CAN ANOSOGNOSIA VINDICATE TRADITIONALISM ABOUT SELF-DECEPTION?

José Eduardo Porcher – PhD. Federal University of Rio Grande do Sul, Porto Alegre, Brazil.
E-mail: jeporcher@gmail.com

The traditional conception of self-deception takes it for an intrapersonal form of interpersonal deception. However, since the same subject is at the same time deceived and deceived, this means attributing the agent a pair of contradictory beliefs. In the course of defending a deflationary conception of self-deception, Mele (1997) has challenged traditionalists to present convincing evidence that there are cases of self-deception in which what he calls the dual belief-requirement is satisfied. Levy (2009) has responded to this challenge affirming that there is at least one real cases of self-deception that meets this requirement, namely, that of anosognosia. In this family of conditions, the patient apparently believes that there is nothing wrong with her while, at the same time, providing behavioral cues that indicate that the patient is somehow aware of his disease. If Levy is right, then traditionalism about self-deception could be vindicated, after having been widely abandoned due to its need to postulate exotic mental processes in order to make sense of the attribution of contradictory beliefs. In this paper, I assess whether Levy's response to Mele's challenge is successful by analyzing his interpretation of the empirical evidence to which he appeals. Finally, I attack the cogency of the underlying commitments about the nature of folk psychology to which one is required to defer in order to draw from conflicting evidence the attribution of contradictory beliefs.
***Key words*:** self-deception. anosognosia. belief. contradictory beliefs. folk psychology.

Introduction

Self-deception is a psychological phenomenon with which every human being is familiar. Since the definition of self-deception is precisely one of the points of contention in the philosophical literature, one might as well begin by first determining the reference of the concept. There is no shortage of examples, but maybe it will help if we confine ourselves to those which are relatable and less intricate. Consider the following representative case:

> Ann is dying of cancer and is aware of many facts, such as her long, steady decline, pointing to this outcome, though no one has told her that her case is terminal and she has avoided letting her doctor give her a prognosis. Suppose further that she talks of recovery and discusses her various plans for the long future ... the facts pointing to her death are not unmistakably prominent and her talk of recovery is apparently sincere ... she has better than average medical knowledge ... [but] (among other things) ... her talk of recovery lacks full conviction (or exhibits too much apparent conviction), and ... is often followed by depression or anxiety [Audi, 1982:134].

Despite our familiarity with this type of situation, and although the folk-psychological concept of self-deception (or its equivalents, such as fooling oneself, lying to oneself, etc.) is used by us every day, we have yet to come up with a consensual cha-

racterization of the phenomenon. This is due to the fact that, though the phenomenon is straightforward enough, there seems to be something amiss with the very idea of deceiving oneself. This puzzle gave rise to a specialized debate with the translation of Jean-Paul Sartre's *Being and Nothingness* into English. In his discussion of "bad faith," Sartre recognizes and elaborates on the apparent contradiction involved in self-deception:

> I must know in my capacity as deceiver the truth which is hidden from me in my capacity as the one deceived. Better yet, I must know the truth very exactly in order to conceal it more carefully–and this not at two different moments, which at a pinch would allow us to reestablish a semblance of duality–but in the unitary structure of a single project (1949/1957, p. 49):

So the very word 'self-deception' carries with it an air of impossibility if we take it to mean exactly what it seems to mean. On close inspection, two puzzles arise from a literal interpretation of the word, each of which is derived from one of two lexical assumptions:

1. By definition, person *A* deceives person *B* (where *B* may or may not be the same person as *A*) into believing that *p* only if *A* knows, or at least believes truly, that not-*p* and causes *B* to believe that *p*.
2. By definition, deceiving is an intentional activity: nonintentional deceiving is conceptually impossible [Mele, 2001: 6].

The first puzzle, often called the *static puzzle*, concerns the possibility of the mental state that the first lexical assumption entails, namely, the possession of contradictory beliefs. The second puzzle, often called the *dynamic puzzle*, concerns the possibility of the project that the second lexical assumption entails, namely, intentionally keeping from oneself something that one believes. For the remainder of this paper, I will deal with the first of these difficulties.

There have been two main proposed approaches to the static puzzle. The first one takes 'deception' literally, declaring self-deception to be a form of *intra*personal deception. I will refer to this as *traditionalism about self-deception*. Insofar as traditionalism entails that the belief that p and the belief that not-p coexist in the mind of the self-deceived, the static puzzle must be solved. The solutions proposed by traditionalists such as David Pears (1984) and Donald Davidson (1985) rest on the Freudian idea that the best way to account for the phenomenon is to somehow *split* the person. Pears's proposed solution is the most radical of these:

> [There is a] subsystem ... built around the nucleus of the wish for the irrational belief and it is organized like a person. Although it is a separate center of agency within the whole person, it is, from its own point of view, entirely rational. It wants the main system to form the irrational belief and it is aware that it will not form it, if the cautionary belief [i.e., the belief that it would be irrational to form the desired

belief] is allowed to intervene. So with perfect rationality it stops its intervention (1984: 87),

It is easy to see how this would solve the pending difficulties. Pears converts the problematic characterization '*A* deceives *A*' that resulted from a literal reading into the non-problematic '*A* deceives *B*,' where *A* and *B* are different subsystems of agency within a reasonably unified system, namely, the person. Because the roles of deceiver and deceived are played by different centers of agency, the aura of paradox disappears. However, this sort of explanation faces its own difficulties. As Mark Johnston (1988: 64) has observed, the traditionalist view replaces a contradictory description of the self-deceiver with one that raises its own host of problems: how can the deceiving subsystem have the capacities to perpetrate the deception? Why should the deceiving subsystem be interested in the deception? Does it suppose that it knows what it is best for the deceived system to believe? Importantly, as Tamar Gendler observes, 'If one of the subpersons (truly) believes that *p* and does not believe that not-*p*, and if that subperson is bothered by this and wishes it were not the case, why would she be find it psychologically fruitful intentionally to bring *someone else* to believe that the opposite?' (2007: 235).

On the other hand, Davidson proposes a functional division that falls short of literally splitting the person into separate centers of agency. His view is that all that is needed is a boundary between conflicting attitudes: there would be no problem in believing contradictory propositions if they didn't come in contact with each other. Davidson claims that it is the drawing of such a boundary between our inconsistent beliefs which constitutes the irrational step involved in self-deception, and that this step is assisted by the nonobservance of Carl Hempel's and Rudolf Carnap's requirement of total evidence for inductive reasoning–a normative principle that enjoins us to give credence to the hypothesis most highly supported by all available relevant evidence when choosing among a set of mutually exclusive hypotheses. Davidson proposes the following conditions under which an agent *A* is self-deceived with respect to a proposition *p*:

> *A* has evidence on the basis of which he believes that p is more apt to be true than its negation; the thought that *p*, or the thought that he ought rationally to believe *p*, motivates *A* to act in such a way as to cause himself to believe the negation of *p* (1985: 88).

Nevertheless, even though Davidson's is a more economical approach to the characterization of the self-deceived than Pears's, both approaches share the assumption that 'self-deception' should be understood literally. However, the 'deception' in self-deception may alternatively be understood as nothing more than a *metaphor* (an observation that originated as early as Canfield and Gustafson, 1962). For proponents of this view, self-deception is not to be understood as a reflexive form of deception, in

much the same way that self-teaching is not understood as a reflexive form of teaching.

The second approach to the static puzzle involves understanding self-deception to be simply a form of motivated irrationality. I will refer to this as *deflationism about self-deception*. Insofar as deflationism maintains that only the false or unwarranted belief exists in the mind of the self-deceived, the static puzzle is apparently bypassed. Deflationists are, however, left with the task of explaining what exactly the mental states involved in self-deception are, and how they are formed and maintained. In other words, their task is explaining what the metaphor stands for. Alfred Mele, the main proponent of deflationism, presents the following set of jointly sufficient conditions for an agent *S* to be self-deceived in acquiring a belief that *p*:

1. The belief that *p* which *S* acquires is false.
2. *S* treats data relevant, or at least seemingly relevant, to the truth value of *p* in a motivationally biased way.
3. This biased treatment is a nondeviant cause of *S*'s acquiring the belief that *p*.
4. The body of data possessed by *S* at the time provides greater warrant for not-p than for *p* (2001: 51).

Although it is certainly not a given that these conditions are indeed jointly sufficient for self-deception to obtain, deflationism has the virtue of at once avoiding the static puzzle and presenting a more parsimonious characterization of the self-deceived.

Mele's challenge and Levy's response

Having advanced the most parsimonious theory of self-deception to date, Mele (1997) challenged traditionalists to provide convincing evidence of the existence of instances of self-deception that satisfy what he calls the *dual-belief requirement*, namely, the requirement that self-deceivers (at some point) simultaneously believe that *p* and believe that not-*p*. Recently, Neil Levy (2009) has responded to Mele's challenge with an attempted demonstration of the satisfaction of the dual-belief requirement. While recognizing that–given that Mele offers merely sufficient (and not necessary) conditions–meeting the challenge would not falsify the deflationary account, Levy points out that, if he is successful, he will have at least undermined the argument from parsimony in favor of deflationism and have strengthened traditionalism insofar as there would not be a need to postulate *ad hoc* exotic mental processes such as the ones invoked by Pears (and, to some extent, Davidson).[1]

[1] However, Levy doesn't aim at vindicating traditionalism entirely, as he doesn't defend intentionalism. What he does intend to do is to 'show that the static puzzle must be solved rather than simply dismissed' (2009: 230).

How may one go about demonstrating that at least some cases of self-deception involve the simultaneous possession of contradictory beliefs? As Levy notes, 'we cannot directly inspect the mind of the self-deceived in order to discover that there are cases where the dual-belief requirement is satisfied' (2009: 230). What one can do is to analyze the evidence available for the attribution of contradictory beliefs to subjects in the grip of self-deception. Levy makes it clear that he thinks that ordinary self-deception may be properly characterized without the attribution of contradictory beliefs, but suggests he is on to at least one case of extraordinary self-deception that does satisfy the dual-belief requirement, making it necessary at least to amend the deflationary account. The case at hand is that of anosognosia.

Anosognosia is a neurological condition characterized by the lack of awareness or the underestimation of a specific deficit in sensory, perceptual, motor, affective or cognitive functioning, brought about by brain dysfunction (Bisiach and Geminiani, 1991; Prigatano, 2010). In the following discussion I will follow Levy and use the term anosognosia to refer to the unawareness of a particular motor deficit, hemiplegia – paralysis of the arm, leg, and/or trunk on the same side of the body – as anosognosia 'has been studied mainly in stroke hemiplegic patients, who may report no deficit, overestimate their abilities or deny that they are unable to move a paretic limb' (Orfei et al., 2007: 3075). The vast majority of cases of anosognosia for hemiplegia follow right-brain injury and thus it is the left side of the patient's body that is usually paralyzed.

What leads Levy to think the case of anosognosia has any significance for the debate on the proper characterization of self-deception is the fact that numerous descriptions and interpretations of the denial, rationalization, and confabulation involved in cases of anosognosia invite comparison with the motivated phenomenon of self-deception. The main source of case reports from which Levy draws comes from Vilayanur S. Ramachandran's studies (1995; 1996). To understand why, according to Levy, it is tempting to see anosognosia as a case of extreme self-deception, let us look at two representative cases. Here is a conversation between one of Ramachandran's patients and himself (Ramachandran and Blakeslee, 1998: 130):

"Esmerelda, how are you doing?"
"I'm fine?"
"Can you walk?"
"Yes."
"Can you use your arms?"
"Yes."
"Can you use your right arm?"
"Yes".
"Can you use your left arm?"?
"Yes, I can use my left arm."

"Can you point to me with your right hand?"

She pointed straight at me with her good right hand.

"Can you point to me with your left?"?

Her left hand lay motionless in front of her?

"Esmerelda, are you pointing?"

"I have severe arthritis in my shoulder; you know that, doctor. It hurts. I can't move my arm now."

On other occasions she employed other excuses:?

"Well, I've never been very ambidextrous, doctor."

Patients of anosognosia are prone to rationalization, making up excuses in much the same way that ordinary people do when self-deceived. This invites not only the comparison with self-deception, but the hypothesis that the neurological mechanisms involved in both phenomena are the same or, at least, somehow related (Hirstein, 2005).[2] Some cases of anosognosia, however, are even more stark and invite the ascription of full-blown delusion.[3] Here is another conversation between one of Ramachandran's patients and himself (Ramachandran and Blakeslee, 1998: 129):

"Mrs. Dodds, can you touch my nose with your right hand?"

She did so with no trouble.

"Can you touch my nose with your left hand?"

Her hand lay paralyzed in front of her.?

"Mrs. Dodds, are you touching my nose?"

"Yes, of course I'm touching your nose."

"Can you actually see yourself touching my nose?"?

"Yes, I can see it. It's less than an inch from your face."

At this point Mrs. Dodds produced a frank confabulation, almost a hallucination, that her finger was nearly touching my nose. Her vision was fine. She could see her arm perfectly clearly, yet she was insisting that she could see the arm move? I decided to ask just one more question.

"Mrs. Dodds, can you clap?"

With resigned patience she said, "Of course I can clap."

"Will you clap for me?"?

Mrs. Dodds glanced up at me and proceeded to make clapping movements with her right hand, as if clapping with an imaginary hand near the midline?

"Are you clapping?"?

"Yes, I'm clapping," she replied.

As Ramachandran notes, this patient's confabulation is on the extreme end of the scale, as it is much more usual for patients with anosognosia to conjure up inane excuses or rationalizations why their left arms do not mo-

[2] If this were true, it would mean that self-deception might at last begin to be understood at a lower level of description–namely, that of neurobiology. This alone makes the comparison worth investigating.

[3] This raises the interesting question of where self-deception ends and clinical delusion begins. Cf. Bortolotti and Mameli (2012).

ve when they are asked to demonstrate the use of that arm. Hence, this case is an extraordinary case of anosognosia and ordinary cases of anosognosia still invite comparison with everyday self-deception, albeit in an exaggerated form. Levy uses this as a starting point to explore the possibility that anosognosia might be evidence against deflationism about self-deception. His overarching argument starts from the premises that (1) some cases of anosognosia are cases of self-deception, and that (2) these cases warrant the ascription of contradictory beliefs, concluding that there is at least one kind of case of self-deception which warrants the ascription of contradictory beliefs. As a corollary of Levy's argument, deflationism about self-deception turns out to be either incorrect or at least incomplete.

Whether or not Levy's first premise is true depends, on the one hand, on an account of self-deception, and on the other hand, on an account of anosognosia. Levy gives the following set of conditions for a case of anosognosia to be a case of self-deception (2009: 234):

1. Subjects believe that their limb is healthy.
2. Nevertheless they also have the simultaneous belief (or strong suspicion) that their limb is significantly impaired and they are profoundly disturbed by this belief (suspicion).
3. Condition #1 is satisfied because condition #2 is satisfied; that is, subjects are motivated to form the belief that their limb is healthy because they have the concurrent belief (suspicion) that it is significantly impaired and they are disturbed by this belief (suspicion).

Note that Levy's characterization of self-deception is somewhat imprecise, since he attributes to the self-deceived the desired, but unwarranted belief, while leaving it open if the attitude of the self-deceived toward the undesired state of affairs is one of belief or suspicion. (I will return to this point.) However, from the point of view of an account of anosognosia, the main point of contention is his third condition, which concerns the motivational origin of anosognosic beliefs. Of course, Levy is not stating that *all* anosognosic beliefs are the product of the subject's desires, but it is still a matter of controversy that there are any motivationally formed anosognosic beliefs (cf. Aimola Davies et al., 2009). Still, since the focus of this investigation is not whether or not it is true that some cases of anosognosia are cases of self-deception, I will assume, for the sake of the argument, that the first premise of Levy's argument is true and turn now to his second premise–the claim that anosognosia warrants the ascription of contradictory beliefs. To support the second premise of his argument, Levy intends to demonstrate that there is evidence to attribute both the desired belief that one is not paralyzed and the undesired belief that one is paralyzed. In the next section, I present and assess this evidence.

Analyzing the evidence

As we have seen, anosognosic patients deny being paralyzed with apparent sincerity. Importantly, this conviction has been empirically tested. In order to answer the question 'Is there tacit knowledge of paralysis in anosognosia?', Ramachandran devised an experiment in which patients were given the choice of completing either a bimanual or a unimanual task for larger and smaller prizes, respectively. He administered the trials to three different patients a total of 19 times. Patients almost always chose the bimanual task, leading Ramachandran to assert that 'the patients either have no "tacit knowledge"of their paralysis or, even if they do, they cannot access this knowledge when choosing between a unimanual vs. bimanual task' (1995: 31). So far, then, the evidence heavily suggests that anosognosic patients believe that they are not paralyzed, and that they fail to believe that they are paralyzed. Nevertheless, Levy assembles several pieces of evidence which, he purports, while not indisputable on its own, make a strong case for the simultaneous attribution of the undesired belief.

First, Levy argues that there is evidence that the fact of paralysis is represented in the brain of anosognosic patients (2009: 236). This is suggested by studies employing vestibular stimulation through the caloric reflex test–a test of the vestibulo-ocular reflex that involves irrigating cold or warm water into the external auditory canal. This test is hypothesized to arouse the parts of the right hemisphere normally engaged in anomaly detection and attention to the left side of the patient's personal space and, notably, it has been shown to lead to temporary remission of anosognosia. More importantly, Levy cites the fact that the application of this test to anosognosic patients has showed recognition that they had awareness of their paralysis all along (Cappa et al., 1987). But note that this is not conclusive evidence given that the might be the alleged recognition may well be an effect of hindsight bias. More importantly, however, is the question of how something being 'represented in the brain' would equal something being believed. Moreover, Hirstein (2005) suggests that we take anosognosics at their word and that, if their brain can nevertheless represent the damage to their limb–a possibility which is not being rejected here at all–this representation is *subpersonal* and inaccessible to consciousness.

Second, Levy cites indirect evidence that the relevant proposition has (at least) the lowest degree of personal availability to the anosognosic patient (2009: 237). Forced-choice situations have yielded evidence of implicit processing in patients with hemispatial neglect–a condition in which, after damage to one hemisphere of the brain, a deficit in attention to and awareness of one side of personal space is observed. Neglect is defined by the inability of a person to process and perceive stimuli on one side of the body or environment that is not due to a lack of sensation (Unsworth: 2007). Marshall and Halligan (1988) showed a neglect patients drawings of

houses, placed so that the leftmost part of the houses fell in her neglected field. Predictably, the patient reported that the houses looked identical. However, the drawing of one the houses was in flames on its left side, something which the patient could not *consciously* see. Marshall and Halligan then proceeded to ask the patient which house they would prefer to live in and reliably chose the house that was not burning. Note, however, that even if this result were undisputed (Fahle, 2003), Levy doesn't offer grounds for accepting evidence from neglect to apply to anosognosia across the board. Nevertheless, even if we were to accept the evidence of implicit processing from neglect patients to transfer to anosognosia patients, Levy again gives us no reason to infer that that the patient *believes* the relevant proposition from evidence that establishes only (if at all) what he himself terms 'the lowest degree of personal availability'–that of cases of blindsight, in which patients cannot use visual information from their blind field in everyday life, but are able to use it to guess above chance in forced-situations (Weiskrantz, 1986).

Third, Levy claims that there is observational evidence that the explicitly denied knowledge guides some of the behavior of anosognosic patients, including their verbal behavior, and takes this to indicate that such knowledge has a degree of availability somewhat above that of visual information in blindsight (2009: 237). This alleged evidence comes from two cases reported by Ramanchandran. The first case (Ramachandran and Blakeslee, 1998: 139) is that of a patient who, after opting for a bimanual task in a forced-choice situation–namely, tying her shoelaces–and failing to complete it, went on to affirm afterwards that she *had* tied her shoelaces. The second case (Ramachandran and Blakeslee, 1998: 150) is that of a patient who affirmed that his left, paralyzed arm was actually *stronger* than his right, healthy arm.

Note that it isn't obvious how these cases represent evidence that these patients's alleged belief that they are paralyzed guides their behavior. To arrive at that conclusion, Levy buys into Ramachandran's interpretation of theses cases. According to Ramachandran, both behavioral manifestations are indicative of what Freud called "reaction formation," defined by Levy as 'the expression of a thought antithetical to the denied proposition, which betrays its motivated nature by its very vehemence' (2009: 237). While this is a valid interpretation, it by no means establishes either that anosognosic patients are somehow aware of their condition–since the manifested behavior can also be interpreted as the result of a frank confabulation–or that any motivational component is involved in anosognosia at all. Moreover, note that once more the language employed by Levy warrants questioning why we should get onboard with belief attribution if the evidence warrants but only a degree of availability somewhat above that of visual information in blindsight.

Fourth, Levy argues that there is strong evidence that the denied knowledge is dispositionally available to anosognosic patients (2009: 237).

Once again, Levy turns to Ramachandran, citing the fact that patients can be gently "prodded" into eventually admitting that their arm is not working, weak and even, in some cases, paralyzed, although, as Ramachandran and Blakeslee note, they seem unperturbed by this admission (1998: 149), a qualification that Levy fails to acknowledge. But even if patients could be prodded into admitting that they are paralyzed, it is by no means trivial that we should we immediately take this as evidence that knowledge of the paralysis is dispositionally available to the patients rather than, for example, as evidence that the patient has just *acquired* such knowledge. In the absence of reasons why the latter plausible interpretation is incorrect, Levy's alleged evidence cannot do the required explanatory work.

The attribution of contradictory beliefs

I claim that the evidence Levy presents for the presence of the undesired belief, as he himself gestures at repeatedly by his choice of words, is not enough to attribute a belief. After presenting the four pieces of evidence for the undesired belief above, Levy concludes that 'taken together, this evidence seems to constitute a strong case for attributing to anosognosics the belief or the strong suspicion that their limb is significantly impaired' (2009: 238). I disagree. While what Levy presents as evidence of the presence of the undesired belief is weak on its own since, as we have seen, it establishes but a low degree of availability, it becomes even weaker when we simultaneously have very strong reasons to attribute the desired belief, that is, to take anosognosic patient's at their word.

Levy's conclusion that we have enough evidence to attribute to the anosognosic patient the belief that he or she is paralyzed stems from the *isolation* of this evidence from the evidence that he himself points out is enough to warrant the attribution to the anosognosic of the belief that he or she is healthy. He then takes the sum total of the evidence to warrant the attribution of contradictory beliefs to the anosognosic and, given that he understands at least some cases of anosognosia to be cases of self-deception, he purports to have demonstrated that Mele's dual-belief requirement holds in at least some cases of self-deception. I argue, in turn, that even if it were true that anosognosia is (in some cases, at least) a form of self-deception, Levy would not be right to derive an attribution of contradictory beliefs from evidence that pulls in two opposing directions. This is because, in the absence of an empirical method of direct inspection of the anosognosic patient's mind (as acknowledged by Levy), *belief is an explanatory, interpretive, and predictive concept*–a tool we use to explain, interpret, and predict behavior. And if we're presented with conflicting evidence, the right response is not to attribute contradictory beliefs–since these have no explanatory power at all–but to withhold attribution of belief and opt, inste-

ad, for a characterization of the subject's attitudes that doesn't abstract away from the cognitive processes that underlie belief attribution. For the sake of advancing in the search for a scientific theory of the phenomena discussed, we need to recognize that cases such as that of anosognosia, and clinical delusions in general, are often simply not amenable to personal-level description and explanation. When it only pretends to be describing precisely the mental states of those to which we attribute beliefs, 'belief' talk does more harm than good.

Conclusion

Levy rightly points out that, like self-deception, anosognosia 'presents us with a real-life–indeed, clinically verified–case in which agents claim that p, while nevertheless giving clear indications that they (at least) strongly suspect that not-p' (2009: 239). Instead of relying on imaginary or literary cases of self-deception, as almost all authors contributing to the literature have done, Levy has taken an important step in bringing empirical evidence to bear on the discussion. However, I have argued that, notwithstanding his efforts to use anosognosia to demonstrate that Mele's dual-belief requirement for self-deception is met, Levy fails to establish this. Importantly, I claim, on explanatory grounds, that Mele's challenge is not answerable by stipulating that evidence pulling us in the direction of opposite attributions warrants our attributing contradictory beliefs to anosognosic patients. In fact, after Levy's attempted demonstration, we have nothing really new that would warrant the attribution of contradictory beliefs to the self-deceived, assuming that anosognosia really is (sometimes, at least) a form of self-deception. Cases of everyday self-deception *also* push us in opposite directions and give us evidence of doxastic conflict. This is precisely what has fueled years of debate on what the self-deceived *really* believe–if they believe that *p* and not-*p*, only *p*, only not-*p*, or, as I contend, that the question doesn't have to have an answer, since assuming so is an overestimation of the preciseness of our folk-psychological vocabulary. If the evidence of doxastic conflict alone were enough for concluding that the dual-belief requirement is met, then the debate would never even have started.

References

Aimola Davies, A.M, Davies, M., Ogden, J.A., Smithson, M, and White, R.C. (2009). Cognitive and Motivational Factors in Anosognosia. In T. Bayne and J. Fernandez, *Delusion and Self-Deception: Affective and Motivational Influences in Belief Formation.* Psychology Press.

Audi, R. (1982). Self-Deception, Action, and Will. *Erkenntnis* 18: 133–58.

Bisiach, E. and Geminiani, G. (1991). Anosognosia related to hemiplegia and hemianopia. In G.P. Prigatano and D.L. Schacter, eds., *Awareness of Deficits After Brain Injury*. Oxford University Press.

Bortolotti, L. and Mameli, M. (2012). Self-deception, delusion and the boundaries of folk psychology. *Humana.Mente* 20: 203–221.

Cappa, S., Sterzi, R., Vallar, G. and Bisiach E. (1987). Remission of hemineglect and anosognosia during vestibular stimulation. *Neuropsychologia* 25: 775–82.

Canfield, J.V. and Gustafson, D.F. (1962). Self-Deception. *Analysis* 23: 32–36.

Davidson, D. (1985). Deception and Division. In J. Elster, ed., *The Multiple Self*. Cambridge University Press.

Fahle, M. (2003). Failures of visual analysis: scotoma, agnosia, and neglect. In M. Fahle and M. Greenlee, eds. *The Neuropsychology of Vision*. Oxford University Press.

Gendler, T.S. (2007). Self-deception as pretense. *Philosophical Perspectives* 21 (Philosophy of Mind), 231–258.

Hirstein, W. (2005). *Brain Fiction: Self-Deception and the Riddle of Confabulation*. MIT Press.

Johnston, M. (1988). Self-Deception and the Nature of Mind. In B. McLaughlin and A. Rorty, eds., *Perspectives on Self-Deception*. Berkeley: University of California Press.

Levy, N. (2009). Self-Deception Without Thought Experiments. In T. Bayne and J. Fernandez, *Delusion and Self-Deception: Affective and Motivational Influences in Belief Formation.* Psychology Press.

Marshall, J.C. and Halligan, P.W. (1988). Blindsight and insight in visuo-spatial neglect. *Nature* 336: 766–767.

Mele, A.R. (1997). Real Self-Deception. *Behavioral and Brain Sciences* 20: 91–102.

Mele, A.R. (2001). *Self-Deception Unmasked.* Princeton University Press.

Orfei, M.D., Robinson, R.G., Prigatano, G.P., Starkstein, S., Rüsch, N., Bria, P., Caltagirone, C. and Spalletta, G. (2007). Anosognosia for hemiplegia after stroke is a multifaceted phenomenon: a systematic review of the literature. *Brain* 130 (12): 3075–3090.

Pears, D. (1984). *Motivated Irrationality*. Oxford University Press.

Prigatano, G.P., ed., (2010). *The Study of Anosognosia*. Oxford University Press.

Ramachandran, V.S. (1995). Anosognosia in parietal lobe syndrome. *Consciousness and Cognition* 4(1): 22–51.

Ramachandran, V.S. (1996). The evolutionary biology of self-deception, laughter, dreaming and depression: Some clues from anosognosia. *Medical Hypotheses* 47(5): 347–362.

Ramachandran, V.S. and Blakeslee, S. (1998). *Phantoms in the Brain: Probing the Mysteries of the Human Mind.* Morrow & Co.

Sartre, J.-P. (1949/1957). *Being and Nothingness*, trans. H. Barnes. Pocket Books.

Unsworth, C. A. (2007). Cognitive and Perceptual Dysfunction. In T. J. Schmitz & S. B. O'Sullivan, eds., *Physical Rehabilitation*. Davis Company.

Weiskrantz, L. (1986). *Blindsight: A Case Study and Implications*. Oxford University Press.