

Notes

1 The Essential Embodiment Thesis

1. While both Noë and Clark argue against BRAINBOUND with respect to cognition, only Noë rejects BRAINBOUND with respect to consciousness. Clark (2009) makes it explicit that he accepts BRAINBOUND with respect to consciousness.
2. Robert Hanna and I explicitly argue against ECM and EM in *Embodied Minds in Action*, chapter 8, under the rubric of the Embodiment Fallacy.
3. However, this is not to say that the world is part of the machinery that generates conscious experience, or that enactivity constitutes consciousness, content, or emotion. The enactivist thesis that I endorse is weaker than the one set forth by Noë.
4. Note that the claim is not that the relevant set of neurobiological properties alone is a *sufficient* condition of the existence of a consciousness like ours. Robert Hanna and I (2009, chapter 6) have argued that the existence of a consciousness like ours is *jointly hylomorphically constituted* by relevant mental and neurobiological properties.
5. Just as in the case of the existence of consciousness like ours, so too the relevant set of neurobiological properties alone is not a sufficient condition of the *specific character* of a consciousness like ours. Both the existence and the specific character of a consciousness like ours are jointly hylomorphically constituted by relevant mental and neurobiological properties. Again, see Hanna and Maiese (2009).
6. For example, the 29 January 2007 issue of *Time* magazine was entirely devoted to the topic, *The Brain: A User's Guide*, and included supportive articles by or interviews with many leading contemporary philosophers of mind and cognitive neuroscientists.
7. According to the metaphysical account Hanna and I set forth in *Embodied Minds in Action*, the brain–scientist system is not synthetic a priori/strongly metaphysically necessarily sufficient – that is, jointly hylomorphically constitutively sufficient – for consciousness or emotional experience like ours.
8. See Gallagher (2005a, p. 40).
9. See Hanna and Maiese (2009, chapter 1).
10. The thesis of Non-Conceptualism says that representational content is neither wholly nor solely determined by a conscious animal's conceptual capacities, and that at least some contents are both solely and wholly determined by its non-conceptual capacities. The version of Non-Conceptualism that I favor says that the representational content of a state is essentially non-conceptual if and only if its semantic structure and psychological function are inherently different from the structure and function of conceptual content. See, for example, Gunther (ed.) (2003) and Speaks (2005).
11. I borrow this example from Prinz (2005).
12. See Gunther (ed.) (2003, part IV).
13. See, for example, Sudnow (1993).

14. Of course, as Colombetti (2011) points out, this strict attraction/repulsion dichotomy is overly simplistic when it comes to the experiences and appraisals that characterize human life. Often human life is characterized by ambivalence and internal conflict, and stimuli are valenced in mixed and complex ways. I believe that what we care about, including our long-term will and character, might be characterized more appropriately in terms of what Colombetti calls 'multi-dimensional valence.'
15. For a further discussion of this, see Jonas's (1966) existentially oriented philosophy of biology.
16. See, for example, the studies cited in Boonin (2003, chapter 3). An earlier study by Prof. Maria Fitzgerald of the Dept. of Anatomy and Developmental Biology at UCL in 1995 placed the emergence of sentience at between 22 and 26 weeks. See *British Parliamentary Office of Science and Technology Notes* 94 (1997). <http://www.parliament.uk/post/pn094.pdf>. Accessed on October 18, 2010.

2 Essentially Embodied, Desire-Based Emotions

1. See, for example, Damasio (1994, 1999, 2003), Pert (1999), and Prinz (2004).
2. See Damasio (1994) and Prinz (2004).
3. See Goldie (2000, pp. 129–134) for a discussion of this.
4. See Greenspan (1980, pp. 233–234); Goldie (2000, p. 76); and Drummond (2004).
5. See Hanna and Maiese (2009, chapter 5).
6. The very fact that it is odd to speak of 'truth-makers' with respect to the emotions supports the claim that the 'logic' of emotion differs from that of judgment.
7. Interestingly, Ratcliffe (2008) is hesitant to widen the category of 'emotion' so as to include existential orientations, since he believes that this would obscure the difference between states directed at particular objects and orientations that constitute the background against which all our experiences, thoughts, and activities occur.
8. See Tye (1996, p. 274) for discussion of this. Note that Tye himself disagrees with this view of 'qualia.' In his view, phenomenal character is nothing but an aspect of intentional content.
9. See Güzeldere (1998, p. 37), who finds this view of phenomenal properties overly narrow.
10. This interpretation is direct and immediate insofar as it occurs spontaneously and does not involve reflection or analysis, though of course these interpretive activities do mediate between the world and the individual's experiences.

3 Sense of Self, Embodiment, and Desire-Based Emotions

1. See Dennett (1991, p. 429).
2. See McGinn (1999, p. 163).
3. For example, Kant, Nagel, and Searle all have articulated views which either explicitly state or imply that this is so.
4. Along similar lines, some theorists have described the unity of consciousness as an awareness of multiple objects, all at the same time, as the contents of a single representation. See, e.g., Brook (1999, p. 43).

5. Strawson (1997) claims that his own 'fundamental experience of consciousness is one of repeated returns into consciousness from a state of complete, if momentary, unconsciousness' (p. 422).
6. This occurs in cases of neo-commissurotomy—i.e., the surgical severing of the corpus callosum, the main connection between the right and left hemispheres of the brain. See, e.g., Nagel (1971).
7. Sometimes this basic bodily awareness is temporarily disrupted (as when my hand 'goes to sleep') or temporarily extended beyond one's own skin (as in Ramichandran's fascinating experiments with rubber arms), and sometimes, catastrophically, it is permanently disrupted (as in apraxia) or pathologically distorted (as in anorexia).
8. For a plausible analysis of proper parthood, see, e.g., Koslicki (2008).
9. See Langton and Lewis (1998). The standard usage, deriving from the work of David Lewis, and more remotely from Leibniz, has it that an intrinsic property is automatically a *non-relational* or *monadic* property.
10. See, e.g., Humberstone (1996).
11. Recall that severe amnesia would not be a counterexample to this thesis. To feel as if one had no past or not future, while of course highly disruptive for one's sense of self, is not to have a conscious life that is completely atemporal, for one likely still would have a sense of events unfolding in the present.
12. Sheets-Johnstone (1998) describes these organisms as possessing corporeal consciousness, but I think it is more appropriate to speak of them as proto-conscious.
13. Likewise, Butterworth (1999) emphasizes embodiment and maintains that the principle of self-unity comes from the 'perceptual-ecological aspect of self, which engages the world with a unitary sense of self-agency' (p. 206).
14. A patient suffering from body integrity disorder, on the other hand, experiences a disruption in her sense of embodiment and sense of self. This disorder involves a longstanding, stable desire to amputate one or more limbs, and likely results from a failure to include or integrate the affected limb in the offline representation of one's body (Carruthers, 2008, p. 1,310). In such cases, disruption in the background sense of bodily integration and bodily attunement constitutes a breakdown in affective framing, and therefore involves a disruption in the patient's sense of self.

4 The Role of Emotion in Decision and Moral Evaluation

1. Note that Zajonc seeks to challenge this claim that affect is 'post-cognitive.'
2. Thompson (2007, p. 86) likewise makes this point.
3. See, for example, Damasio (1994), Zhu and Thagard (2003), and Evans (2002). There is also some contemporary Kantian ethics literature that explores the connection between desire/emotion and action. See, for example, Schapiro (2009).
4. I borrow this phrasing from Damasio (1994, p. 171).
5. In fact, this sort of reason may very well be dependent on and driven by non-self-interested emotions such as altruistic emotions, 'whatever-the-consequences' emotions, integrity-based emotions, authenticity-based emotions, Humean sympathy, empathy, and Kantian respect.
6. This is similar to the argument strategy that Prinz (2006) follows.
7. See also Compton (2003) and Vuilleumier (2005).
8. For more on the frame problem, see Ford and Hayes (eds) (1991) and Ford and Pylyshyn (eds) (1996).

9. Of course, this is not the only frame problem discussed in the literature. For a further exploration, see Ketelaar and Todd (2001).
10. For a related account of how emotion is necessarily involved in all evaluation and observation, see Jaggar (1989).

5 Essentially Embodied, Emotive, Enactive Social Cognition

1. Indeed, the account I propose might be understood as an *extension* of the simulation-theory, as long as simulation is characterized as essentially embodied, emotive, and enactive. For a further discussion of how such an account might be developed, see Winkielman *et al.* (2008).
2. Of course this could be construed as a type of simulation, but what is crucial to note is that such simulation is essentially embodied. We create 'living pictures' of other people with our own bodies, by means of our proprioceptive responses to them. For example, this is illustrated by the way in which people stand and modulate their facial expressions when they are talking to each other at social gatherings. Thus, there is a sense in which 4ET is a *non-cognitivist* version of simulation-theory.
3. Note the deep connection here with Wittgenstein's (1953) account of forms of life. He maintains that the norms for meaningful language use are socially governed and that we are able to use language and understand each other because we share a common, human form of life.
4. As Kim (2005) argues, because any causal relationship between these immaterial souls must take place outside physical space and thus cannot include a spatial relation, it will always be impossible to determine which cause produced which effect. He claims that 'the radical nonspatiality of mental substances rules out the possibility of invoking spatial relationships to ground [the] cause-effect pairings' (p. 80) of mental-to-mental causation, and refers to this as the 'pairing problem' for Cartesian substance dualism.

6 Breakdowns in Embodied Emotive Cognition

1. It is interesting that this conception of social interaction very closely matches some of the basic assumptions of rational decision theory.
2. This is not surprising, given that in my view, both disorders have a common source.
3. For more about illusions of control and pathologies of intentional agency more generally, see Gallagher (2005a, chapter 8).
4. Once again, it is interesting how many of these pathologies produce illusions that almost perfectly match the dualistic or over-intellectualized conceptions of the mind or self that so often appear in philosophical discussions.
5. Frith and Gallagher say it would be 'like giving a lecture with a carousel projector where you press a button to make the slides move forward. But every time you're about to press a button, the slides move forward just before you press. I think the way you would interpret that, which would be reasonably correct, is that there is someone in the control box anticipating your needs and advancing the slides' (2002, p. 66).
6. For the purposes of the current discussion, I will set aside cases of 'acquired sociopathy', in which socially inappropriate and aggressive behavior surfaces after a

frontal brain lesion. Instead, I will focus on what some have called ‘born psychopaths.’

7. Note that Barkley’s description is meant to apply to subjects with ADHD, but I believe this characterization applies equally well to psychopaths.
8. Robert Hanna maintains that Kantian respect should be understood as a pre-reflective, spontaneous higher-order desire to be moved by non-self-interested, non-selfish, non-consequentialist first-order effective desires, together with an essentially embodied emotional responsiveness to the dignity of other persons and of oneself. For more on this, see Hanna’s forthcoming book, *The Rational Human Condition*. If Hanna is correct, then the autistic subject’s application of moral rules might be understood as a disembodied version of Kantian ethical reasoning.
9. Once again, note that I am open to the possibility that simulation happens in a non-conceptual, pre-reflective, essentially embodied direct mirroring of another person’s bodily comportment and dispositions to move in certain ways. If so, then the bodily attunement theory I have presented might be construed as *an essentially embodied simulation theory*.

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