as subject."

[12] See also Shoemaker (1968) for an argument against the possibility of error through misidentification with respect to the first-person. On the contrary, Rosenthal (2011b) presents Dissotiative Identity Disorder as case in which such a misidentification could happen.

4.1 Understanding *De Se* Content.

I like the view about mental content according to which the role of mental states is to distinguish between different possibilities (Stalnaker (1999)). Content of mental states, are ways of dividing the space of possibilities. So, what is relevant to the content is that it exclude certain possibilities.

According to this view, my belief that Assange's arrest is a farce distinguishes between worlds that I take to be candidates to be actual; namely, worlds in which Assange's arrest is a farce, and worlds in which it is not. The division in the logical space is made according to the corresponding proposition, in this case 'Assange's arrest is a farce'.[13] We can, therefore, understand propositions as functions from worlds to truth values.

When I have a state with *de se* content, its correctness condition do not merely concern the way the world might be but also myself. Propositions are not well-suited to capture its content. When I have, say, a belief about myself, it is not well picked up as an attitude toward a proposition (understood as a set of possible worlds). As Egan (2006) notes:

> Possible-worlds propositions do not cut finely enough –knowledge of, and belief about, possible worlds propositions can pin down which worlds I am in, but cannot pin down my location within that world.(2006, p.106)

We need centered proposition. If a possible world is a way the world might be, a centered world can be thought as a way the world might be *for an individual.* Centered worlds propositions do not just individuate a way the world could be, but also a certain logical position within this world. We can think of them as functions from ordered pairs of worlds and individuals (<world, individual>) to truth value. The content of my experience is a centered proposition, a function from world centered in me to a truth value.

The set of worlds that constitutes the content are generally (if not always) determined by the attribution of properties to things. In the example of my belief the content is the set of worlds in which Assange's arrest has the property of 'being a farce'. For a given world, a property determines an extension. In the actual world (@) 'being a farce' determines an extension of all the things that are a farce in @. Assange's arrest is in the extension of 'being a farce' in the actual world if, and only if, @ is a member of the proposition expressed by 'Assange's arrest is a farce.' In such a case, we can think of properties as functions from worlds to extensions.

If the above mentioned analysis of the content of the experience is true I do not attribute to the apple a property so understood but a centered property

[13] In order to make a certain partition of the logical space, one does not require to posses the concepts required to express this proposition, in spite of the fact that the proposition is usually expressed by a sentence. I am assuming here that the content of the experience is non-conceptual: experiences have correctness conditions, make partitions in the space of possibilities, independently on whether the individuals undergoing them have the conceptual resources to express such a conditions.

understood as a function from pairs of possible worlds and individuals to extensions. That is to say, in having an experience I attribute to myself a certain property (Lewis (1979)).[14]

To a first approximation (leaving worries about circularity and reduction aside for the moment) this idea can be expressed in ordinary English either by saying that by having an experience as of a red apple I attribute to the apple the centered feature of having the disposition to cause an experience as of a red apple *in me* or by saying that by having an experience as of a red apple I attribute to *myself* (self-attribute) the property of being confronted with an object that has the disposition to cause experiences as of a red apple in me.[15] The content of this centered proposition is a set of centered worlds, those centered worlds in which the object I am looking at is disposed to cause the experience in me (those centered worlds in which I am confronted with the object that causes the experience in normal circumstances).

The next step, to make sense of this proposal, is to get clear about the kind of entities that individuals, selfs or subjects of experiences are and how the correctness conditions concern them in a way that is compatible with naturalistic theories of mental content.

4.2 Naturalizing *De Se* Content.

Having states with *de se* content requires, to the very least, an ability to distinguish what is me from everything else. In the less demanding sense, the first person pronoum in the articulation of the content of experience above refers to a living body, an organism. So, if we think, following the previous analysis, of the content of the experience as a function from pairs of world and individuals to extension, then individuals are nothing but living organisms.

We have seen that it is in the very nature of the experience to refer to the subject of the experience. The individual that is having the experience is represented by the experience in a particular way, that can be expressed by saying that is not represented as an object but as a subject, that is to say, the content of the experience is *de se*. But what does it mean to represent organisms as subjects? All that I have offered until now is a possible semantic of *de se* content in terms centered worlds whose center is occupied by organisms. If one is interested in naturalistic projects, as I am, one should, at least, provide reason for believing that such a content can be naturalized.

We can consider, for illustration purposes, a naturalistic theory of mental content according to which a representing system is one that has the teleological function of indicating that such-and-such is the case, being such-and-such its

[14] With this semantic tool in hand, we can think of MSI contents as functions from pairs of worlds and mental state to truth value (see footnote 8). In this case it becomes even more clear that from just with MSI content we cannot make sense of the idea that all my experiences are *for-me*.

[15] Let me remark once again that the fact that the content of an experience be expresable through these complex English sentences does not entail that the subject need to have the corresponding conceptual capacity in order to have an experience. The content of experience is non-conceptual (Crane (1992); Dretske (1981); Evans (1982); Peacocke (1986)).

content.[16] How does a state comes to have the function to indicate a centered properties; i.e, how does a state comes to have *de se* content? Moreover, if one is moved by the arguments against HO and in order to have an alternative to such theories, the reply to this last question should better not involve meta-representation.

Organism are continously changing entities that remain nonetheless as a functional unity, as a unique system, during the organisms life. A widespread view in biology, holds that living organisms are self-maintaining systems. The notion of self-maintained system has a long history in philosophy dating back to Aristotle (Godfrey-Smith (1994); McLaughlin (2001)). In contemporary science it was popularized by cyberneticians and more recently, after Ilya Prigogine won the Nobel Prize in 1977 for his work on dissipative structures and their role in thermodynamics, many scientists start to migrate from the cybernetic approach to the thermodinamic view on self-maintaining systems.

In a self-maintaining system the dynamics of the system tend to maintain the inherent order; its organizational pattern appears without a central authority or external element imposing it through planning. This globally coherent pattern appears from the local interaction of the elements that makes up the system. The organization is in way parallel, for all the elements *act* at the same time and distributed for no element is a coordinator.[17]

If organisms are self-maintaining systems it seem reasonable to look for the mechanisms that guarantee the stability within the organism boundaries as the mechanisms that ground the distinction between what is part of the system and what is not, the distinction between what is me and what is not and might also be justified by the phenomenological sense of unity of all my experiences as being present for the same individual or self.

One interesting proposal in this direction is Damasio's notion of proto-self. In his book 'The Feeling of What Happens' Damasio (2000) presented a proto-self as a constitutive element of our experiences.[18]

According to Damasio,

[16] This oversimplistic example amounts to the claim that representational states represent what causes them in normal circumstances, where the normative notion 'normal circumstances' is unpacked by appealling to the function of the state. It is intended to capture the insight of teleological theories. For further and different elaboration of on the details see Dretske (1988); Millikan (1984, 1989); Mossio et al (2009); Neander (1991); Schroeder (2004).

[17] A simple example of these self-maintained systems is the flame of a candle. In the flame of a candle, the microscopic reactions of combustion give rise to a macroscopic pattern, the flame, which makes a crucial contribution to maintain the microscopic chemical reaction by vaporizing wax, keeping the temperature above the combustion threshold, etc. The flame itself favors the conditions that enable it to work. This is an example of the minimal expression of self-maintenance, called dissipative structures:

> Dissipative structures are systems in which a huge number of microscopic elements adopt a global, macroscopic ordered pattern (a 'structure') in the presence of a specific flow of energy and matter in far-from-thermodynamic equilibrium (FFE) conditions. Mossio et al (2009, p. 822)

[18] For a further development of Damasio's ideas about consciousness and the self see Damasio (2010).

> The proto-self is a coherent collection of neural patterns which map [represent], moment by moment, the state of a physical structure of the organism in its many dimensions...[t]hese structures are intimately involved in the process of regulating the state of the organism. (Damasio, 2000, p. 154)
>
> It is an integrated collection of separate neural patterns that map, moment by moment, the most stable aspects of the organism's physical structure.(Damasio, 2010, p. 190)

I will make use of this proto-self in my elaboration of the *de se* content. I think that we can offer an account of such a *de se* content by characterizing a conscious state as a complex of two states that I will call the proto-self and the proto-qualitative state.

On the one hand, the proto-self is a brain structure that has the function of indicating and regulating the homeostasis of the organism. It regulates the internal environment and tends to maintain a stable, constant condition required by the self-maintaining system; the stability required for life.

On the other hand, the proto-qualitative state is another brain structure that has the function of indicating a certain property. [19]

Different phenomenally conscious states are constituted by different proto-qualitative states. Proto-qualitative states are not phenomenally conscious; i.e. the properties of proto-qualitative states do not suffice for having a phenomenally conscious experience. The proto-self is not a phenomenally conscious state either.

It is the interaction between both of them what gives rise to a phenomenally conscious mental state that indicates that the property X is affecting the organism. Phenomenally conscious mental states play a differential role in the homeodynamics of the organism. A difference in functional role accounts for the differences between those mental states that are phenomenally conscious and those that are not.

When looking at the red apple in front of me I undergo a phenomenally conscious experience. My visual system will generate a representation of the properties of the apple; this is a proto-qualitative state. Let me focus on the redness of my experience. The proto-qualitative state indicates a certain shade of red, but this is, still, an unconscious representation. On the other hand, I have a representation of my internal states: the proto-self. This latter representation is altered by the processing of the apple (changes in the retina or in the muscles that control the position of the eyeball, but also changes in the smooth musculature of the viscera, at various places of the body, corresponding to emotional responses, some of them innate). The interaction between the proto-qualitative state and the proto-self constitutes a mental state with the content 'redness for-me', a conscious mental state.

[19] We can think of the content of proto-qualitative states as the properties that result from fixing the individual in the centered features that I have argued constitute the content of experience. The content of a proto-qualitative state PQ is therefore a set of worlds and not a set of centered worlds; something like the disposition to cause the activation of PQ in normal circumstances in organism O.

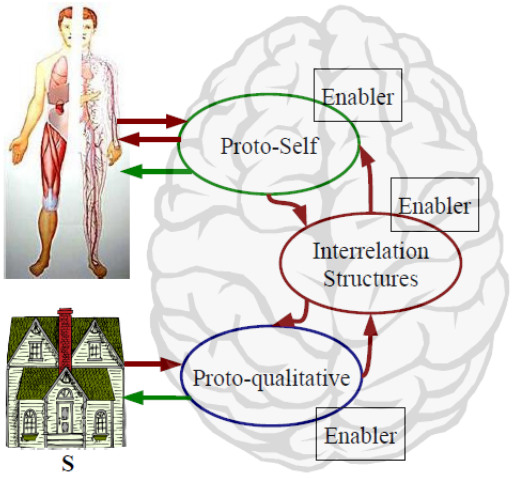


Fig. 1: The proto-self interacts with the proto-qualitative state.

Figure 1 illustrates this idea. To remark that this is a first-order proposal, causal and representational relations are indicated in red and green respectively. A stimulus S causes the activation of the proto-qualitative state (PQ). On the other hand, PQ represents S because S is what causes PQ in normal conditions: PQ has the function of indicating S. Something similar happens in the case of the proto-self, a collection of states that have the function of indicating the situation of my internal states. There are furthermore, causal connection that might involve some further structures (Interrelation Structures), between the proto-self and the proto-qualitative state. This causal processes are constitutive of a phenomenally conscious state. They allow for the interaction between the proto-self and the proto-qualitative state that give rise to a state with *de se* content.

At the level of content, this interaction will explain why the content of experience is *de se*. What is relevant for the mental state is not only the properties that the object of the experience (say, the apple) has; that the apple is causing the activation of a certain neural network (the proto qualitative state PQ) in normal conditions, but the fact that it is causing the activity of the neural network and that this neural network plays a relevant role in the homeodynamic regulation of a particular organism, the very same organism that the proto-self happens to regulate. The content is not just that the object is disposed to cause the state PQ (in normal conditions) but that the object is disposed to cause PQ *in me*, in *the very same organism that the proto-self regulates.*

Consider a state of my organism PQ. Imagine that PQ, has the function of indicating what is disposed to cause it in normal conditions. In these case we can assume that such normal conditions would be something like "via the

particular visual path$_{PQ}$ under *particular lighting conditions*$_{PQ}$".[20] An object has the property that PQ represents only if the object is disposed to cause the activation of PQ in an organism like mine[21] via the *particular visual path*$_{PQ}$ under *particular lighting conditions*$_{PQ}$. If an object reflects light with, say, a wavelength of 650nm in these lighting conditions, then it can cause PQ via the *particular visual path*$_{PQ}$. The surface of the apple reflects light, in these lighting conditions, with a wavelength of 650 nm and is therefore represented by PQ. PQ interacts with my proto-self, the system that monitors and controls the homeodynamics of my organism. The state that results from this interaction is a *phenomenally conscious mental state*. This state represents that the organism is presented with an object that is disposed to cause PQ in normal conditions (*via particular visual path*$_{PQ}$ under *particular lighting conditions*$_{PQ}$). When the organism is in this state, it attributes to itself the property of being presented with an object that is disposed to cause PQ in normal conditions: it attributes to the object a centered feature.

At the neural level, the total neural correlate of an experience as of red will be constituted by the proto-qualitative state, the proto-self and the structures that implement the interaction between the proto-self and the proto-qualitative state plus the mechanisms that allow these areas to perform their function.[22] Figure 2 illustrates some of the involved areas (Damasio (2000, 2010); Laureys and Tononi (2008)), according to the colors in figure 1.[23][24]

5 Conclusion

It is platitudinous that in having an experience one is AWARE of having it. The characterization of this relation underlies the problem of the subjective character of experience and is essential to any theory of consciousness.

[20] PQ_1 doesn't have the function of indicating Transcranial Magneto Stimulation or any drug, even if both are disposed to cause its activation. For that reason something like "via the *particular visual path*$_{PQ}$ is included". In the case of vision, the normal conditions would also include particular lightning conditions. This normal conditions have to be fixed by the function PQ, assuming the truth of a teleological theory of mental content.

[21] Note that there is no need to read this pronoum *de se*. This is a normal indexical and not a essential one. PERRY

[22] I call these mechanisms enablers. An example of an enabler is the reticular formation.

[23] Brain's pictures copyrighted by the University of Washington.

[24] The proposal above is perfectly compatible with the most plausible account of our cognitive access to our mental states, the global workspace (GWS)(Baars (1988); Dehaene (2009)). This theory postulates a kind of memory system, the GWS, that encodes the content of certain states. The content of this memory is broadcasted for global control and can be freely used in reasoning, reporting and rational control of action. According to the GWS theory, allied processes compete for access to the GWS, striving to disseminate their messages to all other processes in an effort to recruit more cohorts and thereby increase the likelihood of achieving their goals. Phenomenally conscious mental states have good chances of gaining access to the GWS. The proto-qualitative state and the proto-self are examples of those assemblies. The recurrent loops between them that help to constitute the phenomenally conscious mental state would at the same time increase the likelihood that the phenomenally conscious state will access the GWS. Arguably further processes are required in order to gain access to the global workspace. Attention is likely to be one of the mechanisms involved.

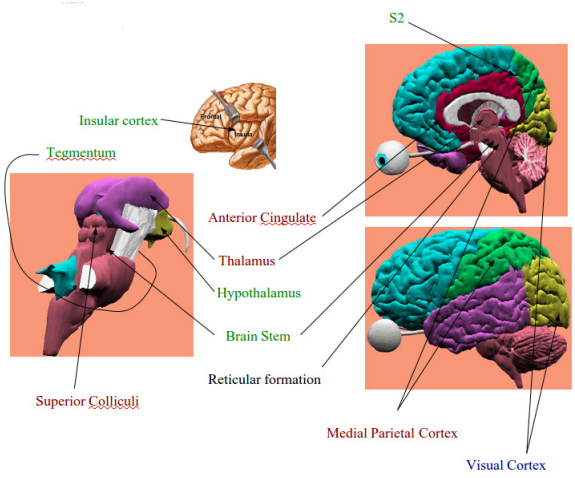


Fig. 2: Structures involved in phenomenal consciousness

I have offered an orthogonal distinction to that between HO and FO theories between self-involving theories and mental state-involving theories, and argued that what is phenomenologically manifest is the former. It is in the nature of the content of the experience that it concerns the subject that is having the experience. The content of the experience is *de se*.

In order to have an alternative to HO theories, I have attempt to sketch, in terms naturalistic compatible terms, a characterization of such a *de se* content and the basics of possible model of what it takes for a mental state to have self-involving content. A model that is supported by our current biological theories and our neurological evidence.[25]

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