

words, (i) is the correct view: perceptual content is always affected by the allocation of one's attention. And only endorsing (ii) or (iii) would lead to counterarguments against intentionalism.⁶

Syracuse University
Syracuse, NY, 13244, USA
nanay@syr.edu

References

- Chalmers, D. 2004. The representational character of experience. In *The Future for Philosophy*, ed. Brian Leiter. Oxford: Oxford University Press. pp. 153–81.
- Funkhouser, E. 2006. The determinable-determinate relation. *Nous* 40: 548–69.
- Johnston, W.E. 1921. *Logic. Part I*. Cambridge: Cambridge University Press.
- Macpherson, F. 2006. Ambiguous figures and the content of experience. *Nous* 40: 82–117.
- Nickel, B. 2007. Against intentionalism. *Philosophical Studies* 136: 279–304.
- Peacocke, C. 1992. *A Study of Concepts*. Cambridge, MA: MIT Press.
- Prinz, J. Forthcoming 2010. How do perceptual states become conscious? In *Perceiving the World. New Essays on Perception*, ed. Bence Nanay. New York: Oxford University Press.
- Simmons, D.J. and C.F. Chabris. 1999. Gorillas in our Midst: sustained inattention blindness for dynamic events. *Perception* 28: 1059–74.
- Speaks, J. Forthcoming. Attention and intentionalism. *Philosophical Quarterly*.
- Wolfe, J. M. 1999. Inattentional amnesia. In *Fleeting Memories. Cognition of Brief Visual Stimuli*, ed. V. Coltheart, 71–94. Cambridge, MA: MIT Press.
- Wolfe, J.M., N. Klempen and K. Dahlen. 2000. Post-attentive vision. *Journal of Experimental Psychology: Human Perception & Performance* 26: 693–716.

6 I am grateful for comments from David Chalmers and Fiona Macpherson.

Consciousness, the self and bodily location

DAVID M. ROSENTHAL

One thing a theory of consciousness must do is capture the way conscious states differ from mental states that are not conscious. If an individual is in some mental state but wholly unaware of being in that state, that state is not a conscious state. By contraposition, a necessary condition for a state's being conscious is that one is in some way aware of it.

We can describe being conscious or aware of something as transitive consciousness; so we can call this necessary condition for a state's being conscious the *transitivity principle*. Elsewhere (e.g. 2005) I have argued that this principle is implemented by higher-order thoughts (HOTs) to the effect that one is in the relevant states; such HOTs make us aware of our conscious mental states. Still, one can do a lot by appeal just to the more general transitivity principle, independent of HOTs.

Plainly not any way of being aware of a state will do. For one thing, the awareness must be subjectively unmediated and spontaneous. Also, one must be aware of the state as one's own, as a state that one is, oneself, in; being aware of a state as belonging to somebody else does not result in that state's being conscious.

It's a delicate matter to say just what being aware of a state as one's own amounts to. I have argued (2005) that one's awareness of the state tacitly represents that state as belonging to the very individual that has that awareness. It is in that way that one is aware of the state as being a state of oneself, as such.¹

Caleb Liang and Timothy Lane (2009) have raised a striking challenge for this account. Liang and Lane cast their argument specifically in terms of my HOT theory of how we're aware of our conscious states, and in terms of a certain immunity I've argued we have to error about which individual one is aware of as being in a particular state (Rosenthal 2004: §4, 2005: §6). But it will be useful first to consider their challenge in more general terms.

Somatoparaphrenia is an unusual neurological deficit in which one comes to identify parts of one's body, typically a limb contralateral to the neurological damage, as belonging to somebody else (e.g. Vallar and Ronchi 2009). Gabriella Bottini et al. (2000) report a patient, FB, whose version of this syndrome seems to raise a difficulty for the requirement that one be aware of conscious states as belonging to oneself. FB identified her own left hand as belonging to her niece. When she was blindfolded and told that the investigator would touch her left hand, she reported no sensation. But when, still blindfolded, she was told that the investigator would touch her niece's hand, FB reported a conscious tactile sensation on her niece's hand.

1 It is important that this representing be tacit. If the higher-order awareness in virtue of which a state is conscious explicitly represented the state as belonging to the very individual that has that awareness, one would be explicitly aware not only of the target state, but also of that higher-order awareness. But we are seldom aware of any such awareness; only when we introspect our mental states are we explicitly aware of our higher-order awareness of those states. We can understand one's tacitly representing a state as belonging to the individual that has the higher-order awareness as consisting simply in one's being disposed to identify the bearer of the state as the same as the bearer of that higher-order awareness (Rosenthal 2004: 167, 2005: 343n.). This qualification is not, however, directly relevant to what follows.

It's natural to describe this in terms of higher-order awareness. FB was aware of a tactile sensation when told that her niece's hand would be touched. So it's reasonable to assume that the sensation occurred in both cases, but she was aware of it only when told that her niece's hand would be touched. Awareness of the sensation was blocked when she took the hand being touched to be the one she denied is hers. And the sensitivity of that higher-order awareness to cognition, such as whose hand FB believes is being touched, is reason to think that the higher-order awareness is itself in nature, that is, a HOT.

Liang and Lane assume that when FB was told her niece's hand would be touched, FB was aware of the tactile sensation as belonging not to herself, but to her niece. And that would violate the condition that one must be aware of every conscious state as belonging to oneself.

Liang and Lane distinguish representing a state as belonging to somebody from representing that state as being present to somebody. And they urge that my HOT theory 'does not allow for [that] distinction' (666). But it's not at all obvious what representing a state as being present to oneself consists in apart from representing the state as belonging to oneself. So it's unclear what their distinction amounts to, and hence how it might help here.

Still, there is a useful distinction between two ways an individual can subjectively own a tactile sensation, and this points towards a reasonable explanation of FB's case. In addition to being aware of bodily sensations as one's own, we are aware of such sensations as having some bodily location; pains, for example, subjectively seem to one to be in a hand, foot or other body part.

As phantom-limb cases show, this is not a matter of the pain's literal location; a pain cannot occur in a limb that does not exist. Rather, we must understand this apparent location as a qualitative aspect of the pain (Rosenthal 2005: ch. 7, esp. 198–201; Meehan 2001, 2002). Just as pains differ in respect of being sharp, dull, throbbing or burning, so they differ also in respect of seeming to be located in a hand, foot or other body part. It is an aspect of the qualitative character of bodily sensations that they have such subjective location. A phantom-limb patient has a pain with the qualitative character of seeming to be located in the missing limb; the patient's higher-order awareness of the pain accordingly represents it as occurring there.

When blindfolded and told that the investigator will touch her niece's hand, FB is aware of a tactile sensation. She is aware of the sensation in the spontaneous, unmediated way characteristic of conscious sensations. So she is aware of the sensation as being her own. But she is also aware of that sensation as having a subjective bodily location in a hand that is not part of her own body, but is instead part of her niece's body.

There is no conflict between these two ways of being aware of a sensation. The first is a matter of whose sensation it is from the point of view of consciousness. FB is aware of the sensation in the way characteristic of conscious

sensations; so she is aware of it as belonging to herself. The second concerns the subjective location of the sensation, and FB is aware of the sensation as seeming to occur in her niece's hand.

Bottini et al. asked FB 'how she could report touches on somebody else's hand'. FB acknowledged that it was 'strange', but confabulated that her niece would absent-mindedly leave her hand in FB's hospital room (251). FB presumably understood the question how she could 'report touches on' her niece's hand as meaning how could she have a conscious sensation of touches on her niece's hand. Plainly FB was aware of the sensation as her own, but also aware of it as having a 'strange' subjective location. It is very much the way a phantom-limb patient is aware of a pain as occurring in a non-existent body part.² Everything Bottini et al. report fits well with this understanding of how FB is aware of these sensations.

What is it for FB to identify the relevant hand as belonging to her niece, given that she identifies the sensation as belonging to herself? We rely on a broad collection of indicators in identifying our own bodies. One indicator is the subjective location of one's bodily sensations, but we rely also on such things as which movements we seem to control, continuity among body parts, and what we see when we look in the mirror (Rosenthal 2004: §5, 2005: ch. 13, §4).

These marks of bodily identity come apart in conditions such as somatoparaphrenia. Almost everything FB has to go on leads her to distinguish her own body from her niece's, but her neurological deficit leads her to identify her own left arm and hand as belonging to her niece. And this misidentification of body parts carries over to the subjective location of bodily sensations that result from stimuli in the misidentified parts.

The transitivity principle, and hence the more specific HOT theory, readily explain FB's case. There are two ways in which one can be aware of a bodily sensation as being owned by somebody. One is being aware of the sensation as subjectively one's own; the other is being aware of the sensations as having a subjective location in somebody's body. Typically that subjective location is in the body one independently identifies as one's own, but pathology may cause that not to happen.

Something parallel occurs in cases of thought insertion, a symptom of some schizophrenic patients who report having thoughts that seem to have been generated by another individual (e.g. Mullins and Spence 2003). There is controversy about how exactly to explain this phenomenon (e.g. Frith 1992; Campbell 1999; Stephens and Graham 2000). But any account must

2 Indeed, phantom limb can itself result in a mismatch between self and other. Vilayanur S. Ramachandran *et al.* (2008) report two phantom-limb patients who feel tactile sensations on their own phantom hand simply from seeing somebody else's hand being stroked. Ramachandran *et al.* note that the visual input excited mirror neurons, and they hypothesize that normally a signal from one's own hand indicates that it's not one's own hand that's being stroked, a signal that's absent in phantom-limb patients.

plainly recognize two distinct ways we can be aware of our thoughts, as regards whose thoughts they are and as regards who seems to have generated them. As with FB's somatoparaphrenia, the transitivity principle and the more specific HOT theory readily accommodates the distinction between these two ways in which we are aware of our thoughts.

Liang and Lane note that the way one is aware of a sensation as being one's own connects with the trivial immunity I've argued we have to error about whom one is aware of as having a conscious sensation. Sydney Shoemaker (1968) famously argued, following Wittgenstein (1958: 66–67), for a robust immunity to error. Shoemaker acknowledged that even if I am aware of myself as feeling pain or seeing a canary, I can be mistaken about whether it's pain I actually feel or a canary I actually see. But he urges that if in such a case I am right that somebody feels pain or sees a canary, I cannot then be mistaken about whether it is I who does so. I cannot be wrong because I misidentify the individual that does actually feel pain or see a canary.

Such immunity would have to rest on something special about the way we are aware of our conscious states. But it is unclear what special feature that could be. What is it about the way we are characteristically aware of our conscious sensations that could guarantee that I am the individual who has those sensations? Why couldn't I, for example, have such overwrought empathy with you that I become unclear about whether a particular sensation is yours or mine?

It's thus arguable that Shoemaker's strong immunity does not hold; even if I am aware in the characteristic subjective way that somebody is in pain and somebody actually is, I may still be wrong about whether I am the one who's in pain. But there is still a more modest immunity to error that does hold. Overwrought empathy notwithstanding, I cannot in such a case be wrong about whether it is I whom I am aware of as being in pain.

This trivial immunity follows from what it is for one to be aware of oneself as being in pain. Being aware of oneself as being in pain consists in being aware, in a spontaneous, seemingly unmediated way, of an individual's being in pain, and being disposed to identify that individual as the individual that has that awareness. No error is possible about whom I am aware of as having the pain because the spontaneous awareness tacitly identifies the bearer of the pain with the bearer of the awareness. I labelled this *thin immunity* to distinguish it from Shoemaker's more robust immunity (2004: 171–73, 2005: 356–59).³

There are two kinds of ownership, one that is a matter of whom a sensation seems subjectively to belong to and the other a matter of the apparent

3 Liang and Lane urge that such thin immunity is a corollary of HOT theory. I see it rather as an obvious feature about the way we are aware of our conscious states, and urge that HOT theory can provide a satisfactory explanation of it (Rosenthal 2005: 357).

bodily location of the sensation. Both kinds of ownership figure in the way we are aware of our conscious sensations. Thin immunity pertains only to which individual one is aware of a sensation as belonging to. Liang and Lane assume that HOT theory can capture only that kind of ownership, and conclude that HOT theory and thin immunity conflict with FB's awareness of some tactile sensations as located on her niece's hand.

But a virtue of HOT theory, and more generally the transitivity principle, is the useful flexibility they afford in explaining the various ways we are aware of our conscious states. And both can readily accommodate FB's awareness of the relevant tactile sensation as spontaneous and subjectively immediate and hence as belonging to herself, and also as subjectively located on the hand of a distinct individual.

Graduate Center
City University of New York
New York, NY 10016-4309, USA
davidrosenthal@nyu.edu

References

- Bottini, G., E. Bisiach, R. Sterzi and G. Vallar. 2002. Feeling touches in someone else's hand. *NeuroReport* 13: 249–52.
- Campbell, J. 1999. Schizophrenia, the space of reasons, and thinking as a motor process. *The Monist* 82: 609–25.
- Frith, C.D. 1992. *The Cognitive Neuropsychology of Schizophrenia*. Hillsdale: New Jersey: Lawrence Erlbaum.
- Liang, C. and T. Lane. 2009. Higher-order thought and pathological self: the case of somatoparaphrenia. *Analysis* 69: 661–68.
- Meehan, D.B. 2001. Spatial experience, sensory qualities, and the visual field. In *Proceedings of the Twenty-Third Annual Conference of the Cognitive Science Society*, eds. J.D. Moore and K. Stenning. Mahwah, NJ: Erlbaum.
- Meehan, D.B. 2002. Qualitative character and sensory representation. *Consciousness and Cognition* 11: 630–41.
- Mullins, S. and S.A. Spence. 2003. Re-examining thought insertion: semi-structured literature review and conceptual analysis. *British Journal of Psychiatry* 182: 293–98.
- Ramachandran, V.S. and D. Rogers-Ramachandran. 2008. Sensations referred to a patient's phantom arm from another subject's intact arm: perceptual correlates of mirror neurons. *Medical Hypotheses* 70: 1233–34.
- Rosenthal, D.M. 2004. Being conscious of ourselves. *The Monist* 87: 161–84.
- Rosenthal, D.M. 2005. *Consciousness and Mind*. Oxford: Clarendon Press.
- Shoemaker, S. 1968. Self-reference and self-awareness. *The Journal of Philosophy* 65: 555–67.
- Stephens, G.L. and G. Graham. 2000. *When Self-Consciousness Breaks: Alien Voices and Inserted Thoughts*. Cambridge: MA: MIT Press/Bradford Books.

Vallar, G. and R. Ronchi. 2009. Somatoparaphrenia: a body delusion. A review of the neuropsychological literature. *Experimental Brain Research* 192: 533–51.

Wittgenstein, L. 1958. *The Blue and Brown Books*. Oxford: Basil Blackwell, 1958.

Counterpart theory and modal realism aren't incompatible

DUNCAN WATSON

Jim Stone has recently argued that counterpart theory and modal realism are incompatible. His argument relies on a particular modal claim about the nature of the Lewisian pluriverse: I argue that the person who believes in counterpart theory and modal realism ought not to accept this claim though. I conclude that Stone has not shown that counterpart theory and modal realism are incompatible.

1. Stone's argument

Jim Stone (2009: 650–51) presents the following argument against the compatibility of Lewisian modal realism and counterpart theory:

Let a situation *S* be one at any possible world where someone finds a wallet and is free to choose whether or not to return that wallet; and let someone be free to choose to return a wallet iff if they return the wallet they could have not returned it and if they don't return the wallet they could have returned it. It's possible that every person in *S* (no matter what possible world they're in)¹ freely returns the wallet.

Suppose for *reductio* that every person in *S* freely returns the wallet then, given what it is to *freely* return a wallet, each person in *S* could have not returned the wallet.

According to counterpart theory, if each person in *S* could have not returned the wallet each person in *S* must have a counterpart who doesn't return the wallet. But we're supposing that everyone in every possible world who's in *S* does return the wallet, so there aren't any counterparts who don't return the wallet – therefore it's not the case that each person in *S* could have not returned the wallet.

1 From hereon in assume that when I talk of 'every' or 'each' person in *S* it has this meaning unless otherwise indicated, i.e. that the quantifier is unrestricted, ranging over everything in the pluriverse.