Psychological immunity, bodily ownership, and vice versa

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Abstract. This paper presents a view on bodily IEM by describing, first, the structure that grounds need to have in order to yield IEM judgments, and then arguing that somatosensation has this structure. I make my case by presenting an analysis of the sense of bodily ownership. According to this analysis, there is a substantive explanatory relationship between bodily self-consciousness and psychological self-consciousness. I argue that one central virtue of this approach to bodily self-consciousness is that, not only does it help explain bodily IEM, but it also sheds some light on the fact that both psychological and bodily self-ascriptions are subject to analysis in IEM terms, despite their differences.

Keywords. Immunity to error through misidentification, bodily IEM, somatosensation, bodily ownership

1. Psychological self-consciousness and bodily self-consciousness

In philosophical discussions about self-consciousness, various notions of self-consciousness are addressed. This essay focuses on two of these notions. I will call the first *psychological self-consciousness*. The notion of psychological self-consciousness captures the sort of self-consciousness that we usually express in self-ascriptions of phenomenally conscious experiences made on the grounds of phenomenal awareness of these experiences. Psychological self-consciousness is paradigmatically expressed by tokening the first-person pronoun "I" in the subject position in self-ascriptions of experiences. For instance, "*I* am thinking about last summer" expresses psychological self-consciousness —provided that it is based on my being phenomenally aware of a thought about last summer.

The second notion of self-consciousness this essay is about is what I will call *bodily self-consciousness*. The notion of bodily self-consciousness captures the sort of self-consciousness that we usually express in self-ascriptions of a body made on the grounds of somatosensory perception of this body.[1] Paradigmatically, bodily self-consciousness is expressed by tokening the

[1] Somatosensory perception includes pain, proprioception, kinesthesia, feelings of bodily temperature, interoceptive sensations, sensations related to balance, and tactile sensations, namely perception of our bodies yielded by the somatosensory system (Nelson, 2000; Berntson & Caccioppo, 2009). Throughout the paper, I will talk indistinctly about *somatosensation* (and related terms), *bodily sensations* and *bodily experiences*.

first-person pronoun "my" to refer to the body that one is feeling, i.e. the body that figures in the content of the sensations. The italicised pronouns in statements like "*My* legs are crossed" or "I feel pain in *my* knee" express bodily self-consciousness —assuming that they are based, respectively, on feeling crossed legs or a pain in the knee. As illustrated by "*I* feel pain in *my* knee," in which the first person is tokened twice, psychological self-consciousness also applies to somatosensation: somatosensory experiences are themselves phenomenally conscious states that one typically self-ascribes, besides being states about what one takes to be one's own body.[2]

The appeal to self-ascriptions in this initial characterisation of the two notions of self-consciousness should just be understood as a starting point. The self-ascriptions *express* the experiences that underlie them. But this initial characterisation is intended to be compatible with all accounts of the nature of the underlying experiences: in particular, it is neutral with respect to whether phenomenally conscious experiences in general, and the contents of somatosensory experiences in particular, are themselves first-personal in a way that somehow parallels their corresponding expression in the judgments.

Putting things in terms of self-ascriptions allows us to see that these two notions of self-consciousness are conceptually distinct. Judging, of oneself, that one has an experience, is different from judging, of oneself, that one has a body. The former —psychological self-consciousness— concerns the fact that our descriptions of the experiences we are phenomenally aware of generally involve a mention to ourselves as their subject. The latter —bodily self-consciousness— concerns the fact that we think and talk first-personally about the body that figures in the content of a subset of our conscious experiences, namely somatosensory experiences. However, that psychological and bodily self-consciousness are conceptually distinct does not mean that there are no explanatory relations between them. In fact, I contend that there are, and that inquiring into these explanatory relations helps shed light on central epistemic features of self-consciousness. This paper revolves around one of the ways in which psychological and bodily self-consciousness are explanatorily intertwined, and draws the implications of this intertwining for one of their epistemic features: immunity to error through misidentification relative to the first-person (IEM).

As it turns out, both psychological self-ascriptions on phenomenal grounds and bodily self-ascriptions on somatosensory grounds are subject to analysis in terms of IEM. I will start by describing the phenomenon of IEM both for the psychological and the bodily case in the upcoming **Section 2**. My aim for the rest of the paper will be to put forward a view on bodily IEM. I will first describe the structure that grounds need to have in order to yield IEM judgments (**Section 3**), and then I will argue that somatosensation has this structure (**Section 4**). I will make my case by presenting an analysis of some aspects of the phenomenology of somatosensation.

[2] The distinction I trace here between psychological self-consciousness and bodily self-consciousness is essentially the same traced by Bermúdez (2018a) between psychological ownership and bodily ownership.

According to the particular view that I defend, there is a substantive explanatory relationship between bodily self-consciousness and psychological self-consciousness, where the former depends on the latter. As I will show, one central virtue of my approach to bodily self-consciousness is that, not only does it help explain bodily IEM, but it also sheds some light on the fact that both psychological and bodily self-ascriptions are subject to analysis in terms of IEM, despite their differences. I will close the paper (**Section 5**) by discussing precisely these differences —which will be presented already in the immediately upcoming section—, and arguing that my proposal is ready to accommodate them.

2. Psychological immunity and bodily immunity

Shoemaker (1968) coined the notion of immunity to error through misidentification, which he traced back to Wittgenstein (1958), to refer to a special kind of epistemic security of some of our statements and judgments.[3] As he put it,

> "… to say that a statement 'a is ϕ' is *subject* to error through misidentification relative to the term 'a' means that the following is possible: the speaker knows some particular thing to be ϕ, but makes the mistake of asserting 'a is ϕ' because, and only because, he mistakenly thinks that the thing he knows to be ϕ is what 'a' refers to" (ibid., 557).

Shoemaker's target in this passage are singular judgments of the form "a is ϕ," in which one predicates a property of an individual. For some judgments "a is ϕ," it cannot be the case that the subject making the judgment actually knows of *some* individual that they have the property ϕ, but is wrong in predicating ϕ of the *particular* individual picked out with "a." These judgments are *immune to error through misidentification* relative to the use of "a." Within the debates on IEM, one of the most discussed types of judgments, and indeed one that concerned Shoemaker, is judgments of the form "I am ϕ," in which one predicates a property of oneself. Following the scheme just presented, a first-personal judgment "I am ϕ" is IEM relative to "I" if it cannot be the case that the subject making the judgment knows that someone is ϕ, but goes wrong solely in judging that the individual that she knows to be ϕ is herself.[4]

Importantly, not all first-personal judgments are IEM. As Shoemaker pointed out, judgments are IEM relative to the grounds on which the subject makes them. Consider for instance "I am thinking about last summer," in which a subject says of herself that she has a given mental state,

[3] Shoemaker originally talked about statements being IEM. Following convention in the literature, here I will talk about judgments being IEM, on the assumption that statements express judgments.

[4] I will follow Salje (2017) in taking myself to be bound by Shoemaker's original definition of IEM. This definition is stated in terms of knowledge and encompasses both wh- and *de re* immunity (Pryor, 1999). See Palmira & Coliva (2024) for an exhaustive survey of the literature on how the notion of IEM should be cashed out.

namely a thought about last summer. Suppose now that the subject states "I am thinking about last summer" because she is prompted to report what she is currently thinking of, say by a colleague who catches her looking nostalgic. The subject then judges that she is thinking about last summer simply on the grounds of her introspective awareness of her occurrent thoughts about last summer.[5] In this context, "I am thinking about last summer" is IEM precisely in virtue of the fact that the subject has got to it introspectively: introspection is such that, if a subject knows introspectively that *someone* is thinking about last summer, then she cannot be mistaken in that it is not, however, *herself* who is thinking about last summer.

In contrast, suppose that the subject states "I am thinking about last summer" because, upon reading her therapist's anonymised files about some of his patients' post-holiday depressions, she comes across a file about a patient who thinks about last summer at all times; and then, for some reason, concludes that this patient must be her. Forming the judgment by reading the therapists' files leaves the judgment open, or vulnerable, to an error through misidentification relative to "I." For suppose that the file the subject has read is not hers, and that, previous to reading it, she was not thinking about last summer at all. While, as revealed by the file, there is indeed some patient who thinks about last summer —for, let's assume, this patient thinks about last summer at all times!—, and hence our subject is right that *someone* is thinking about last summer, it is not true that this individual is *herself*.

One important strand of the debate on IEM relative to the first person focuses on the scope of the phenomenon: which grounds have the capacity to yield judgments that are IEM, and why. In this context, one set of first-personal judgments paradigmatically said to be IEM are those expressive of psychological self-consciousness, of which "I am thinking about last summer" in the first, introspective scenario is an example: judgments in which one self-ascribes an experience on the grounds of one's phenomenal awareness of the experience.

As is well known, however, Evans (1982) pointed out that IEM is not limited to psychological self-ascriptions on phenomenal grounds. Rather, he argued, bodily self-ascriptions are also susceptible to being analysed in terms of their vulnerability or immunity to misidentification errors *if made on somatosensory grounds*. For an instance, take the judgment we would express as "My legs are crossed," and suppose I say so because I feel somatosensorily that my legs are crossed. Evans' suggestion is that IEM holds in this case too: it is not possible that I know on somatosensory grounds that someone's legs are crossed, but yet my judgment is wrong in the specific sense that the individual whose legs I know to be crossed is in fact not myself. According to Evans, then, the range of first-personal judgments that enjoy this kind of epistemic security includes judgments expressive of bodily self-consciousness —which, more

[5] I use "introspective awareness" of an experience, here and throughout the paper, as interchangeable with "phenomenal awareness" of an experience. That is to say, for the purposes of this discussion, phenomenal awareness will always be awareness of conscious mental states.

specifically, are IEM relative to the first-person pronoun used to qualify the body felt as part of the content of the sensations.

In this paper, I will focus on bodily IEM. I will argue that somatosensation is indeed the kind of ground suitable to yield IEM judgments, and I will offer a proposal as to why this is so. I will also argue that my approach has one important virtue: it illuminates a puzzle about IEM that has not received as much attention in the literature as it deserves.

According to Evans, bodily IEM allows to draw important anti-Cartesian conclusions, for it has implications on the kinds of claims about the nature of selves that we are entitled to make: given the epistemic privilege that both bodily and psychological self-attributions enjoy, we have as much reason to claim that we are bodily beings as we have to claim that we are psychological beings (Evans, 1982, 224). Evans thus drew important conclusions about the metaphysics of selves from his epistemic considerations. Regardless of how legitimate one thinks this specific move is, I believe that Evans' point masterfully articulates an intuition that has historically shaped philosophical discussion on self-consciousness: there are ways of knowing about our bodies that typically seem to us as certain as the ways in which we know about our conscious psychological lifes altogether.

On the face of it, it is not obvious that this epistemic commonality should obtain, for other philosophical intuitions pull in different directions. First, bodies and experiences are frequently treated as rather dissimilar metaphysical types. Second, introspection and somatosensation are not obviously analogous as capacities: in both cases, and for similar reasons, there is discussion on whether they should be considered *perceptual* capacities; but, whereas consensus among analytic philosophers tends to lean toward treating somatosensation as perceptual, consensus about introspection is less clear.[6] This is the puzzle, then: why should there be an epistemic commonality between self-ascriptions of experiences on phenomenal grounds, and bodily self-ascriptions on somatosensory grounds?

In the upcoming pages I will be arguing that somatosensation is the kind of ground suitable to yield IEM bodily self-ascriptions, partly in virtue of its phenomenology: as I will argue, the analysis of this phenomenology reveals that bodily self-ascriptions on somatosensory grounds are self-ascriptions of a structural feature *of experiences*, i.e. of bodily sensations. This, I

[6] Shoemaker (1994) made an influential case that introspection is not perceptual because, among other things, it does not afford identification information about the object perceived, i.e. information that allows to distinguish it from other objects. Following Shoemaker, it could be argued that somatosensation is not perceptual either, on the grounds that it gives us access only to one object, namely our own body. But this has been disputed, e.g. by appealing to how somatosensation conveys our body as a bounded object and therefore as distinct from other objects lying beyond it (Martin, 1995; Bermúdez, 2018b), or by appealing to the fact that we are aware of different body parts (Schwenkler, 2013). When it comes to introspection, Shoemaker's diagnosis has been challenged (Armstrong, 1997; Kriegel, forthcoming), but other recent contributions decidedly agree with it (Gertler, 2012; Butler, 2013; Giustina, 2023). It is worth pointing out, however, that within the tradition of classical phenomenology, both phenomenal awareness of mental states and bodily awareness in bodily sensation are treated as non-perceptual (see Zahavi, 2006 for an exhaustive review).

contend, sheds light on our puzzle, for it yields a characterisation of somatosensation and its contents that makes bodily self-consciousness derivative of psychological self-consciousness.

Before moving on to the substance of the paper, however, let me address one important concern that suggests itself at this point. Within debates on IEM, what I am describing here as a commonality has actually been considered, traditionally, a *limited* commonality. For, while judgments expressive of psychological self-consciousness are, more often than not, thought to be *logically* IEM, bodily IEM has often been assumed to be only *de facto* IEM.[7] The thesis that somatosensory judgments are IEM has been disputed on the grounds of science-fictional scenarios in which a subject is wired up to some other individual's body and has somatosensory experiences caused by this other body that are subjectively indistinguishable from her ordinary sensations. Suppose that, in this kind of scenario, this subject judges "*My* legs are crossed:" this subject could be said to *know*, of some legs, that they are crossed, while being wrong that her own legs are. Because of the putative threat posed by these scenarios, the thesis of bodily IEM is typically relativised to normal conditions. The scenarios are aimed to suggest that the possibility of an identification error exists for somatosensation; but yet, the scenarios are far away enough from the actual world so that we can still say that *in normal conditions*, if a subject judges "My legs are crossed" on somatosensory grounds, she won't be wrong in that someone indeed has crossed legs, and she knows so somatosensorily, but it is not herself who does. This sort of relativisation to normal conditions is indeed a difference between bodily IEM and psychological IEM: it is not standard to propose analogous deviant causal chains as threats to the immunity of psychological self-ascriptions.[8]

The existence of this difference could be seen as downplaying the philosophical worth of the more general similarity I have stressed above —i.e. that both somatosensory and psychological judgments are subject to analysis in terms of IEM, even if the analyses may differ. I am not convinced by this downplaying interpretation. Alternatively, I believe that we should take seriously as an explanandum the fact that both cases are subject to the IEM analysis, while *also* taking seriously as an explanandum the fact that *only* in one case, namely the bodily case, IEM has been relativised to normal conditions the way it has. This is the strategy that I will pursue here.[9]

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[7] Evans' original discussion of bodily IEM already considers the scenarios that, it has been argued, make it *de facto* IEM (1982, 221) —scenarios that I will immediately describe in the body of the text. Recent discussions of IEM that take the scenarios seriously and assume that they make bodily IEM *de facto* are e.g. Wright (2012, 272), de Vignemont (2012, 226), Guillot (2014, fn.7, 8 & 19) or García-Carpintero (2015, 19-20). Coliva & Palmira (2024) is a recent review in which bodily self-ascriptions based on somatosensation are mentioned among those classically treated as *de facto* IEM. See however fn. 9 below for a follow-up on this.

[8] An analogous case in the psychological domain would be one in which a subject is phenomenally aware of, and self-ascribes, experiences that are strictly speaking someone else's. The reason why I think this scenario is not standardly proposed as a challenge to psychological IEM will transpire in Section 5 below, as part of my discussion of the *de facto* proviso on bodily IEM.

3. On the structure of (somatosensory) grounds

One reason why IEM is important as an epistemic phenomenon is that it reveals something about the structure of our grounds for judgments. Given that self-ascriptive judgments about the body are IEM when made on somatosensory grounds, it is plausible that something about the somatosensory mode of access to the body explains the IEM of the judgments. Likewise, given that self-ascriptions of experiences are IEM when made on phenomenal grounds, it is plausible that something about the phenomenal mode of access to experiences explains IEM here too. IEM prescribes what we could call a *self-knowledge condition* on grounds. For a judgment to be IEM, its grounds need to work as follows:

> **Self-knowledge condition on grounds**: if the subject knows, on these grounds, that *someone* has property F, then she *eo ipso* knows on the same grounds that *she herself* has property F.

In other words, grounds that yield IEM judgments are such that knowledge, on these grounds, that a given property is instantiated by an individual, just comes with knowledge, acquired on the same grounds, that the property is instantiated by oneself. Since both somatosensory perception and phenomenal awareness yield self-ascriptions that are IEM —respectively, bodily and psychological self-ascriptions—, it is arguable that, as grounds, somatosensory perception and phenomenal awareness are structurally similar at least in the sense dictated by the self-knowledge condition.

We can now make the self-knowledge condition more precise by applying it to specific grounds. Applied to somatosensation, it reads thus:

> **Self-knowledge condition on somatosensation**: if the subject knows, on somatosensory grounds, that *some* body is F, then she *eo ipso* knows, on the same grounds, that *her own*

[9] Although a majority of philosophers have taken crossed wire scenarios as evidence that bodily IEM is merely *de facto*, Salje (2017) has argued that these cases provide, in fact, no such evidence: according to her, contrary to appearances, the cases do not meet the conditions that would make them counterexamples to bodily IEM. I will only be able to explain in more detail where exactly I stand with respect to Salje's position once my own strategy in the paper has been fully laid out (in fn. 13). Still, in order to be as clear as possible, at this initial stage, about the dialectic that I set out to develop, let me reformulate what I just said in the last paragraphs of the current section: I believe that a source of initial resistance to my claims that "bodily self-ascriptions on somatosensory grounds are self-ascriptions of a structural feature *of experiences*," and that this "yields a characterisation of somatosensation and its contents that makes bodily self-consciousness derivative of psychological self-consciousness," will come from those who do find crossed wire cases convincing. For, if things are as I will propose they are, why would one at all think, as it has been customary, that bodily self-attributions, but not psychological ones, are *de facto* IEM? Given the kind of view that I defend, the burden is on me to answer this question. This is one of the tasks that I am setting myself to do in the rest of the paper.

body is F.

Note that the self-knowledge condition concerns what the subject gets to know on certain grounds, and how she gets to know it. In this sense, what the IEM of judgments has revealed is a *functional* feature of grounds: something about the kinds of knowledge they yield. Zooming in to the somatosensory case, what the IEM of somatosensory judgments has revealed is a *functional* feature of somatosensation, i.e. something about the knowledge it affords: somatosensory experiences are such that what we know about the body on their grounds, we know it about our own body. How does somatosensensory *experience* exactly meet this condition?

One natural way to address this question is by focusing on the grounds themselves, i.e. on their content and their phenomenology. For explaining how the self-knowledge condition obtains for somatosensation implies explaining the "impressions" of ownership: how it is the case that, whenever I notice a body and its properties somatosensorily, I notice this body and its properties *as my own*. As I will suggest immediately, this sort of analysis can be found in the literature on what has been called a *sense of bodily ownership*.

Besides, in order to explain how the self-knowledge condition obtains, we need to plug in the fact that these "impressions" track the world correctly. The self-knowledge condition on somatosensation talks about how subjects know, on somatosensory grounds, that the body they feel is theirs. In other words, it talks about how impressions of ownership on these grounds are typically right. Hence the implementation of the condition also has to do with how the world is: the world is typically such that somatosensory judgments of ownership describe it adequately.

In the rest of this section I will spell out in detail these two steps. I detail these steps by breaking down the self-knowledge condition into two further conditions, which I will respectively call *Phenomenological* and *Metaphysical*.[10] As I will suggest, what it means for grounds, and in particular for somatosensation, to meet the self-knowledge condition is for them to meet these two conditions. I introduce them in turn.

The self-knowledge condition puts the focus on somatosensation as capable of grounding bodily self-ascriptions. One way of addressing this requirement is by investigating whether there is anything like first-personal bodily *experiences*: if there is anything, in bodily experiences themselves, analogous to the first person that shows up in the judgments of bodily ownership (i.e. the first-person pronoun usually tokened to refer to the body that one is feeling). Note that being analogous here involves capturing the "eo ipso" clause of the self-knowledge condition. The condition stresses how, when we judge something about a body that we feel from the inside, we judge it about *our own* body somewhat compellingly. Our precise question, then, is whether it makes sense to say that we experience a body first-personally, i.e. as our own, whenever we feel

[10] Dokic's (2003) distinction between the sense of ownership and the fact of ownership is similar to the one I trace here between the Phenomenological and the Metaphysical conditions on somatosensation.

a body at all. The self-knowledge condition, which in the first instance dealt with beliefs and knowledge, translates into a condition about bodily *experience* as follows:

> **Phenomenological condition on somatosensation:** if a subject has a somatosensory experience as of some body being F, then this experience is, *eo ipso*, an experience as of her own body being F.[11, 12]

Let me spell out now in what sense meeting the Phenomenological condition contributes to explaining what it means for somatosensation to meet the Self-knowledge condition, and why this helps explain IEM. The general idea is that, if somatosensation has the structure described in the Phenomenological condition, then it is the kind of ground suitable to yield IEM judgments.

In general, one very straighforward way to justify a subject's belief that p is by appeal to her experience as of p —that is, experiences are justifying reasons for belief. Relatedly, a subject's experiencing that p quite straightforwardly explains this subject's forming the belief that p — namely, experiences are also motivating reasons for belief. If, guided by the Self-knowledge condition, our goal is to explain why, when feeling a body somatosensorily, subjects believe "*My* body is ϕ" by the very same token by which they would at all believe that *some* body is ϕ, then one straightforward way to do so is to claim that this is exactly what the experience is like: in somatosensation, subjects *experience* "*My* body is ϕ" by the very same token by which they would at all experience that *some* body is ϕ; and hence that, in judging, subjects simply take the

[11] On the grounds of the experiences reported by somatoparaphrenic patients, Vignemont (2018) has argued that experiencing the body somatosensorily, and experiencing it as one's own, do not go together *necessarily*. Somatoparaphrenia is a condition affecting mostly patients with right brain damage characterised by the patients' claim that the contralesional side of their bodies doesn't belong to them. However, there are reports of patients that, still endorsing their beliefs of disownership, feel sensations in their disowned limbs (Moro et al., 2004; Bottini et al., 2002. Bradley (2021) has argued that, despite the reports of somatoparaphrenic patients, there is still a necessary link between feeling the body from the inside and feeling it as one's own; to which Jeppsson (2024) is a recent, forceful rejoinder). In light of these and other cases (such as depersonalisation; see Billon, 2017), the Phenomenological condition on somatosensation has to be read as a typicality thesis: if a subject has a somatosensory experience as of some body being F, then this experience *typically* is, *eo ipso*, an experience as of her own body being F. What this means is that, typically, i.e. for most subjects, their somatosensory experiences have the relevant first-personal content, and hence the *eo ipso* claim follows: they just take their experiences at face value. The view that I will articulate in Section 4 substantiates the Phenomenological condition assuming this reading. In line with this, the Self-knowledge condition on somatosensation also needs to be read in terms of typicality. Explaining how my framework can accommodate the experiences that do not meet the conditions (such as those in somatoparaphrenia and depersonalisation) goes beyond the scope of this paper. For discussions on bodily IEM in connection with somatoparaphrenia (in particular on whether, and how, the failure of the Phenomenological condition on somatosensation constitutes a threat to bodily IEM), see Rosenthal (2010), Lane & Liang (2009, 2010, 2011), Vignemont (2012) and Kang (2016).

[12] I think of the Phenomenological condition on somatosensation along the lines developed in Wright (2012, 259): "there will not be the distinction in one's relevant information between that component which justifies the associated existential claim and that component which, presumptively, justifies the identification of a witness." For instance, if my somatosensory experience as of some legs being crossed is *eo ipso* an experience as of my own legs being crossed, "there is no dividing up my information in such a way that the claim that someone's legs are crossed is justified by one part of it, and the identification that the person is myself by another." (ibid.)

experiences at face value, so that the judgments are grounded directly in these experiences (Wright, 2012, 260).

The philosophical literature on the so-called *sense of bodily ownership* essentially revolves around the Phenomenological condition. Authors in the debate on bodily ownership mostly assume the condition and propose accounts thereof (Billon, 2017; Peacocke, 2017; Bermúdez, 2018b; Vignemont, 2018; Bradley, 2021; Serrahima, 2024). The view that I will develop in the next section substantiates the Phenomenological condition: it argues for the plausibility of the claim that there is something it is like to feel the body as one's own, where this is integral to feeling a body somatosensorily at all. In the upcoming section I thus highlight the interaction between the notion of a phenomenology of bodily ownership and the discussion on IEM. To my mind, the capacity to contribute to explaining bodily IEM constitutes powerful abductive reason in favour of any given view of bodily ownership.

So far I have detailed the first step to an explanation of how exactly somatosensation meets the Self-knowledge condition. This first step concerned an explanation of our impressions of ownership. But, as mentioned, in order to explain how the Self-knowledge condition obtains for somatosensation, we need to plug in the fact that these impressions track the world correctly. The implementation of the condition indeed hangs on the fact that, typically, the body that we feel somatosensorily is in fact our own. The *Metaphysical condition* on somatosensation captures this:

> **Metaphysical condition on somatosensation**: for each subject, the body that she experiences somatosensorily is her own, in normal circumstances.

The Metaphysical condition expresses a true and uncontroversial fact, and doesn't need further argumentation. It explains the workings of somatosensation in our world, stating that the body that subjects are connected to and get information about through their somatosensory system in this world happens to be, in general, their own body. The expression "in normal circumstances" included in the condition introduces the caveat about the possibility of crossed wire scenarios: if the subject judges a body to be her own on the grounds of her bodily experiences, and it so happens that the body in question *is* her own, then her judgment is correct. If it so happens, however, that the body in question *is not* her own, for instance because she is wired up to someone else's body, then her judgment is in error through misidentification. The Metaphysical condition simply indicates that in the actual world subjects generally find themselves in the former situation.

In the upcoming sections I will focus on somatosensation in order to argue that it is the kind of ground suitable to yield first-personal, IEM judgments about the body. In the next section I will address the Phenomenological condition: I will spell out how somatosensation has the kind

of structure dictated by the condition by offering an account of the phenomenology of bodily ownership. In short, my contention is that in somatosensation *we experience the body as our own by experiencing it as a sensory field*. According to this view, when subjects judge about *a* felt body, they *eo ipso* judge about *their own* body simply because this is what figures in their somatosensory experiences. I will suggest that my approach illuminates why IEM is a central epistemic feature of both psychological and somatosensory judgments.

The Metaphysical condition will be addressed later (**Section 5**). I have already stated that the condition obtains, namely that bodily self-ascriptions are typically true when based on somatosensation. Hence, the point of discussing the condition will not be to motivate it further, but rather to show its role in explaining why bodily immunity may be considered only *de facto* immunity. I will propose that the difference in modal force that has traditionally been identified between bodily and psychological IEM has to do with the Metaphysical condition: in particular, it depends on, and presumably can vary with, the concept of ownership assumed and at stake in discussions on IEM. In my view, the intuitions about the possibility of crossed wire scenarios in the bodily case, pervasive in the literature, follow from, and are a symptom of, the concept of bodily ownership typically assumed in discussions on bodily IEM. This concept of ownership differs in a crucial way from the one typically at stake in talk about experience ownership —and hence in discussions on psychological IEM. In other words, to the extent that what it means for us to own a body differs from what it means for us to own an experience, intuitions about the modal force of bodily and psychological IEM are likely to come apart; and conversely, that they do come apart bears testimony of a disparity in the underlying concepts of ownership.[13]

[13] Now that I have laid out my strategy, I am in a position to explain where exactly I stand with respect to Salje (2017). Salje argues that crossed wire cases do not succeed as counterexamples to bodily IEM: if a subject's crossed wire sensations (call the subject Ann) are to be phenomenologically indistinguishable from her ordinary sensations, then Ann won't simply be perceiving someone else's body (call this other person Bob) even if Ann is wired up to Bob's body. Rather, Ann will actually be perceiving her own body. On Salje's view, this is because somatosensation has a non-perspectival structure that gives it *de se* content (to use my own terms: this is because somatosensation meets the Phenomenological condition). Given this non-perspectival structure, Salje argues, Ann's sensations in a crossed wire scenario will be felt as located in her own body parts, and hence describing the scenario as one in which "the tickle in Bob's nose has caused Ann to have a coordinate sensation of ticklishness in her own nose" (p. 46) is more accurate than describing the scenario as one in which Ann feels a tickle in Bob's nose. Hence, as Ann self-ascribes the ticklish nose in this scenario, she won't be mistaken. If Salje is right, then, crossed wire scenarios do not support the merely *de facto* status of bodily immunity, because the putative supporting thought experiments cannot even be properly formulated. According to her, the widespread intuition that they can follows from the fact that authors have not thought the relevant scenarios sufficiently through (p. 40).
I find Salje's argument compelling. Still, it is sensible to remain open to the possibility that it doesn't always work. One potential problem comes from cases in which Ann and Bob have significantly non-overlapping bodies, e.g. Bob has two arms but Ann has had her left arm amputated (and, for the sake of the objection, has never felt a phantom left arm). In her paper, Salje refers to cases in which Ann misperceives her body: a body part of Bob has a property P that Ann's *corresponding body part* does not have (pp. 48-9). When Ann mistakenly takes her own body part to be P in this case, she makes a mispredication error, but, on Salje's view, for the reasons mentioned above, Ann still doesn't make a misidentification error. I wonder, however, what Salje would say about the non-overlapping bodies case: Ann feels a bent phantom left arm on the grounds of being wired to Bob's bent left arm. Does the intuition that Ann's misperception of a bent arm is a misperception *of her own arm* being bent still hold in this situation?

4. The Phenomenological condition on somatosensation: bodily ownership

When considering what is specific of the phenomenology of bodily perception from the inside, authors often mention that bodily properties, when perceived in this way, appear as having a somewhat psychological tint. Brewer (1995, 303), for instance, writes that "[t]he direct object of bodily awareness is genuinely psychological" and Dokic (2003) talks about bodily experiences as experiences about *psychophysical* states of affairs. These claims intend to encapsule the idea that, from the point of view of the phenomenology, bodily properties perceived from the inside are given as properties of the very subject of experience.

In my view, this general idea is largely on the right track and, if examined carefully, helps disentangle the nature of the sense of bodily ownership. In this section I will bring in some considerations that substantiate and articulate this general idea. On the one hand, considerations around the notion of sensory field: I will appeal to the functions that philosophers have traditionally attributed to sensory fields, and to how they apply to touch. On the other hand, I will suggest to treat bodily sensations, or at least a significant subset of them, on the model of touch described. Taken together, these considerations afford an explanation of the fact that the body is experienced as our own in somatosensation.[14]

One classically highlighted feature of the phenomenology of touch is its duality.[15] Touch is an exteroceptive sensory modality: when we engage in tactile exploration of objects, our experience represents external objects and their properties. But this happens in virtue of our physical contact with the objects. In touch, objects lie directly beyond our skin and in contact with it. Because of this contact, we tactually feel the boundaries of the body against the objects, which translates into our feeling sensations *in the body itself* caused by the contact with objects. These sensations are part of the phenomenology of the tactile experience, so that one can perform switches of attention that make the sensations salient. Edmund Husserl put this point illustratively:

> "My hand is lying on the table. I experience the table as something solid, cold, and smooth … At the same time, I can at any moment pay attention to my hand and find on it touch-sensations (…) The same sensation of pressure is apprehended at one time as

Salje may or may not be able to accommodate cases like this. In any case, my strategy in this paper does not depend on the failure or success of her strategy; although potential problems to her account may be taken as further justification of the need for something like my own strategy to underpin bodily IEM. With my discussion of the Metaphysical condition in Section 5, I intend to take the sting out of crossed wire scenarios even if, *pace* Salje, they can be formulated.

[14] I have developed these considerations in detail in (Serrahima, 2023). I refer the reader to this paper for a full articulation of the argument summarised in this section.

[15] See however Mizrahi (2023) for a recent, very rich, critical discussion of the view of touch outlined in this section.

> perception of the table's surface … and at other time produces, with a 'different direction of attention,' … sensations of digital pressure." (Husserl, *Ideas II*, 147)

As noted by Husserl in this passage, in tactually perceiving the table I feel e.g. its solidity as a property of the table, namely as a property of an object that lies beyond my bodily boundaries. However, I can also switch attention and focus on the sensations of pressure that are not presented as properties of the table, but rather as lying on the bodily side of the perceived boundary. This structure allows us to describe the phenomenology of touch thus: in touch, we experience the body as having some boundaries which demarcate the area within which perceptual objects are presented; and as bearing experiential properties that are not assigned to these perceptual objects.

This description concentrates what, in the philosophy of visual perception, has often sufficed to postulate a visual field. The visual field is conceived as the seen area within which objects of vision are presented (see e.g. Gibson, 1950; Martin, 1992; Richardson, 2009). Besides, it is posited precisely as the bearer of some properties of our visual experiences that are relevant to their phenomenology but not presented to us as properties of the objects represented — paradigmatically, colour properties in phosphene experiences or in afterimages (Peacocke, 2008; Kind, 2008; Siegel, 2010). On these grounds, I submit that in touch we experience the body as a sensory field. Even if the body is part of what is represented in tactile experience, its representational status is different from that of the external objects of touch.

Before expanding on this latter point, let us see how the description of the phenomenology of touch just offered extends to other bodily sensations. I have mentioned above that, in touch, the boundary of the touching bodily part is phenomenologically salient because it is in contact with objects. To use an expression from the literature of bodily awareness, in touch we have a *sense of boundedness*, namely a sense that the body is bounded with respect to what lies outside of it (Martin, 1995; Vignemont, 2018; Bermúdez, 2020). It is now rather common to assume that the sense of boundedness is not exclusive of touch, however. As the idea goes, all localised bodily sensations involve a sense of boundedness even if they do not involve objects directly in touch with the body: when I feel a sensation at a given bodily location, I by the same token feel that my body extends to at least the point in space where I am feeling the sensation (Martin, 1995).

This allows to generalise the point about the duality of touch to localised sensations *mutatis mutandis*. In these sensations, "in addition to having some sense of the extent of one's body, one also has some sense of the world extending beyond [the body's] limits" (Martin, 1993, 212). Against this backdrop, it is reasonable to cash out the sense of boundedness as a sense of possible tactile intercourse with objects.[16] In my view, it is built into the phenomenology of

[16] See Vignemont (2021) for a related notion of tactile expectation.

localised sensations that, were objects to stand exactly where we feel our bodily boundaries to be, tactile intercourse would occur, that is, we would be affected by the objects in the sense that tactile sensation would be elicited.

This generalisation gives us grounds for the claim that the body is experienced as a sensory field in localised bodily experiences beyond the tactile. At least in localised sensations,[17] the body is experienced as a bounded object that potentially gives us somatosensory access to the objects standing beyond its boundaries. The boundaries demarcate the area within which objects would be presented if they got in touch with the body; and in turn, when we feel the body in these sensations, we feel it to bear properties that are indeed not assigned to extra-bodily objects, but rather to this area.[18]

My basic contention in this section is that *experiencing the body as a sensory field in somatosensation* just specifies what it means to experience the body as our own in this modality. This is because sensory fields are indeed part of what is perceived in the corresponding sensory experiences, but —to repeat— their representational status is not the same as that of the objects represented. As it has been conceptualised, the visual field is the seen area within which objects of vision are distributed. In this sense, it is part of the enabling conditions for visual experiences to represent objects at all, and it remains relatively stable across all experiences of the visual modality: it is a *structural feature of visual experiences* (Richardson, 2009). By describing the body in terms of fields, we can leverage the notion of a structural feature of experiences for the somatosensory domain. In my view, what is specific of the phenomenology of bodily perception from the inside is that, when experiencing the body in somatosensation, we experience it as that which eventually structures our somatosensory access to external objects. This articulates further the general idea we opened this section with, namely that bodily properties perceived from the inside are given as *psychophysical*, or as properties of the subject *of experience*. My specific proposal is that they are given as properties of a field, i.e. something structural to (somatosensory) experiences.

The appeal to *structural features of experiences* is important. Experiences are subjectively marked at least in the sense that, when subjects have them, they typically take them to be their own. As pointed out in the introduction, somatosensory experiences are no exception to this: they are also phenomenally conscious states we typically self-ascribe. In judgments like "*I* feel pain in *my* knee," in which the first person appears twice, the body part figuring in the content of the sensation is described first-personally: it is picked out by referring to the subject of the experience, in turn picked out in first-personal terms (Serrahima, 2024). On the view outlined

[17] Some bodily sensations, such as interoceptive sensations, are often not localised (Armstrong, 1962). Interestingly, it is sometimes argued that non-localised bodily sensations do not involve a sense of ownership (Vignemont, 2019).

[18] The conception of the sensory field as only potentially filled with objects is part of how theoreticians talk about the visual field in cases where the field is present, and apparently so for the subject, and yet experiences have no representational objects at all, as is the case of phosphene experiences (see e.g. Peacocke, 2008).

here, this is grounded on feeling the body, in somatosensation, as a structural feature of self-ascibed experiences: the very somatosensory experiences by which we feel the body. To repeat, this just means that the body is felt as something that enables our perceptual access to the world; as something that, in touch with objects, gives rise to a conscious experience *of ours*.

This proposal substantiates the Phenomenological condition on somatosensation:

> **Phenomenological condition on somatosensation:** if a subject has a somatosensory experience as of some body being F, then this experience is, *eo ipso*, an experience as of her own body being F.

On this account, bodily self-ascriptions in judgments based on somatosensation are grounded on feeling the body as our own and taking this experience at face value. When one feels the body *eo ipso* as one's own, this is because one does not experience the body as an ordinary representational object, but as something structural to the very somatosensory experiences by which one is feeling it —experiences that in turn are, in normal circumstances, taken to be one's own.

Things thus described, the puzzle about why there is an analogy in the epistemic status of bodily self-ascriptions on somatosensory grounds, and psychological self-ascriptions on phenomenal grounds, is less of a puzzle. Despite the fact that bodies and experiences may be rather dissimilar metaphysical types; and despite the fact that introspection and somatosensation may be disanalogous as capacities; perception of the body from the inside presents the body phenomenologically as a structural feature of experiences. This characterisation of bodily self-consciousness fleshes out, and nuances, the idea that the object of bodily awareness is *genuinely psychological*, or at least *psychophysical* (Brewer, 1995; Dokic, 2003).[19, 20]

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[19] One way of putting the message of this section is that judgments about the body on somatosensory grounds are a type of psychological judgment (i.e. a type of judgment about experiential properties of the subject). This opens up an interesting avenue that I cannot address in this paper: against Wright (2012, 271), bodily self-ascriptions based on somatosensation would not rest on an identification between the body and the subject of experience. This might amount to a resolution of the exchange between Wright (2012) and García-Carpintero (2018), alternative to the resolution proposed by Palmira & Coliva in their survey (2024, pp. 19-20).

[20] As an anonymous reviewer has pointed out to me, my proposal in this section could evoke views in the current literature on self-consciousness that appeal to the mode-content distinction, such as Recanati's (2007, 2012) and the contemporary phenomenologists' (e.g. Zahavi and Kriegel's, 2015).

Recanati explains the IEM of bodily self-ascriptions in terms of a subjectless content of sensations —which encodes a bodily condition, e.g. "legs being crossed"—, to which the somatosensory *mode* contributes the subject as the only person relative to which the content is evaluated. My view is different from Recanati's in that I do not defend that bodily sensations have a subjectless content. Sensory fields are phenomenologically subjective *and* they are part of what is perceived —part of what is seen in vision, and part of what is felt in bodily sensation—, despite their representational status being different from that of the objects represented, i.e. despite being structural (that is to say, part of the enabling conditions for the experiences to represent objects, and relatively stable across all experiences of the modality). Fields are subjective because they are structural, namely given the relation they bear with the very experiences of which they are a content. In other words, the subjectivity of the experiences is brought to bear into the content of the sensations in virtue of the kind of content that sensory fields are. Importantly, the subjectivity of

5. Bodily IEM as *de facto* IEM: the Metaphysical condition on somatosensation

At this point a question arises about the modal difference that has been identified between bodily and psychological IEM. If the grounds for bodily IEM derive their subjectivity from the general subjectivity of experiences —in the sense that, in judging about the body on somatosensory grounds, we are judging about a structural feature of experiences—, why would one at all think, as it has been customary, that bodily self-ascriptions on somatosensory grounds, but not psychological ones on phenomenal grounds, are *de facto* IEM? In this section I will leverage Coliva's (2002a) discussion of the metaphysics of thought ownership to argue that —in the terminology I am using in this paper— the modal difference identified between bodily and psychological IEM is related to the second condition, namely the Metaphysical condition, and can be explained by resorting to it in a way that is compatible with my discussion of the Phenomenological condition on somatosensation.[21]

Let me start by rehearsing the Metaphysical condition on somatosensation:

> **Metaphysical condition on somatosensation**: for each subject, the body that she experiences somatosensorily is her own, in normal circumstances.

To recall, this condition supplements the Phenomenological condition on somatosensation in explaining bodily IEM. In accordance with the Phenomenological condition, I have offered an explanation of the typical impression of ownership for the body that one feels somatosensorily. What the Metaphysical condition now does is bringing in the fact that, in normal circumstances, this impression tracks the world correctly, for the body that one feels somatosensorily is typically

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experiences I am appealing to here is not specific of somatosensory experiences, but pervasive to all conscious experiences in normal conditions.

In turn, my discussion of bodily awareness in terms of sensory fields is reminiscent of the way classical phenomenologists discuss bodily awareness (e.g. Husserl, 1989; Merleau-Ponty, 2012). A full separate paper would be needed to elucidate to what extent my approach to the body as a sensory field would fit in with the phenomenologists' idea that bodily awareness, like phenomenal awareness of experiences, is a form of pre-reflective awareness (Zahavi, 1994, 71). Two brief notes might be interesting in this connection, however. Firstly, my view does characterise bodily self-consciousness in terms that approach it to psychological self-consciousness: this might be read as related to the phenomenologists' idea that experiences, and the body from the inside, are relatively similar as "objects" of awareness. Secondly, as explained, my view ultimately relies on the notion that conscious experiences are subjectively marked. I have not articulated a proposal on what this "subjective mark" of experiences might be, but to the extent that, I propose, it "confers subjectivity" to the sensory field, it should probably be understood as a *sense of mineness* for experiences —a view that phenomenologists have championed by cashing mineness out in terms of a first-personal *mode of givenness* of experiences (Zahavi, 2005; Zahavi and Kriegel, 2015).

[21] Guillot (2014), fn. 7, reasons along lines similar to the ones developed in this section in her explanation of the *de facto* proviso on bodily IEM *vis à vis* psychological IEM.

one's own. This secures that the Self-knowledge condition obtains for somatosensation. To recall, the appeal to normal circumstances in the Metaphysical condition responds to the alleged possibility of crossed wire scenarios. Barring these scenarios, says the Metaphysical condition, somatosensation tracks the body that actually is one's own. In my view, the difference between bodily and psychological IEM needs to be traced back precisely to the operative notion of *the body that actually is one's own* —and relatedly, to the notion of a body that is in fact *not* one's own—, and to how it contrasts with the notion of *an experience that actually is one's own*.

Consider conscious experiences. For instance, an occurrent thought about last summer. If I consciously entertain a thought about last summer, then this thought about last summer *is* mine. More generally, what it means for an experience to be a given subject's experience is for this experience to be phenomenally conscious for this subject. This is because experience ownership is determined by phenomenal awareness: if a subject S is phenomenally aware of an experience, this makes the experience, by definition, S's experience (Coliva, 2002a).

I do not intend this here as a strong, positive proposal about the metaphysics of experience ownership, i.e. about what makes it the case that an experience actually is a given subject's experience. Rather, my point is that the concept of experience ownership just described in the immediately previous paragraph is the one arguably operative in discussions about psychological IEM: in particular, the fact that psychological IEM is found to be logically IEM is an indicator that this is indeed the underlying operative concept. According to this concept of experience ownership, phenomenal awareness of an experience E suffices to own —i.e. to be the subject of — experience E. Thus, given this concept of experience ownership, subjects own the experiences they are phenomenally aware of *necessarily*, and not merely *in normal circumstances*.[22] Given

[22] Assuming this concept of experience ownership is compatible with being sensitive to the phenomenon of thought insertion. In thought insertion, subjects have conscious experiences that are not presented to themselves straightforwardly as their own: they might claim that these experiences are not theirs or that they are someone else's (Frith, 1992). Thought insertion speaks directly to the Phenomenological condition, in what would be its version for phenomenal awareness: it concerns whether, if a subject has a given phenomenally conscious experience, this experience is *eo ipso given to her* as her own experience. Thought insertion calls into question the generality of this condition —but it is less clear that it undermines the claim that the thoughts are, in some basic sense, *in fact* the subject's own thoughts. In this sense, the case of thought insertion, *vis à vis* the Phenomenological condition on phenomenal awareness, parallels the case of somatoparaphrenia, *vis à vis* the Phenomenological condition on somatosensation (see footnote 11). Thought insertion calls into question that having a phenomenally conscious experience and being aware that this experience is one's own go together *necessarily*, hence recommending that the Phenomenological condition on phenomenal awareness be formulated in terms of typicality: it is *typically* the case that phenomenally conscious experiences are *eo ipso* given as one's own experiences. There is extensive discussion on whether this challenges psychological IEM, and in particular, on how this interacts with the metaphysics of thought ownership. Campbell (1999, 2003) distinguished between thought-ownership and thought-authorship, where the latter is the quality of being the generator of a thought, and argued that subjects can be introspectively aware of thoughts that are not their own, in the author sense. However, a standard position has it that, in thought insertion, ownership of the thought is still retained by definition, a position that deploys the concept of experience ownership explained in this section (Stephens & Graham, 1994; Coliva, 2002a, 2002b; Gallagher & Zahavi, 2008; Gallagher, 2015; see Verdejo, 2023 for discussion of this type of view. Hu (2017) and Palmira (2020) are also recent contributions to this discussion).

this concept of experience ownership, then, if a subject has a phenomenally conscious experience *and* takes the experience to be her own, she will necessarily be right: she won't possibly be wrong in the sense that someone indeed has the experience but it is in fact not herself, because having the experience —being its subject, its "owner"— just means noticing it in this way. Hence the strong modal profile of psychological self-ascriptions on phenomenal grounds.

The upshot of this is that, when it comes to our relationship with our psychological life, the mode of access to it that *eo ipso* implies self-ascription, i.e. phenomenal awareness, is a mode of access that, it is most often assumed, also determines ownership, metaphysically speaking. As per this assumption, it is precluded that, given the self-ascription of an experience one is phenomenally aware of, one is wrong that the subject of the experience is oneself.

But the case of bodily ownership is crucially different on this count. As it turns out, being somatosensorily aware of a body does not seem to suffice to actually "own" this body. Again, I do not mean this as a strong, positive proposal about the metaphysics of bodily ownership. What I mean to do here is just bring out something about our concept of bodily ownership of which the intuitions about the possibility of crossed wire scenarios are a symptom. The basic idea behind crossed wire cases is that subjects might receive somatosensory feedback from bodies *that are in fact not their own*. Hence, one crucial assumption behind these cases is that being somatosensorily connected to a body does not by itself make this body one's own. Crossed wire scenarios can only be adduced as potential challenges to bodily IEM inasmuch as we have other operating criteria for bodily ownership. What these criteria might be is beyond the scope of this paper —maybe my body is the body I have had control over for a sufficient amount of time, or the body that I am visually familiar with when I look into a mirror, or a mix of these and other facts. In any case, to repeat, somatosensory access does not seem to suffice for bodily ownership. It is this difference, between the concept of experience ownership and the concept of bodily ownership, that makes intuitions about the epistemic security of self-ascriptions of phenomenally conscious experiences, and of self-ascriptions of the somatosensorily felt body, finally come apart. Unlike what happens in the psychological case, in the bodily case we do not take the mode of access that *eo ipso* implies self-ascription, i.e. somatosensory access, to be the mode of access that determines ownership, metaphysically speaking. This leaves open, at least prima facie, the possibility that a subject feels a body somatosensorily *and* takes the body to be her own —that is, that the Phenomenological condition for somatosensation obtains—, and yet the self-ascription is a *mis*ascription: this will be so when other criteria for bodily ownership fail, as presumably happens in crossed wire scenarios.

Importantly, all of this is in principle compatible with the operative metaphysical concept of bodily ownership changing over time. It may be that, at one point, what it means for a body B to be a subject S's body *just is* for S to be able to feel B somatosensorily. At that point in time, it will not be possible to construct crossed wire scenarios in which S has somatosensory access to a

body B that is not hers, and S's self-ascriptions of B will be correct by definition.[23] In this sense, whether we can construct crossed wire scenarios that challenge bodily IEM partly depends on whether we take somatosensory access to a body to be sufficient to claim that this body is our own.

The main upshot of this section is that common intuitions about the possibility of crossed wire scenarios manifest an operative concept of bodily ownership according to which bodily ownership does not follow from having the kind of access to a body that *eo ipso* implies self-ascription of this body (i.e. somatosensory access). This operative concept has two features that are important for our discussion. The first: it is crucially different from an arguably common concept of experience ownership, according to which the kind of access to experiences that *eo ipso* implies self-ascription of the experiences, i.e. phenomenal access, also implies ownership of them. To the extent that these concepts are different, the modal profile of bodily self-ascriptions on somatosensory grounds, and psychological self-ascriptions on phenomenal grounds, will appear to be different. The second important feature of the operative concept of bodily ownership is that it is presumably variable: it is possible, or at least conceivable, that is varies so that, at one point, we just can't formulate scenarios in which subjects are wired up to bodies that aren't their own.

I believe that, together with the considerations in the previous sections, this alleviates, at least a little, the threat posed by these scenarios. As I acknowledged at the beginning of the paper, there are indeed ways of knowing about our bodies that feel as certain as the ways in which we know about our conscious psychological lifes altogether. In this paper I have defended that the intuitions about there being an epistemic commonality between introspective knowledge of our minds and knowledge of our bodies from the inside are perfectly justified and track something valuable: they are grounded on the typical contents and phenomenology of somatosensation (described in Section 4, in discussion of the Phenomenological condition), which, in my view, convey the body as a structural feature *of experiences*, and hence as a psychological object. The fact that somatosensation meets the Phenomenological condition is an essential part of explaining bodily IEM. The other essential part of the explanation is the metaphysics of bodily ownership. It is precisely in connection with the metaphysics that intuitions about the epistemic security of psychological self-consciousness and bodily self-consiousness often come apart: putative threats to bodily immunity come from the notion that

[23] To recall (see fn. 13), according to Salje (2017) it is indeed not possible to construct crossed wire scenarios in which Ann receives somatosensory feedback (solely) from a body *that is in fact not her own*. But this is not because she thinks that receiving somatosensory feedback from Bob's body *makes Bob's body become Ann's*, but rather because she thinks that, when receiving somatosensory feedback from Bob's body, Ann will feel the sensations in her own body. Hence, in order to make her case, Salje assumes the concept of bodily ownership that I describe in this section, by which there is one body which is Ann's, another body which is Bob's, and a connection between the two that does not suffice for Ann to become the owner of Bob's body.

somatosensory access does not grant ownership. But this is a contingent matter, tangential to the existence of a sense of bodily ownership.

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