# Self-consciousness and the Unity of Consciousness<sup>1</sup>

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## I

Consciousness has a number of puzzling features. One such feature is its unity: the experiences and other conscious states that one has at a particular time seem to occur together in a certain way. I am currently enjoying visual experiences of my computer screen, auditory experiences of bird-song, olfactory experiences of coffee, and tactile experiences of feeling the ground beneath my feet. Conjoined with these perceptual experiences are proprioceptive experiences, experiences of agency, affective and emotional experiences, and conscious thoughts of various kinds. These experiences are unified in a variety of ways, but the kind of unity that I'm interested in here concerns their phenomenal character. Take just two of these experiences: the sound of bird-song and the smell of coffee. There is something it is like to have the auditory experience, there is something it is like to have the olfactory experience, and there is something it is like to have both the auditory and olfactory experiences together. These two experiences occur as parts or components or aspects of a larger, more complex experience. And what holds of these two experiences seems to hold – at least in normal contexts – of all of one's simultaneous experiences: they seem to be subsumed by a single, maximal experience.<sup>2</sup> We could think of this maximal experience as an experiential perspective on the world. What it is like to be me right now is (or involves) an extremely complex conscious state that subsumes the various simpler experiences that I outlined above (seeing my computer screen, hearing bird-song, smelling coffee, and so on). I will follow recent literature in using the term "co-consciousness" for the relation that a set of conscious states bear to each other when they have a complex phenomenology (Bayne and Chalmers 2003; Dainton 2000; Hurley 1998; Lockwood 1989).

In order to illuminate the phenomenal unity of consciousness that I am interested in it is useful to contrast it with other conceptions of what it is for consciousness to be unified One contrast is between co-consciousness and co-ownership – the relation of being had by the same subject of experience (at the same time). Although the two notions are intimately related, they appear to be conceptually distinct. Co-consciousness is a phenomenal relation – it is an experiential relation between experiences – but although co-ownership is a relation between phenomenal states, it isn't itself a phenomenal relation. Whether the subject of experience is a Cartesian ego, an embodied animal, or something in between, being had by the same subject of experience (at the same time) doesn't itself enter into the character of what it's like to have a set of experiences.

A further reason for distinguishing co-consciousness from co-ownership is that it seems at least conceivable that the two relations might pull-apart. Some have argued that the splitbrain syndrome shows that experiences can be co-owned without being co-conscious. The split-brain patient has one experience in the right hemisphere, another experiences in their left hemisphere, but neither experience is subsumed by a single phenomenal perspective. Yet – so this account goes – both experiences are had by the same subject of experiences (Marks 1980). This is a controversial account of the split-brain, and there are a number of points at which one might take issue with it. I mention it not because I think that co-ownership and co-consciousness can actually dissociate, but to illustrate that it seems conceivable that they can.

It is also useful to contrast co-consciousness with epistemic conceptions of the unity of consciousness. According to Shoemaker,

Unity of consciousness is in part a matter of one's various beliefs forming, collectively, a unified conception of the world. ... Perfect unity of consciousness, then, would consist of a unified representation of the world accompanied by a unified representation of that representation, the latter including not only information about what the former represents, but also information about the grounds on which the beliefs that make up the former are based, and about what the evidential relations between the parts of that representation are (1996: 184, 186).

My phenomenal conception of the unity of consciousness is distinct from Shoemaker's epistemic approach to the notion. Although there are undoubtedly intimate connections

between the phenomenal and epistemic conceptions of the unity of consciousness, it seems clear that a set of experiences could be co-conscious without being unified in Shoemaker's sense.

Let me return to phenomenal conceptions of the unity of consciousness. There is, I think, a strong case to be made for thinking that the experiences that individuals have at a time are normally unified. Our perceptual experiences normally occur together with our emotional experiences, imagistic experiences, and conscious thoughts as parts of a single phenomenal perspective. Even divided attention – trying to navigate a difficult stretch of road while carrying on a philosophical conversation – seems to leave the unity of consciousness intact. The kinds of phenomenal gap that occur between the experiences of one person and the experiences of another, or between a person's experiences on one day and their experiences the following day, seem not to occur between the simultaneous experiences of a single person.<sup>3</sup> Perhaps the unity of consciousness can be lost in certain pathologies of consciousness such as the split-brain syndrome, but such splits in phenomenal unity seem rare at best. And to the extent that the various experiences are phenomenally unified this fact needs explaining.

There are various levels at which one might attempt to explain the unity of consciousness. One could pitch an explanation at the level of sub-personal processes. Hurley (1998) takes such an approach in appealing to the notion of a dynamical singularity to account for the unity of consciousness. But one might also pitch an account of the unity of consciousness at a personal level. Perhaps there is something about conscious states, thought of as content-bearing states, that accounts for their unity. I this paper I develop personal level accounts of the unity of consciousness that involve self-consciousness in some way. The thought that self-consciousness and the unity of consciousness are deeply connected is often mentioned in passing, but it is rarely explored in any detail. I think it is worth exploring it, for a clearer perspective on how these two features of the mind are related promises to shed much-needed light on both notions.<sup>4</sup>

#### Π

One of the themes of recent work on self-consciousness is that self-consciousness takes different forms. In considering which forms of self-consciousness might constrain co-consciousness it is natural to begin with bodily-based – or what we can call *ecological* – self-consciousness (Neisser 1988; Bermúdez 1995, 1998). Ecological self-consciousness is an awareness of one's own body as a unitary, bounded physical object. In one way or another ecological self-consciousness enters into most forms of experience. It enters into

bodily sensations – pains, aches, itches and the like – for they are experienced as occurring in one's body. It enters into experiences of bodily agency, for although bodily action is usually directed at the world, one's body is recessively given in the phenomenology of agency. And ecological self-consciousness enters into the contents of perception. Visual perception of a tree presents the tree as standing thus-and-so with respect to oneself. While the tree is, we might say, explicitly represented in the experience, the bodily self is implicitly given in the visual experience. And what applies to vision seems also to apply to other forms of perception, such as audition, olfaction, touch, and so on. All these forms of consciousness involve an awareness of oneself as an embodied subject.

How might ecological self-consciousness constrain the unity of consciousness? One possibility is that experiences can be co-conscious only if they involve ecological self-consciousness. Call this the *strong ecological constraint*.<sup>5</sup> The strong ecological constraint is one way of developing the suggestion that the physical or material self is essentially involved in the unity of consciousness (Ayers 1991: 285f).

A central objection to the strong ecological constraint is that the contents of certain sorts of conscious states appear not to be spatially located. Consider, for example, what it's like to have certain moods, such as a vague feeling of ennui. Does one's body enter into what it's like to have such a state? Not as far as I can tell. Similarly, conscious thoughts of various kinds (believings, desirings, entertainings) seem to lack ecological structure. Conscious thoughts might occur in one's head, and their content might even be bodily involving in some way (one might be wondering where one's hands are, for example), but one's body is not implicitly represented in conscious experience in the way that it is represented in perceptual experience. Conscious thinking doesn't bring with it a sense of embodiment.

This point can be illustrated by considering a case of complete phenomenal disembodiment. Suppose you wake up one morning to discover that you've become blind. As you struggle to come to terms with this, you realize that you've also become deaf. Then, in rapid succession, your other perceptual modalities and bodily senses begin to go – you lose bodily sensations, the sense of touch, your sense of smell and taste, and so on. Your only remaining experiences are thoughts and emotions. You think to yourself, "What on earth is happening to me?" and this thought is accompanied by a rising sense of panic and fear. Although your stream of consciousness is devoid of any form of ecological self-consciousness your remaining conscious states – your anxious thoughts, feelings of panic and fear – will, I suggest, be phenomenally unified.

The strong ecological constraint seems to be false, but perhaps a weaker ecological constraint holds. Perhaps co-conscious experiences cannot be ecologically structured around *different* 

ecological selves if they are to be unified. Call this the *weak ecological constraint*. The weak ecological constraint allows that experiences that are not bodily involving could be phenomenally unified, but it rules out experiences that are structured around different bodies from being unified.

So the crucial case to consider in evaluating the weak ecological constraint is a case in which multiple phenomenal embodied [This doesn't make sense as it stands] co-exists with phenomenal unity. Barry Dainton has developed a variant of Dennett's well-known out-of-body scenario (Dennett 1981) to argue for such a possibility. In Dennett's scenario your brain is removed from your body, but kept alive and functioning in a vat; it remains in contact with your body via a complex system of tiny radio transceivers attached to your severed nerve endings. Dainton's scenario also involves the removal and envatment of one's brain,

but instead of transceivers being used to connect your body and brain in perfectly normal fashion, the nerves responsible for transmitting signals from your eyes and ears are connected to auditory and visual receptors in an artificial head. These receptors are functionally equivalent to your biological eyes. This head is then placed on a mountain top and switched on. You immediately feel yourself 'transported' to the mountain top (which is familiar to you), and you start to perceive the world from the perspective of your artificial head – which can be moved around. After several hours, the head is switched off, and you are plunged into silence and darkness; needless to say, you now feel wholly disembodied. But not for long: the transceivers connecting your brain to your body are now activated; you feel a full range of bodily experience (but no auditory or visual sensations), and find that your body – whose movements you can control in the normal way – has been placed underwater. Using your sense of touch, you explore your underwater environment for several hours. You are then disconnected from your body, and the artificial head is reactivated: you find yourself back on the mountain top. And so it goes. You gradually become accustomed to perceiving the world from two vantage points; you get used to *existing* (or so it seems) at two different locations. (Dainton 2003).

In the final phase of Dainton's experiment, the transceivers connecting your brain to the artificial head and your body are simultaneously active. Dainton allows that in this situation one might initially have a highly confusing combination of experiences, but he suggests that one would become accustomed to having two distinct sensory-fields, one bodily, one audio-visual. "Each of these sensory-fields would constitute a distinct

phenomenal space – distinct because you no longer have the impression that your audiovisual experiences are spatially related (phenomenologically) to your bodily experiences, and vice-versa" (2003). But although your two sensory fields not spatially (ecologically) unified, they – or, better, the conscious states that occur within them – are phenomenologically unified. There is something it is like for you to have these two sensory-fields; they are parts or constituents of one's phenomenal field in just the way that one's visual experiences and conscious thoughts are.

Dainton's thought-experiment seems to me to provide a powerful case against the weak ecological constraint. It does, however, have one drawback: it assumes that one's audio-visual sense field can function in independence from one's body-centered sense field. I find this assumption plausible, but perhaps it's false. Perhaps there is something about the spatial structure of one's perceptual field(s) that demands that they be centred on a body-based sense field. It's not clear to me how such an argument would go, but perhaps this claim can be established. At any rate, it would be good to find a different way to put pressure on the weak ecological constraint.<sup>6</sup> The following scenario attempts to do this.

Consider Borgy. Borgy has three bodies and a single mind. Borgy's mind is (or is implemented in) his three brains; as in Dennett's scenario, Borgy's brains communicate by means of miniature radio transmitters, and are functionally integrated to the same degree that our two neural hemispheres are. Because he has three bodies, Borgy can be in three non-contiguous places at once; he can sunbathe on Bondi beach in Sydney, hike in an Arizonan desert, and have breakfast in a Parisian café all at the same time. Borgy's perceptual experiences are structured around each of his three bodies: he sees a dog as standing thus-and-so with respect to Body A, he hears a car as moving away from body B, and so on.

Although Borgy has three bodies – and is thus either a scattered physical object or a set of physical objects – he is a single subject of thought and action. Borgy's perceptual states feed into a unitary cognitive system, and he has direct control over each of his three bodies (this, in part, is what makes these three bodies *his* bodies). He acts with one (or more) of his bodies in the way that you and I act with one (or more) of our limbs. It is Borgy (and not body A), that sees the tree that is visually apparent to Body A; it is Borgy (and not body B) that plays tennis with body B. Information derived from each of Borgy's three bodies is non-inferentially available – via his unified cognitive system – for actions involving any one of his three bodies. Of course, when acting with more than one of his bodies Borgy will need to coordinate his perceptual experiences, and this may involve some form of inference. But we can be in precisely the same position as Borgy in this

respect; in a crowded subway car one might need to work out whether the shoes that one feels with one's toes are the same shoes that one is looking at.

Could Borgy have a single phenomenal perspective? I submit that he could. I suggest that Borgy's perceptual experiences could be *phenomenally* unified despite the fact that they are structured around distinct bodies. Borgy experiences the world from three discontinuous spatial perspectives, but his various experiences are subsumed by a single phenomenal perspective. And the unity of this phenomenal perspective would enable him to integrate the contents of states that occur in distinct perceptual fields, although not in the way that he can integrate the contents of states that occur in the same perceptual field. Borgy can tell, for example, that it's hotter in Bondi than it is in Paris right now, for his phenomenal perspective includes the fact that his Australian body is hotter than his Parisian body, even though he doesn't experience these two bodies as being spatially related. And suppose that he is looking at two ducks, one in Paris and one in Sydney. He can tell which of the two ducks is bigger (or more colorful, or noisier, etc) even though he doesn't see the ducks as being spatially related thus-and-so with respect to each other. If Borgy's experiences can be phenomenally unified despite the fact that they are ecologically disunified, then the weak ecological constraint is false.

I don't claim that the Borgy scenario provides a knockdown argument against the weak ecological constraint, but I do think that it puts the onus on the proponent of the constraint to show why a multiply embodied creature couldn't have a unified phenomenal field. It is, I admit, difficult to *imagine* what it would be like to be Borgy. Attempting to imagine what it would be like to have three bodies at once seems to degenerate into imagining what it would be like to have three bodies successively. But it's not clear what evidential weight to assign to our imaginative difficulties here. As Nagel has famously pointed out, most of us find it difficult to imagine what it would be like to be a bat as a reason for thinking that there isn't something it's like to be a bat. We shouldn't confuse an inability to project ourselves into a certain phenomenal perspective with an inability to conceive that a certain type of phenomenal perspective is possible. My claim is only that multiple phenomenal embodiments with phenomenal unity are conceivable; I don't claim that we can project ourselves into such a phenomenal perspective.

Are there any direct reasons for thinking that Borgy couldn't have a unified consciousness? One line of objection derives from the oft-expressed thought that the contents of co-conscious states must be consistent (see Baars 1988, Hurley 1998: 115, 118; Revonsuo 2003). Call this the *consistency constraint* on co-consciousness. Some support for the consistency constraint can be garnered from such phenomena as binocular rivalry, in

which the visual system selects only one of competing visual stimuli for consciousness. Binocular rivalry is one among many perceptual effects that demonstrates the desire of our perceptual systems for consistency, but it doesn't show that inconsistent contents can't be co-conscious. In fact, there is ample evidence of inconsistency in consciousness. Think, for example, of the effect of wearing inverting spectacles (see Hurley 1998 – this is not an illuminating reference for inverted lenses – could you dig up the origina ref please?). Prior to adaptation, such spectacles cause the contents of vision to be inconsistent with the contents of touch: the vase looks as though it is upside down, but it feels as thought it's the right way up.

One might try to revise the consistency constraint on co-consciousness to deal with these cases. Hurley (2000) suggests that the consistency constraint should be restricted to cases that meet two conditions: they must be intra-modal, and they must be dynamic. Consciousness tolerates inconsistent contents only as long as they belong to different perceptual modalities, and only so long as the subject is engaged in active perception. An amended constraint of this kind would meet the counterexamples in question, but I don't see why we should endorse it. Hurley herself provides no argument for it.

Even if we were to accept a revised consistency constraint, it's not at all clear that Borgy would flout it. The reason for this is that it seems possible for Borgy's experiences to be indexed to each of his three bodies. Suppose that Borgy is looking at three animals: from body A he sees a monkey in the middle of his visual field; from body B he sees a turtle in the middle of his visual field; and from body C he sees a walrus in the middle of his visual field. For creatures with a single body this might result in inconsistent (intra-modal) experiences: one would see these three animals as locating in the same physical space. But Borgy has three bodies, and the representational contents of his experiences take this fact into account. In the same way that our bodily sensations are implicitly tagged to various parts of our bodies (the pain is in the big toe of our left foot rather than our right foot), so too Borgy's experiences would – one assumes – be tagged to one of his bodies. We experience a pain-in-our-right-leg, but Borgy experiences a pain-in-the-right-leg-of-my-Body-A; we have the visual experience of a walrus-directly-ahead-of-me, but Borgy has the visual experience of a walrus-directly-ahead-of-my-body-A, and so on. So even if some form of the coherence constraint on co-consciousness is true, it is far from clear that Borgy would flout it. There is nothing inconsistent in having a monkey a turtle and a walrus in the centre of one's visual field if one also has three visual fields.

Let me end this section with some tentative considerations against the weak ecological constraint that derive from the structure of actual, albeit uncommon, states of consciousness. Consider what it's like to imagine what you would see if you were looking down from the ceiling of the room that you are currently in. Now, I take it that you were visually conscious while you engaged in that act of visual imagery. Now, consider the relationship between those states of visual perception and the states of visual imagery. I take it that they are phenomenally unified, but are they ecologically unified? This answer to this question turns on how the contents and character of visual imagery relate to one's phenomenal body. I suggest that visual imagery involves a kind of imagined phenomenal body: the contents of the state of imagery are anchored to one's body, as one would experience it if one actually were at the top of the room. So there is a sense in which even in this mundane phenomenal states one experiences a kind of multiple embodiment with phenomenal unity. A less mundane version of this situation occurs in out-of-body experiences, where such states of imagination have the phenomenal character of perceptions. In at least some forms of out-of-body experiences, people report having had multiple conscious perspectives: it's as if they are in two disconnected places at once (Joseph 1996: chapter 8; Tong 2003). Again, this suggests that ecological self-consciousness does not constrain phenomenal unity.

#### III

There is much more to be said about how the spatial structure of consciousness might constrain its phenomenal unity, but I want to turn now to a different self-consciousness based approach to the unity of consciousness. Perhaps the unity of consciousness isn't to be accounted for in terms of the unity of the experienced body, but the unity of oneself as a single subject of mental states.

This proposal – call it the *psychological constraint* – avoids the two objections that undermined the ecological constraint: the problem of non-spatial mental states and the problem of multiple embodiments. It can account for non-spatial mental states, for such states might be experienced as belonging to oneself qua mental subject even if they aren't experienced as belonging to oneself qua physical subject. And it can account for multipleembodiment, for experiencing oneself as spatially or physically disunified need not prevent one from experiencing oneself as psychologically unified, as a single subject of thought and agency.

As with the ecological constraint, we can distinguish between weaker and stronger forms of the psychological constraint. The strong psychological constraint holds that in order to be unified experiences must involve psychological self-consciousness; the weak form holds only that experiences cannot be unified if they are structured around different psychological selves (that is, if they seem to be had by different subjects of experience). My comments will focus on the strong psychological constraint. The weak psychological constraint raises a number of fascinating questions, but I lack the space to deal with them here. (Henceforth I will drop the modifier 'strong' when referring to the strong psychological constraint.)

The most obvious objection to the psychological constraint is that it seems possible for one's experiences to be phenomenally unified without one being aware of them as one's own. Indeed, it seems possible for a set of experiences to be unified without the subject of those experiences having the ability to be aware of those experiences as their own. It is one thing to have a conscious state, and it is quite another to be aware of oneself as the subject of that conscious state. One of the attractions of the ecological constraint was that it appealed to a form of self-consciousness that has some claim to being necessarily embedded in consciousness as such. By contrast, the psychological constraint appears to employ a form of self-consciousness that seems to be dissociable from consciousness as such, and might even be quite rare. In short, the objection is that psychological selfconsciousness is simply too rare a phenomenon to underlie the phenomenal unity of consciousness.

There are, I think, three responses that one might make to this problem. A first response is to suggest that although consciousness might be possible without psychological self-consciousness, the *unity* of consciousness isn't. Non-linguistic animals might be conscious, but their experiences aren't unified. A second response is to weaken the psychological constraint by holding only that it must be *possible* for unified experiences to be experienced as belonging to oneself. A third response is to reject the claim that psychological self-consciousness is in fact dissociable from consciousness as such. Let me explore these suggestions in turn.

The fact that our access to the phenomenological perspective of non-linguistic animals is limited makes it difficult to rule out the first proposal, but I am not inclined to look upon it with much favor. I find it implausible to suppose that the acquisition of psychological self-consciousness could unify hitherto disunified experiences into a single fully unified phenomenal field. But even if something can be said to appease this worry, the proposal must still deal with the fact that even creatures that are fully self-conscious are rarely aware of all of their experiences as their own. I can and do attend to my experiences, but I certainly don't attend to them all of the time. Further, the fact that my experiences are phenomenally unified doesn't seem to be dependent on my attending to them. Rather, it seems as though attending to one's experiences reveals the unity that they have independently of one's attending to them (see Dainton 2000).

But perhaps the second proposal can help. This proposal appeals to the *possibility* of selfascription as a constraint on the unity of consciousness (see van Cleve 1999). We might call this the Kantian proposal, in reference to Kant's oft-cited claim that it must be possible for the 'I think' to accompany all of my representations (1929: B131). (I am not suggesting that Kant endorsed the Kantian proposal; indeed, I am far from convinced that Kant was at all interested in phenomenal conceptions of the unity of consciousness.) It might be possible to develop the Kantian proposal in plausible ways, but as it stands it faces two objections. First, it is under-specified. In what sense must it be possible for one to be conscious of one's conscious states? Possible under what conditions? Possible right here and now, or possible under idealized conditions? It is far from clear that even fully selfconscious subjects of experience are capable of self-ascribing all of their co-conscious experiences at once. Perhaps any two co-conscious (and relatively simple) experiences can be self-ascribed, but it is far from clear that one can be aware of the set of one's current experiences all at once. A second and more serious objection is that explaining the unity of consciousness in terms of the possibility of self-ascription seems, intuitively, to be getting this back to front. Intuitively I would have thought it more reasonable to explain the possibility of self-ascription in terms of the unity of consciousness.

I turn now to the third and, I think, most plausible of the three suggested replies, viz., that despite appearances consciousness and psychological self-consciousness are deeply, and perhaps even necessarily, connected. There are certainly those who seem to suggest that it might be. Flanagan claims, "...All subjective experience is self-conscious in the weak sense that there is something it is like for the subject to have that experience. This involves a sense that the experience is the subject's experience, that it happens to her, occurs in her stream" (Flanagan 1992: 194). Galen Strawson describes the subject of experience as something that is "alive and present in consciousness at any given moment of consciousness" (Strawson 2000: 50). And Zahavi writes of a "sense of 'myness' – or ipseity – that permeates experience" (see Zahavi 2000). Perhaps the unity of consciousness is constrained by this sense of ownership or myness.

But what exactly is this sense of ownership (or myness)? I take the experience of ownership to be an experience whose representational content is roughly: this (target) experience is had by the subject of this (reflexive) experience. Although I assume that the experience of ownership has representational content, I don't assume that this content is conceptual. Nor do I assume that the experience of ownership generates a belief about the ownership of the target state. Just as one can have the visual experience as of a dog in

front of one without having the concept of a dog, and without believing that there is a dog in front of one, so too one can have the experience of ownership towards an experience without *believing* that the experience in question is one's own.

What is the *range* of the experience of ownership? Is it, as Flanagan's comments suggest, a necessary constituent (or concomitant) of experience? Is it part and parcel of the subjectivity of phenomenal consciousness? I'm not convinced that it is. While it is a necessary truth that there is something it is like to have (phenomenally) conscious experiences, I don't think that the "what it's likeness" of experience entails, or necessarily brings with it, a sense of ownership. There seems to be a conceptual distinction between what we might call *subjectivity* – the fact that there is something it is like to have a conscious state – and the sense of ownership. It seems at least conceptually possible to have a phenomenal state without experiencing oneself as the subject of that phenomenal state.

Might subjectivity and ownership *actually* come apart? This question has recently been discussed in connection with the schizophrenic delusion of thought-insertion. Patients with this delusion say that the thoughts of other people are being inserted into their minds (see Frith 1992; Gold and Hohwy 2000). As one patient put it,

I look out the window and I think that the garden looks nice and the grass looks cool, but the thoughts of Eamonn Andrews come into my mind. There are no other thoughts there, only his. ... He treats my mind like a screen and flashes his thoughts into it like you flash a picture (Mellor 1970: 17).

At first glance, patients suffering from thought-insertion seem to be saying that some of their conscious thoughts – thoughts that occur in their stream of consciousness – are not their own. And the best explanation for such claims seems to be that although these patients are aware of their thoughts, they lack any sense of ownership with respect to them.

But matters aren't so straightforward. A number of authors, however, have argued that the sense of ownership can take two forms; or, perhaps, that there are two forms of ownership. One form of ownership involves a bare sense of being the *subject* of a state, while another forms involves being its *author* or *agent* (see Campbell 1999; Gallagher 2000; Graham and Stephens 1994). Think of what it's like to have a jingle running through one's mind: one experiences oneself as the subject of this state, but not as its author. Let us reserve the term "the sense of ownership" for the first sort of experience, and the term "the sense of agency" for the second sort of experience.

Arguably, the most charitable interpretation of thought-insertion is that such patients have no sense of agency with respect to their thoughts – they do not feel as if they are involved in their production in any way. It is less clear that such patients lack a sense of ownership towards those thoughts that they claim have been inserted into their minds.<sup>7</sup> So delusions of thought-insertion don't provide quite the case against the psychological constraint that we were looking for. Are there any cases in which individuals might fail to experience a sense of ownership (rather than just authorship) towards their experiences?

There are a number of syndromes in which the sense ownership might be lost; I will conclude by discussing one such syndrome: depersonalization and the Cotard delusion. Patients suffering from depersonalization complain that their sensations and perceptions no longer feel as though they belong to them. Such patients sometimes describe themselves as a mere bundle of thoughts; they report that neither their body nor their bodily experiences feel as though they belong to them. Galen Strawson cites the experience of a friend with depersonalization who found that the thought "I don't exist" kept occurring to him. 'It seemed to him that this exactly expressed his experience of himself, although he ... knew, of course, that there had to be a locus of consciousness where the thought "I don't exist" occurred' (Strawson 1997: 418). In its most extreme form depersonalization becomes Cotard's delusion, which involves the belief that one is dead (Young and Leafhead 1996). Cotard patients seem to have lost the ability to recognize themselves as the owner of their experiences (Gerrans 2000: 112). While both depersonalization and Cotard patients appear to have lost the experience of ownership, only the Cotard patients take this loss of the experience of ownership at face value.

Do these patients retain a phenomenally unified perspective? Although it is difficult to say for sure, there is no evidence that they don't. These patients don't complain of having phenomenally disunified experiences, nor – unlike split-brain patients – do they behave in ways that are suggestive of phenomenal disunity. So it seems that even the most plausible forms of the weak psychological constraint fail. Of course, these are only prima facie considerations. Perhaps depersonalisation and Cotard's syndrome are not to be understood in terms of the loss of the experience of ownership. Or perhaps – despite appearances to the contrary – individuals with these disorders do suffer from a disunified phenomenal perspective. These patients don't provide a knockdown case against the psychological constraint, but they do, I think, reduce its appeal.

Where does this leave us with respect to the unity of consciousness? Self-consciousness accounts of the unity of consciousness are, I think, among the more plausible philosophical or personal-level accounts of the unity of consciousness. If self-consciousness doesn't explain – or even constrain – the unity of consciousness, it's not clear that there is anything to be said at a personal level about the unity of consciousness. Perhaps the lesson to be learnt from this is that the unity of consciousness isn't really a philosophical problem at all.

### REFERENCES

Ayers, M. 1991 Locke, New York: Routledge.

Baars, B. 1988. *A Cognitive Theory of Consciousness*, Cambridge: Cambridge University Press.

- Bayne, T. and Chalmers, D. 2003 "What is the Unity of Consciousness?," The Unity of Consciousness: Binding, Integration and Dissociation, ed. Axel Cleeremans, Oxford: Oxford University Press.
- Bermúdez, J. L. 1995 "Ecological Perception and the Notion of a Nonconceptual Point of View," *The Body and the Self*, eds. J.L. Bermúdez, A. Marcel and N. Eilan, Cambridge, MA: MIT Press, 153-74

\_\_\_\_ 1998 The Paradox of Self-consciousness. Cambridge, MA: MIT Press.

- Broad, C. D. 1925 The Mind and its Place in Nature. London: Routledge and Kegan Paul.
- Campbell, J. 1999 "Schizophrenia, the Space of Reasons, and Thinking as a Motor Process," *The Monist*, 82: 609-25.
- Dainton, B. 2000 *Stream of Consciousness: Unity and Continuity in Conscious Experience*. London: Routledge.
- \_\_\_\_\_ 2003 "Unity in the Void: Reply to Revonsuo," *Psyche* 9: http://psyche.cs.monash.edu.au.
- Dennett, D. 1981 "Where am I?," *The Mind's I*, ed. D. Hofstadter and D. Dennett, New York: Basic Books.
- Flanagan, O. 1992 Consciousness Reconsidered. Cambridge, MA: MIT Press.
- Frith, C. 1992 *The Cognitive Neuropsychology of Schizophrenia*. Hillsdale, NJ: Lawrence Erlbaum Associates.

- Gallagher, S. 2000 "Self-reference and Schizophrenia: A Cognitive Model of Immunity to Error through Misidentification," *Exploring the Self*, ed. D. Zahavi, Amsterdam: John Benjamins.
- Gerrans, P. 2000 "Refining the Explanation of Cotard's Delusion," *Mind and Language*, 15: 111-122.
- Gold, I. and Hohwy, J. 2000 "Rationality and Schizophrenic Delusion," *Mind and Language*, 15/1: 146-67.
- Graham, G. and Stephens, G. L. 1994 "Mind and Mine," *Philosophical Psychopathology, ed.* G. Graham and G. L. Stephens, Cambridge, MA: MIT Press.
- Hurley, S. 1998 Consciousness in Action. Cambridge, MA: Harvard University Press.
- \_\_\_\_\_ 2000 "Clarifications: Responses to Kobes and Kinsbourne," *Mind and Language*, 15: 556-561.
- \_\_\_\_\_ 2003 "Action, the Unity of Consciousness, and Vehicle Externalism," *The Unity of Consciousness: Binding, Integration and Dissociation,* ed. A. Cleeremans, Oxford: Oxford University Press.
- Joseph, R. 1996 *Neuropsychology, Neuropsychiatry, and Behavioral Neurology* (2<sup>nd</sup> ed.) Baltimore, MD: Williams & Wilkins.
- Kant, I. 1929 Critique of Pure Reason. N. K. Smith (trans) London: Macmillan.
- Korsgaard, C. 1996 "Personal Identity and the Unity of Agency: A Kantian Response to Parfit," *Creating the Kingdom of Ends*, Cambridge: Cambridge University Press.
- Lockwood, M. 1989 Mind, Brain and the Quantum. Basil Blackwell.
- Marks, C. 1980. *Commissurotomy, Consciousness and Unity of Mind*. Cambridge, MA: MIT Press.
- Mellor, C. S. 1970 "First Rank Symptoms of Schizophrenia," *British Journal of Psychiatry* 117: 15-23.
- Neisser, U. 1988 "Five Kinds of Self-knowledge," *Philosophical Psychology* 1:35-59.
- Revonsuo A. 2003 "The Contents of Phenomenal Consciousness: One Relation to Rule them All and in the Unity Bind Them," *Psyche* 9: http://psyche.cs.monash.edu.au.
- Roessler, J. 2001. "Understanding Delusions of Alien Control," *Philosophy, Psychiatry, & Psychology*, 8: 177-88.
- Rovane, C. 1998. The Bounds of Agency. Princeton, N.J.: Princeton University Press.

Searle, J. 2000. "Consciousness," Annual Review of Neuroscience. 23: 557-578.

- Shoemaker, S. 1996. "Unity of Consciousness and Consciousness of Unity," *The First-Person Perspective and Other Essays*, Cambridge: Cambridge University Press.
- Spence, S. 2001 "Alien Control: From Phenomenology to Cognitive Neurobiology," *Philosophy, Psychiatry, Psychology*, 8, 2/3, 163-172.
- Strawson, G. 1997 "'The Self'", Journal of Consciousness Studies, 4: 405-28.
- \_\_\_\_\_ 1998 "The Phenomenology and Ontology of the Self," *Exploring the Self*, ed. D. Zahavi, Amsterdam: John Benjamins.
- Tong, F. 2003 "Out-of-Body Experiences: from Penfield to Present," *Trends in the Cognitive Sciences*, 7: 104-106.
- van Cleve, J. 1999 Problems from Kant. New York: Oxford University Press.
- Van Eeden, 1990 "A Study of Dreams," *Altered States of Consciousness*, ed. C.T. Tart, New York: Harper Collins, 175-90.
- Wegner, D. 2002 The illusion of conscious will. Cambridge, MA: MIT Press.
- Young, A. and Leafhead, K. M. 1996 "Betwixt Life and Death. Case Studies of the Cotard Delusion," Method in Madness: Case Studies in Cognitive Neuropsychiatry, eds. P. W. Halligan and J. C. Marshall, Hove, East Sussex: Psychology Press, 147-71.
- Zahavi D. 2000 "Self and Consciousness," *Exploring the Self*, ed. D. Zahavi, Amsterdam: John Benjamins.

2 It is interesting to note that although Searle (2000) officially rejects a mereological conception of the unity of consciousness, he adopts mereological language in giving an intuitive gloss on the notion.

3 Are there any non-pathological experiences that might be disconnected from the rest of one's phenomenology? Perhaps; it's hard to be sure. Dainton wonders whether the faint sensations that lie at the periphery of consciousness – "such as the nagging back-pain that floats in and out of one's attentive awareness" (Dainton 2000: 90) – might fail to be co-conscious with the rest of one's experiences. However he suggests that the fact that the phenomenal background seems to consist of a unified ensemble of experiences suggests that peripheral sensations are also co-conscious with the rests of one's experiences. I think that Dainton is right, although the very fact that peripheral experiences lie outside the focus of attention makes it difficult to know how they are related to each other and to the rest of one's experiences.

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4 See Hurley (1998) for another perspective on why self-consciousness cannot account for the unity of consciousness. See Bayne and Chalmers (2003) for some discussion of why Hurley reject phenomenological accounts of the unity of consciousness.

5 Although I know of no explicit defense of either ecological constraint, a number of authors seem to be at least sympathetic to this general approach. Both Korsgaard (1996) and Ayers (1991) suggest that the unity of the experienced body is closely connected to the unity of consciousness – although it is far from clear what they mean by 'the unity of consciousness.' Also suggestive is Rovane's remark that there is "some evidence that phenomenological unity is actually grounded in animal identity" (1998: 18). Unfortunately, she doesn't say what this evidence is.

6 C.D. Broad once suggested that the unity of the states of a mind involved them sharing a relation to the experience of a "mass of bodily feelings" (1925: 566).

7 The sense of ownership might also be lost in epileptic automatisms and related syndromes (see Spence 2001, Wegner 2002).