

# THE EMBODIED SELF

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## 1. Introduction

Descartes thought that he was distinct from his body and could exist without it. The self that is distinct from its body is, according to Descartes, an immaterial substance. This immaterial self possesses a body and is so intimately conjoined with its body that it forms a union with it. The relation between self and body is, Descartes insists, unlike the relation between a pilot and his vessel. If one were in one's body like a pilot in a vessel one would not feel pain when one's body is hurt. Nevertheless, the fact remains that each of us is, strictly speaking, distinct from his or her body. The self is a thinking and unextended thing. The body is an extended and unthinking thing.<sup>1</sup>

The question to which Cartesian dualism is a response is, first and foremost, a metaphysical question, namely:

(M) What is the relation between a person and his or her body?

To talk about the 'person' is, in the context of (M), to talk about the thinking, experiencing self. It is this self or soul that, according to the dualist, is distinct from its body. At the other end of the scale from dualism is a form of materialism according to which, far from being distinct from its body, self and body are in fact identical. On this account, the only sense in which each of us has a body is that each of us is a body.<sup>2</sup> A third view is constitutionalism. This says that a (human) person is constituted by a human body without being identical to the constituting body. For the constitutionalist, the relation between person and body is like the relation between Michelangelo's David and the piece of marble that constitutes it.<sup>3</sup>

Both dualists and constitutionalists think that the identity conditions for persons are different from those for bodies and that it is metaphysically possible for a person to have different bodies at different times. If this is a genuine possibility then an obvious question is: what makes a particular body mine? To answer this question is to specify criteria of embodiment. On one account, the criteria of embodiment are both volitional and sensory. A person is volitionally embodied in a particular body B only if his or her volitions produce movements in B that fulfil or conform to those volitions. A person is sensorily embodied in B ‘to the extent that the interactions of that body with its surroundings produce in the person sense-experiences corresponding to, and constituting veridical perceptions of, aspects of those surroundings’ (Shoemaker 1984a: 117).

A related consideration is that people are normally aware of their own bodies “from the inside”, in a way that they are not aware of any other person’s body.<sup>4</sup> One might think that one’s own body just is the body that one is aware of from the inside.<sup>5</sup> More cautiously, it might be proposed that for a body to be one’s own body it is at least necessary that one is aware of it from the inside. This criterion of embodiment faces some serious challenges. If, as seems plausible, proprioceptive awareness of one’s present bodily position and posture is a key element of one’s awareness of one’s own body from the inside then what are we to make of those unfortunate individuals who, as a result of illness or injury, have lost much of their proprioceptive awareness of their own bodies?<sup>6</sup> In such cases, there is little inclination to say that the body that the individual used to be aware of from the inside is no longer her body.

Even if one is not satisfied by the idea that awareness of one’s body from the inside is a criterion of embodiment or regards the search for such criteria as misconceived, it is

still an interesting question how such awareness should be characterized. The issue here is phenomenological rather than metaphysical. The question is:

(P) What is the nature of the awareness that each of us has of his or her own body from the inside?

One issue is whether bodily awareness is a form of perceptual awareness. A related issue is whether it is awareness of one's body as an object, as a subject, or both. From the premise that one's body is an object in space it does not follow immediately that awareness of one's body from the inside is awareness of it as an object. Nevertheless, it is clear on reflection that there is much to be said that for the idea that bodily awareness is awareness of one's body as a bounded spatial object. Does this mean that one cannot be aware of one's body as a subject or, to put it another way, that bodily awareness is not self-awareness? The assumption that awareness of something as an object is incompatible with awareness of it as a subject is open to question but even without this assumption the proposal that bodily awareness is self-awareness runs into serious difficulties. What is hard to dispute, however, is that to be aware of a particular body from the inside is to be aware of it as one's own body. This sense of ownership is something that a satisfactory response to (P) might be expected to acknowledge and explain.

To talk about the nature of bodily awareness is to invite questions about the nature of bodily knowledge. In its most general form, the epistemological question is:

(E) What, if anything, is special about the knowledge we have our own bodies?

One suggestion is that we have ways of gaining knowledge of our own physical states and properties that give rise to the phenomenon of immunity to error through misidentification relative to the first person.<sup>7</sup> To get a fix on this phenomenon, suppose that I feel pain and

judge on this basis that I am in pain. The sense in which this judgement is immune to error through misidentification is that the following is not possible: I know that someone is in pain but my judgement is mistaken because, and only because, the person I know to be in pain is not me. Now compare the proprioceptively based judgement 'My legs are crossed'. It is not possible that this judgement is expressive of the knowledge that someone's legs are crossed but is mistaken because, and only because, the individual whose legs I know to be crossed is not me. One of the major challenges facing a philosophical account of our bodily knowledge will be to explain the immunity to error through misidentification of such bodily self-ascriptions.<sup>8</sup>

While (M), (P) and (E) are not unconnected, we will proceed by considering each of them in more depth in the next three parts. In the concluding part, the focus will be on the importance of embodiment. The issue here is whether cognition can properly be understood as anything other than embodied. It seems compelling that 'embodiment plays a central role in structuring experience, cognition, and action' (Gallagher 2005: 136). Indeed, one might go further and claim that embodiment is what makes cognition possible. If this is right then it tells us something important about the 'self'. For if the self is that which perceives, acts, and thinks, and perceiving, acting, and thinking must understood in bodily terms, then the metaphysical lesson is obvious: the self is, first and foremost, an embodied self.

## 2. The Body and the Self

Am I identical with my body? If not, can I exist without having a body? Descartes thinks that the answer to both questions is 'yes'. Many philosophers who are not dualists still believe that Descartes is right on both counts. On the distinctness of self and body, consider the following simple argument: when I die I cease to exist but my body does not

cease to exist.<sup>9</sup> So I am not identical with my body, and the continued existence of my body is not sufficient for my own continued existence. Call this the argument from death for the thesis that I and my body are not identical. It is also plausible, many believe, that the continued existence of my body is not necessary for my continued existence. Suppose that my brain is removed from my body, which is subsequently destroyed, and transplanted into my best friend's debrained body. The resulting person would not just be (let us assume) psychologically continuous with me. The resulting person would be me, but I would have a different body from the one I had previously. What was once my body (the one from which my brain was removed) no longer exists but I still exist, so I could not have been identical with that body and am not identical with my new body. Call this the argument from bodily transfer for the non-identity of self and body.<sup>10</sup> Now consider this variation on the argument from bodily transfer: my brain is removed from my skull and kept alive and conscious in a vat of nutrients. My body is destroyed. On one view, I still exist even though I no longer have a body. In this scenario, I can truly think "I no longer have a body".<sup>11</sup> So it is not just that the continued existence of my body is not necessary for my continued existence. It is also the case that I can exist without having a body. Call this the brain in a vat argument for the possibility of disembodied existence.

Cartesian dualism explains the alleged fact that an embodied person is not identical with his body and can exist without a body on the basis that the person, or at any rate the self, is an immaterial substance, a soul. The coherence of this approach has been questioned on the basis that it is not possible to specify criteria of singularity and identity for souls and that this makes all talk of such entities unacceptable.<sup>12</sup> In response, Descartes might question the claim that it is illegitimate to posit souls in the absence of informative general

criteria of singularity or identity. As long as each of us is directly aware of his or own singularity and identity the absence of criteria does not matter. It is questionable, however, that there is any such consciousness of one's own identity as an immaterial thinking substance. In addition, the positing of souls might be questioned on the basis that if we think of the world as causally closed then there will not be any room in it for a 'separate realm of mental substance that exerts its own influence on physical processes' (Chalmers 1996: 124-5).

If we are satisfied that Cartesian dualism is no longer a serious option how can we still agree that a person is distinct from his body and can exist without it or, indeed, without any body? As Shoemaker observes, any account of personal identity which allows for the possibility of bodily transfer is incompatible with the view that a person is simply identical with his body, but the thesis that a person is not identical to his body 'gives no support to dualism and is in fact perfectly compatible with a materialist view of the world' (1984b: 106). It is perfectly compatible with the view that mental states are realized in, or at least supervenient on, states of the brain. Neither the argument from bodily transfer nor the brain in a vat argument implies that I am an immaterial thing or that a person's mental states are realized in states of an immaterial substance.

What, then, is the relation between a person and his or her body? Constitutionalism holds that this relation is 'simply an instance of a very general relation: constitution' (Baker 2000: 27). A human person is constituted by a human body, and if x constitutes y at any time, then x is not identical to y. The constitution view is still a form of materialism. It can 'agree to many claims dear to dualists' (Baker 2000: 217) without positing immaterial souls. On the issue of whether a human person is identical to his or own body and whether

such a person can survive a complete change of body the constitutionalist and the dualist are in complete agreement even though they explain the non-identity of person and body and the possibility of bodily transfer in quite different ways. Constitutionalism is a form of materialism.<sup>13</sup>

It is only an argument in favour of the constitution view that it can give dualists so much of what they say they want if dualism's desiderata are reasonable. Those who think that people are identical with their bodies do not accept these desiderata and are sceptical about the various arguments in favour of the view that a person is not identical to his or her body. Take the argument from death. Unless my death is extremely violent my body will not go out of existence when I die. It only follows that I am not identical with my body if it is true that I will go out of existence when I die. But is this true? As Judith Jarvis Thomson asks:

Don't people who die in bed just become dead people at the time of their deaths? Cats who die in bed become dead cats at the time of their deaths; why should it be thought otherwise in the case of people? Can't there be some dead people as well as dead cats after the roof falls in? The answer is surely that there can be (1997: 202).

If there is anything in what Thomson says in this passage then the argument from death is inconclusive.

The same goes for the argument from bodily transfer. Suppose that scientists invent a brain-state transfer device which can record the state of one brain and imposes that state on a second brain.<sup>14</sup> One day my wife is kidnapped by someone who, having access to a brain-state transfer device, records the state of his own brain and imposes it on my wife's brain. There is then a shoot-out in which, as we would say before we know the full facts of

the situation, the kidnapper is killed and my wife is rescued. Even if the person who was rescued thinks that she is the kidnapper would we really say, even after discovering what happened with the brain-state transfer device, that this person is the kidnapper in my wife's body? Would we not think that my wife survived and that, as a result of what the kidnapper did to her, she is under the illusion that she is the kidnapper?<sup>15</sup> In this case, there is no brain transplantation but if the fact that the rescued individual is psychologically continuous with the kidnapper does not make it true she is the kidnapper then it is not at all clear why we should take a different view of the case in which this psychological continuity obtains as the result of a brain transplant. If my wife has had her brain removed from her skull and the brain of the kidnapper transplanted into her skull then I might reasonably think that something quite terrible has happened to her but deny that the terrible thing that has happened to her is that she has been killed. She has been psychologically mutilated but when she says after the rescue that she kidnapped someone yesterday she says something false. She is the victim rather than the perpetrator of the crime; the kidnapper has not survived in my wife's body.

Animalism is the view that we are identical with certain human animals.<sup>16</sup> The sense in which I am identical with a certain human animal H is not that I share my matter with H but that I am identical with H. On this account, the sense in which it is my wife rather than the kidnapper who has survived the shoot-out is that the animal with which my wife is identical has survived the shoot-out. The fact that an animal's brain has been tampered with by a brain-state transfer device does not mean that the animal no longer exists. If I am an animal, and it is true that an animal cannot change bodies, then I cannot change bodies. If animals cannot be disembodied then I cannot be disembodied. If my brain is removed from



my skull and kept alive in a vat of nutrients while the rest of my body is destroyed the animal that is located where I am presently located ceases to exist. If that animal ceases to exist then I cease to exist. Even if it makes sense to suppose that my disembodied brain can think, the survival of my brain is insufficient for my survival.

As P. F. Snowdon observes, 'it is an open question what the relation is between an animal and its body' (1995: 71). While even animalists may be reluctant to say that an animal is identical with its body, there is little doubt that certain bodily continuities are sufficient for the survival of the animal. The hard question for the animalist is whether bodily continuity is necessary for the survival of the animal and, if so, what kind of bodily continuity. In the case in which my brain is transplanted into my friend's debrained body, with the rest of my body being destroyed, it looks as though this amounts to the destruction of the animal with which I am identical. The survival of this animal requires more than the survival of one of its organs, its brain. The animalist must therefore resist the characterization of such cases as ones in which the person goes with the brain. From an animalist perspective, the intuition that we can change bodies is deviant unless human animals can change bodies.<sup>17</sup> We are, in fact, bodily beings and, as Descartes recognized, we are presented to ourselves as such. The next question, therefore, is: what is involved in our being aware of ourselves as bodily beings?

### 3. Bodily Awareness

What is the nature of the awareness that each of us has of his or her own body? To see oneself in a mirror is to be aware of one's own body but this is not the kind of bodily awareness that led Descartes to say that the experienced relation between body and self is not like the relation between a pilot and his ship. To make sense of Descartes' remark it has

to be recognized that each of us is normally aware of his or her own body from the inside. Such awareness takes many different forms. For example, most of us can tell, without looking, whether we are moving or not, or whether our legs are crossed. The source of this kind of non-visual knowledge of bodily posture and movement is proprioception.<sup>18</sup> In Gallagher's terminology, subpersonal proprioceptive information updates the motor system with respect to the body's posture and movement and is the basis for proprioceptive awareness. The latter is a 'self-referential, but normally pre-reflective, awareness of one's own body' (2005: 73). The body of which one is proprioceptively aware is given to one as one's own body. In being proprioceptively aware that one's legs are crossed one is not normally aware of the position of a pair of legs in a way that leaves it open whether the legs in question are one's own. Proprioceptive awareness of one's body is awareness of it "from the inside". It is a cognitive relation to one's body that is not like the relation between pilot and ship.

Bodily sensation is another important aspect of bodily awareness. To feel a pain in one's foot is to perceive one's own body.<sup>19</sup> It is my foot that feels a certain way when I feel a pain in my foot, and in feeling a pain in my foot I am aware of the foot as a part of my own body. A sense of ownership is built into the phenomenology of this type of bodily awareness, and one question that has been raised is whether everything that one feels in this way must be a part of one's own body. M. G. F. Martin draws a useful contrast in this connection between what he calls the 'sole-object' and the 'multiple-object' views of bodily awareness. The former says that 'bodily sensations, together with kinaesthesia, proprioception, and the vestibular sense, amount to an awareness of one's body that is only of one's own body and its parts' (1995: 273). In contrast, while the multiple-object view

grants that sensation gives one awareness of body parts it maintains that 'it is merely a contingent matter that one comes to be aware only of one's own body parts in this way and that it is quite conceivable that one could be aware of parts of others' bodies in the same way' (1995: 274).

Consider the following argument in support of the multiple-object view: imagine that it feels to me as if there is a pain in my left hand but that, when asked where it hurts, I indicate my neighbour's hand. This would surely be a case in which sensation is providing me with awareness from the inside of a part of someone else's body. If such a thing is conceivable, then we might conclude that what the multiple-object view is right to insist that it is merely contingent that sensation only gives us awareness of our own body parts. The question, however, is whether in the example just given it would be correct to say that one should be regarded as having genuinely perceptual awareness of a body part that is not one's own. On the sole-object view I do not count as perceiving my neighbour's hand in the case described even if I am hooked up to it by a radio transmitter. The proposal is that bodily experiences of parts of other people's bodies are illusory or hallucinatory and that it is a necessary condition for a subject to perceive a body part that the part in question is a part of the subject's body.<sup>20</sup>

A further potential difficulty for the sole-object view is suggested by Shoemaker's observation that 'ordinary modes of perception admit our perceiving, successively or simultaneously, a multiplicity of different objects, all of which are on a par as non-factual objects of perception' (1994b: 126). Given that one's own body is the only body that one can be aware of from the inside, how can it be right to characterize such awareness as genuinely perceptual? More generally, isn't the very idea of sole-object perception absurd?

Only if what Shoemaker says is true of ordinary modes of perception is necessarily true of any form of awareness that deserves to be called perceptual. On a more liberal conception, perceptual awareness is fundamentally a sort of awareness in which objects are presented, it provides knowledge of the presented object, and the knowledge that it provides is grounded in sensation. On each of these counts, bodily awareness comes out as a form of perceptual awareness even if the fact that it is restricted to one object means that it is not perception in the ordinary sense.

The sense in which bodily awareness involves the presentation of an object is not just that one's body is an object but that one is aware of it as an object. It is presumably a sufficient condition for one to be aware of something 'as an object' that one is aware of it as a material object. To be aware of something as a material object is to be aware of it as having shape, extension and solidity. In Locke's terms, it is to be aware of it as possessing primary qualities. The first thing to notice about the awareness we have of our own bodies is that it involves having a sense of the shape of our bodies. To have a sense of the shape of one's body is, in turn, to have a sense of its boundaries, a sense of where it ends and the rest of the world begins. In addition, awareness of one's own body from the inside is awareness of it as extended in space, as three-dimensional. Finally, there is also the sense of one's body as solid, that is, as occupying a region of space. Touch and movement provide us with access to the solidity of other bodies, and are bound up with a sense of the solidity of one's own body. There is no better way of becoming aware of the solidity of one's own body than literally to bump into someone else or something else. In each of these respects, awareness of one's own body from the inside is awareness of it as an object.

Is bodily awareness a form of self-awareness? If self and body are identical then it follows that awareness of one's body is in fact awareness of oneself. However, this is not what those who think that bodily awareness is self-awareness have in mind. Their idea is that bodily awareness is self-awareness to the extent that it is awareness of one's body qua subject.<sup>21</sup> Specifically, the suggestion is that bodily awareness fulfils the necessary and sufficient conditions for a form of awareness to count as awareness of something qua subject. Suppose that the conditions for awareness of something qua subject are that it is:

- (a) Awareness of it as one's point of view on the world.
- (b) Awareness of it as the bearer of one's sensations and other mental states.
- (c) A form of awareness which does not allow for misidentification.

If it true that these conditions are sufficient and that bodily awareness satisfies all of them then there would be no reason not to count such awareness as self-awareness.<sup>22</sup> The problem is that it is doubtful whether the proposed conditions are sufficient and it is not clear, in any case, that bodily awareness satisfies all of them.

A way of defending (a) would be to stress the perspectival nature of perception. When one perceives objects other than oneself one perceives them as standing in spatial relations to one's body. The spatial content of perception is, in this sense, egocentric, and one's body 'functions as the absolute point about which spatial relations are experienced as orientated' (Bell 1990: 210).<sup>23</sup> It might be held that for one's body to function in this way just is for one to be aware of it as one's point of view on the world. In vision, however, it is only a part of the body – the head - that serves as the point about which spatial relations are experienced as orientated, and a different story will need to be told about the egocentric spatial content of tactile perception. In addition, the fact that objects are perceived as

standing in spatial relations to a specific body part does not seem sufficient to justify the claim that one is aware of that part as one's point of view on the world, especially if that body part can itself be perceived. When one perceives a part of one's own body one is aware of it not as one's point of view on the world but rather as something on which one has a point of view.

The most that can be said in favour of (b) is that we are conscious of our sensations as having bodily locations. As Brewer writes, 'we cannot get away from the fact that bodily sensations immediately appear as determinately located not only in egocentric space but also in specific body parts filling those locations' (1995: 299). Does this mean that one is aware of one's body as a 'bearer of sensations' (Husserl 1989: 168)? One might think that there is a gap between the idea that one's sensations present themselves as having a bodily location and the idea that one's body is their presented subject. Even if no such gap exists there is still the question of whether the body is the apparent bearer of other mental states. Whatever there is to be said for the idea that the body is the presented subject of sensation it is harder to make anything of the proposal that it is the presented subject of belief. Beliefs do not appear to have bodily locations in the way that sensations do, and this puts further pressure on the idea that bodily awareness is awareness of one's body qua subject.

The issue of immunity to error through misidentification will be taken up below. If bodily self-ascriptions that are based on awareness of one's body from the inside enjoy this kind of immunity<sup>24</sup> then (c) looks in somewhat better shape than either (a) or (b). However, the significance of this point should not be exaggerated. For the immunity to error through misidentification of some bodily self-ascriptions is not sufficient to justify the proposal that the awareness on which they are based is awareness of one's body qua subject. Immunity to

error through misidentification is a relatively widespread phenomenon. Demonstrative judgements like “This is red” enjoy such immunity even though the perceptual awareness on which such judgements are based is not awareness of anything qua subject.

Even if bodily awareness could be shown to satisfy (a), (b) and (c) there would still be doubts about the idea that bodily awareness is self-awareness. As Martin notes, ‘if it is at least open to the subject to wonder whether the object that she is presented with in bodily sensation is not herself but rather only an object closely associated with herself, then that object cannot be presented to her as being the self’ (1995: 284). It makes sense for one to wonder whether the object one is presented with in bodily sensation is oneself because even if the two coincide they do not coincide a priori. To make this vivid, suppose that object of bodily sensation or awareness includes an artificial limb. In this case the question whether the object of one’s bodily awareness is oneself would not be confused. Indeed, if one is identical with one’s physical body then the answer to this question is actually ‘no’, at least on the reasonable assumption that a prosthetic limb is not strictly speaking a part of one’s physical body.

A related consideration is this: suppose that awareness of one’s own body from the inside is, as the discussion so far suggest, awareness of it as an object. In that case, it might be thought to follow almost immediately that it is not awareness of one’s body qua subject. This assumes that awareness of something as an object and awareness of it qua subject are incompatible modes of awareness.<sup>25</sup> We might call this position incompatibilism. On this account, ‘bodily awareness can be of both kinds – awareness qua subject, awareness as an object’ but ‘it cannot be both at once’ (Longuenesse 2006: 296). To put it another way, the

body is either ‘a thing among other things, or it is that by which things are revealed to me’ but ‘it cannot be both at the same time’ (Sartre 1989: 304).

In contrast, compatibilism is the view that one can be simultaneously aware of one’s body both as subject as an object. To be aware of one’s body in both of these modes is, in Merleau-Ponty’s suggestive terminology, to be aware of it as a ‘subject-object’ (1989: 95).<sup>26</sup> The body that is the presented subject of experience and sensation is not a mere body, a piece of inanimate physical matter, but an animated, living body, a point of occupancy for psychological properties.<sup>27</sup> A mere body can neither be, nor be presented as being, a self or subject. But once we think in terms of the living body, the idea that such a thing can appear in consciousness both as subject and as object should begin to strike us as less mysterious.

One way of arguing for incompatibilism would be to note that the sort of awareness in which objects are presented involves the exercise of ‘a capacity to keep track of a single thing over a period of time – that is, an ability, having perceived an object, to identify later perceptions involving the same object over a continuous period of observation’ (Evans 1982: 175). In contrast, awareness of oneself qua subject does not involve the exercise of any such ability. Suppose that I judge that ‘I am now F’ and judge a few moments later ‘I was F’. If this transition is to be expressive of awareness of oneself qua subject, one would expect ‘the later dispositions to judge to flow out of the earlier dispositions to judge without the need for any skill or care (not to lose something) on the part of the subject’ (Evans 1982: 237). Since it cannot be the case that a given form of awareness both does and does not involve keeping track there can be no such thing as awareness of something qua subject as an object.<sup>28</sup>



Now imagine that I am disposed to judge at one time that I am standing up and disposed to judge a few moments later that I was standing up. Assuming that the present-tense judgement is proprioceptively based should the later disposition to judge be regarded as flowing out of the earlier disposition without my needing to keep track of my body? This is, in a way, quite plausible. One does not keep track of one's own body in the way that one keeps track of other bodies, and one is not liable to lose track of one's own body in the way in which one is liable to lose track of other bodies. From an incompatibilist perspective this makes it difficult to think of proprioceptive awareness as awareness of one's body as an object and correspondingly easier to think of it as awareness of one's body qua subject. Yet there are also conditions on awareness of the self qua subject that bodily awareness does not satisfy. Strictly speaking, therefore, bodily awareness is neither awareness of oneself as an object nor awareness qua subject. This puts paid to compatibilism: if bodily awareness is neither awareness of oneself as an object nor awareness of oneself qua subject then it can hardly be both awareness of oneself as an object and awareness of oneself qua subject. Bodily awareness is sui generis, and this accounts for the failure of attempts to assimilate it to other more familiar forms of awareness.

#### 4. Knowing One's Own Body

According to Descartes, the mind is better known than the body. Introspective knowledge of one's mental properties is epistemically privileged in ways that distinguish it from the knowledge that one may have of one's physical properties. Among the supposed epistemic privileges of introspection are infallibility and incorrigibility. If I judge that I am in pain then my judgement is immune to error and to correction. In addition, introspective knowledge is knowledge of facts that are in some sense self-intimating. I cannot be in pain

without realizing that I am in pain, at least on the assumption that I am attentive and have the concept of pain. So when it comes to introspective knowledge of one's own mind both error and ignorance are ruled out. In contrast, neither error nor ignorance is ruled out in relation to one's bodily properties, whether the properties in question are properties of one's own body or of a body that is not one's own. For example, my judgement that my legs are bent can be mistaken, and my legs can be bent without my realizing it. I might wake up from an operation in which my legs have been amputated and mistakenly judge that my legs are bent because it feels as if they are. In this case, there is no question here of my judgement being either infallible or incorrigible.

One question that has been raised about these claims is whether they exaggerate the epistemic privileges of introspective knowledge. We can agree that this kind of knowledge has a special authority without agreeing that it is infallible or incorrigible, or that mental properties are self-intimating.<sup>29</sup> A more pertinent question for present purposes is whether the Cartesian picture of self-knowledge underestimates the epistemic privileges of bodily self-knowledge. When I judge that my legs are bent, it can happen that my judgement is mistaken because my legs are not bent. Can it happen that my judgement is mistaken because, although I know that someone's legs are bent, the person whose legs I know to be bent is not me? If the judgement is based on vision then such a mistake cannot be ruled out. In contrast, if the judgement is based on proprioception then there is a strong case for thinking that it is immune to error through misidentification relative to the first-person pronoun. As Evans remarks:

[W]e cannot think of the kinaesthetic and proprioceptive system as gaining knowledge of truths about the condition of a body which leave the question of the

identity of the body open. If the subject does not know that he has his legs bent (say) on this basis (...) then he does not know anything on this basis (To judge that someone has his legs bent would be a wild shot in the dark) (1982: 221).

We can see the force of this observation by considering the possibility that my brain is hooked up to someone else's body in such a way that I am registering information from that other body. When that body's legs are bent it feels to me as if my legs are bent. If I then judge on this basis that my legs are bent is my judgement at least expressive of the knowledge that someone's legs are bent, even if I am not the person whose legs I know to be bent? If, as suggested above, bodily experiences of parts of other people's bodies are illusory, then we should resist this characterization of the case. I cannot be said to know that someone's legs are bent on the basis of an illusion. So the fact that such illusions are possible does not show that proprioceptively based bodily self-ascriptions are not immune to error through misidentification.

What explains this immunity? One explanation is that it is a condition or criterion of embodiment in body B that (i) one has proprioceptive and other ways of coming to know about the position and movement of B, and (ii) that these ways of coming know to give rise to first-person judgements that are immune to error through misidentification relative to the first person. On this account, 'my body is the one of which I gain knowledge in the non-inferential ways described by Evans' (Peacocke 2008: 100). This approach will be appeal to those who think that body and self are not identical, and that it is a genuine question what makes a particular body mine. If I am identical to my body then this question does not arise in the same way. In that case, an alternative explanation of immunity to error through misidentification would be one that sees this phenomenon as a reflection of the constraints

on first-person thought rather than as flowing from supposed conditions on “ownership” of a particular body. First person thinking requires the conception of oneself as a bodily being, and to have this conception is for one to have ways of gaining knowledge of one’s bodily properties that do not leave open the question of the identity of the body.

### 5. The Significance of Embodiment

Can cognition properly be understood as anything other than embodied? If not there would be no better way of bringing out the significance of embodiment for a proper understanding of cognition. The claim that cognition must be understood as embodied can be defended by focusing on the idea that perception must be embodied. For if there is no such thing as disembodied perception, then there is no such thing as disembodied cognition, at least on the assumption that perception is the most basic form of cognition. What is now needed, therefore, is an answer to two questions: in what sense is perception embodied, and what is wrong with the idea of disembodied cognition?

A controversial answer to both questions is suggested by what Alva Noë calls the ‘enactive approach to perception’. This says that perceiving is something we do rather than something that happens to us. The world ‘makes itself available to the perceiver through physical movement and interaction’ (2004: 1). Only a creature with bodily skills can be a perceiver, and perception is not a process in the brain but ‘a kind of skilful activity on the part of the animal as a whole’ (2004: 2). If perception is constituted by our possession and exercise of bodily skills then it may also depend on our possession of the sort of bodies that can encompass or sustain such skills: ‘to perceive like us, it follows, you must have a body like ours’ (2004: 25).

One argument for the enactive approach appeals to the phenomenon of experiential blindness. This type of blindness is not due to the absence of sensation but to an inability to integrate sensory stimulation with patterns of movement and thought. The existence of experiential blindness provides evidence for the enactive approach because it shows that in order to see one needs ‘implicit practical knowledge of the ways movement gives rise to changes in stimulation’ (2004: 8). A creature that lacks this sensorimotor knowledge is to all intents and purposes blind in the experiential sense. This is not to claim that paralysis is a form of blindness. Quadriplegics can see but then they also have the pertinent skills. They can still move their eyes and head, and their condition does not deprive them of a practical understanding of the significance of movement for stimulation.

On one reading of the enactive approach, the dependence of perception on bodily skills or sensorimotor knowledge is merely causal. On a stronger reading, the dependence is constitutive.<sup>30</sup> On this reading, perception is a skilful activity. Either way, perception depends on embodiment. To conceive of a disembodied being is to conceive of a being with no sensorimotor knowledge and no bodily skills. Such a being could not be a perceiver and its knowledge of the world could not be perceptual knowledge. More cautiously, it would not be possible for a disembodied being to perceive the world in anything like the way that we perceive the world.

Another way of bringing out the significance of embodiment for perception and so for cognition more generally would be to adopt Gallagher’s distinction between body image and body schema. There are at least two questions in relation to which this distinction serves a useful purpose:

1. To what extent, and in what way, does one's body appear as part of one's perceptual field?
2. To what extent, and in what way, does one's body constrain or shape the perceptual field?

The concept of the body image bears on the first of these questions whereas the concept of the body schema bears on the second. A body image 'consists of a system of perceptions, attitudes, and beliefs pertaining to one's own body' (Gallagher 2005: 24). The body image includes one's perceptual experience of one's body, one's conceptual understanding of bodies in general, and one's emotional attitude towards one's own body. The body schema, in contrast, is not a set of perceptions, beliefs, or attitudes. It is a 'system of sensory-motor capacities that function without awareness or the necessity of perceptual monitoring' (2005: 24). It structures consciousness without showing up in the contents of consciousness. It is responsible for processing new information about posture and movement and can also be seen as a set of motor programmes or habits, such as those involved in walking, reaching and swallowing. It is one's body schema rather than one's body image that allows one to walk beneath a low-hanging tree branch without bumping one's head.

The value of the distinction between body image and body schema can be brought out by considering cases in which the two become dissociated. On the one hand, there are cases of unilateral neglect in which a stroke patient disowns, say, an arm which continues to be used to dress, walk and eat. In this case the patient's body schema is intact but there are problems with the body image. On the other hand, there are cases of deafferentation in which the patient has no sense of touch or proprioception below the neck. Here it is the body schema rather than the body image which has gone missing. In one well-documented

case, the patient was still capable of controlled movement but only by means of a ‘partial and imperfect functional substitution of body image for body schema’ (Gallagher 2005: 44).<sup>31</sup>

These reflections on the significance of embodiment for perception and action tell us something important about ‘the self’. They suggest that the fantasy of a disembodied self is just that: a fantasy. For it is important to remember that ‘self’ is not normally used as a sortal noun. We might ask how many people there are in a particular room but not how many selves there are. ‘Self’ is, in this respect, more like a formal concept, and the point of talking about the self or subject is to identify a locus of thought, perception and action. Yet perception and action require embodiment, and thought is inseparable from perception and action. So if the self is that which perceives, thinks, and acts then the self is, above all, an embodied self.

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<sup>1</sup> Descartes sets out his views on the relation between mind (self) and body in his Meditations on First Philosophy (Descartes 1996). See, especially, the Sixth Meditation, where he makes the point that the relation between self and body is unlike the relation between a pilot and his vessel.

<sup>2</sup> For a defence of this view see Williams 1973 and Thomson 1997.

<sup>3</sup> See Baker 2000 for an exposition and defence of constitutionalism or what she calls the ‘Constitution View’.

<sup>4</sup> Cassam 1995 and Martin 1995 both contain detailed discussions of this form of bodily awareness.

<sup>5</sup> In the terminology of Cassam 1995 this would be an ‘idealist’ conception of body ownership. Locke appears to be an idealist in this sense in Book 2, chapter 27 of his Essay Concerning Human Understanding (Locke 1975).

<sup>6</sup> See the case study in Cole 1991.

<sup>7</sup> The idea that some first-person judgements are immune to error in this sense is associated, above all, with Sydney Shoemaker. Shoemaker 1994 contains the classic account of this phenomenon. See Pryor 1999 and Campbell 2004 for further discussion.

<sup>8</sup> The claim that some bodily self-ascriptions are immune to error through misidentification relative to the first person is associated, above all, with Gareth Evans. See Evans 1982: 220-24.

<sup>9</sup> Unless my death is extremely violent.

<sup>10</sup> See Book 2, chapter 27 of Locke’s Essay for a version of this argument. Shoemaker’s ‘Brownson’ case makes the same point. If Brown’s brain is removed from Brown’s body and transplanted into Robinson’s debrained skull in such a way that the resulting person –

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Brownson- is psychologically continuous with Brown it is hard to resist the conclusion that Brownson is the same person as Brown even though they have different bodies. See Shoemaker 1984b: 78.

<sup>11</sup> This example is taken from Peacocke 2008: 98.

<sup>12</sup> This is Strawson's objection to Cartesian dualism. See Strawson 1974 and Cassam 2008 for further discussion.

<sup>13</sup> According to Baker, 'although it may be empirically impossible for me to have a complete change of body, the Constitution View raises no theoretical barrier to a human person's having a complete change of body' (2000: 218).

<sup>14</sup> The idea of a brain-state transfer device is used by Shoemaker (1984b: 108-111) to make a point about personal identity.

<sup>15</sup> Paul Snowdon makes substantially the same point. See Snowdon 1995: 77.

<sup>16</sup> Snowdon 1990 is a classic paper in defence of animalism.

<sup>17</sup> See Snowdon 1991 for further discussion of this point.

<sup>18</sup> 'Proprioception is the bodily sense that allows us to know how our body and limbs are positioned' (Gallagher 2005: 43).

<sup>19</sup> This assumes the correctness of a perceptual model of sensation. See Martin 1995 for further discussion and references.

<sup>20</sup> This proposal is defended in Martin 1995.

<sup>21</sup> See Cassam 1997 for a defence of this view.

<sup>22</sup> This is the basis on which Cassam 1997 argues for the view that bodily awareness is self-awareness.

<sup>23</sup> Bell is here describing Husserl's view. See Husserl 1989: 166.

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<sup>24</sup> For further discussion of the immunity to error through misidentification of demonstrative judgements see Evans 1982: 179-91.

<sup>25</sup> For further discussion see Cassam 1997: 68-73.

<sup>26</sup> Cassam 1997 defends a form of compatibilism.

<sup>27</sup> The distinction between a mere body and a living body corresponds to Husserl's distinction between der Körper and der Leib. For a useful account of this distinction see the Translators' Introduction to Husserl 1989: xiv.

<sup>28</sup> See Longuenesse 2006 for further discussion.

<sup>29</sup> We might think, for example, that the special authority of self-knowledge consists in its not being based on evidence. See Moran 2001 and McDowell 2006.

<sup>30</sup> See Block 2005 for a discussion of the importance of distinguishing clearly between these two versions of the enactive approach.

<sup>31</sup> This is the case of Ian Waterman, vividly described in Cole 1991.