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Merleau-Ponty on Human Motility and Libet's Paradox

by **T. Brian Mooney and Damien Norris**

Abstract

In 1979, neuroscientists Libet, Wright, Feinstein and Pearl introduced the "delay-and-antedating" hypothesis/paradox based on the results of an on-going series of experiments dating back to 1964 that measured the neural adequacy [brain wave activity] of "conscious sensory experience". What is fascinating about the results of this experiment is the implication, especially when considered in the light of Merleau-Ponty's notions of "intentionality" and the "pre-reflective life of human motility", that the body, and hence not solely the mind, is a thinking thing. The experiments and conclusions of Libet et al. have attracted considerable academic attention and have been used in the development of psychological theories on automotivism and the adaptive unconscious. Moreover, they have engendered a series of important considerations in respect of the question of free will. This paper outlines the connections between the findings of Libet et al. and Merleau-Ponty's ontology as presented in the Phenomenology of Perception (1945/1962). It is not our intention to argue that the former amounts to new wine in old bottles, but rather to show counterfactually (since we offer no new scientific data and assume the conclusions of the experiments) that Merleau-Ponty's ontology provides a theoretical framework which explains the experimental data obtained by Libet et al., and provides further speculative confirmation of the work stemming from neuro-physical research and emerging theories on the adaptive unconscious.

In 1979, four neuroscientists Libet, Wright, Feinstein and Pearl introduced the "delay-and-antedating" hypothesis/paradox based on the results of an on-going series of experiments dating back to 1964 that measured the neural adequacy [brain wave activity] of "conscious sensory experience" (Libet, 1964, 1973, 1993; Libet, Alberts, Wright, Dellatre, et al., 1964; Libet, Alberts, Wright, & Feinstein, 1967, 1972; Libet, Alberts, Wright, Lewis, & Feinstein, 1975; Libet, Gleason, Wright, & Pearl, 1983; Libet, Pearl, et al., 1991; Libet, Wright, Feinstein, & Pearl, 1979). What is fascinating about the results of this experiment is the implication, especially when considered in the light of Merleau-Ponty's notions of "intentionality" and the "pre-reflective life of human motility", that the body, and not solely the mind, is a thinking thing. The experiments and conclusions of Libet et al. have attracted considerable academic attention and have been used in the development of psychological theories on automotivism and the adaptive unconscious (Wilson, 2002). Moreover, they have engendered a series of important considerations in respect of the question of free will (Brasil-Neto et al., 1992; Dennett, 1991; Dennett & Kinsbourne, 1992; Wegner, 2002; Wegner & Wheatley, 1999). This paper will outline the connections between the findings of Libet et al. and Merleau-Ponty's ontology as presented in the *Phenomenology of Perception* (1945/1962). It is not our intention to argue that the former amounts to new wine in old bottles, but rather to show counterfactually (since we offer no new scientific data and assume the conclusions of the experiments even though there have been numerous criticisms of the latter [Churchland, 1991a, 1991b;

Dennett, 1991]) that Merleau-Ponty's ontology provides a theoretical framework which explains the experimental data, and provides further speculative confirmation of the work stemming from neuro-physical research and emerging theories on the adaptive unconscious.

Libet's Experiment

In their experiment, Libet et al. attempted to measure cognitive responses to physical stimuli. The subject's forearm was pricked with an instrument while a device monitored the neural adequacy [brain wave activity] of the neural cortex area in the brain corresponding to the area of stimulation. Subjects were asked to respond to the stimulation by pressing a button as soon as they became aware of the stimulus.

Working within the traditional paradigm of linear causality one would expect the following sequence: (a) *stimulation* to the forearm; (b) *brain wave activity* [or neural adequacy measurement]; (c) the subject's *physical response* of pressing the button. However, this sequence did not occur. Instead, what actually occurred was: (a) *stimulation* to the forearm; (c) the subject's *physical response* of pressing the button; and, half a second *after* the subject's physical response, (b) *brain wave activity* or neural adequacy measurement. Even more puzzling is the fact that the subject claimed to be aware of the stimulation at the moment of response, despite the absence of brain wave activity [neural adequacy] normally associated with conscious awareness of action.

The result of this experiment presents an interesting paradox. How can a subject be aware of a sensation - that is, be conscious of it - if the subject's brain has not registered that "awareness"?

One way of resolving Libet's paradox would be to bite the bullet and say that the experiment is a case of backward causation - the activity in the subject's brain was the cause of her *preceding* response. This is the line followed up by Libet. However, there is a less heroic explanation of the paradoxical sequence - that the subject's body reacted to the stimulus prior to the activity of her mind. As it stands, this explanation seems unsatisfactory because it seems to leave out the causal role of the subject's cognition. But this *lacuna* is filled once we say that the body, and not solely the mind, is a thinking thing. This completed explanation is implicit in Merleau-Ponty's remark that "it is not [reflective] consciousness which touches or feels, but the hand, and the hand is, as Kant says, 'an outer brain of man'" (Merleau-Ponty, 1945/1962, p. 316). The complete explanation is in turn delivered by Merleau-Ponty's account of intentionality in terms of the "pre-reflective life of human motility", in which one can begin to see a possible non-reductionist framework for the interpretation of the experimental data obtained by Libet et al.. We will not defend this account here. Instead, it will be presented as one that is coherent and not implausible. We now turn to this.

Intentionality as Intentional Arc

Many phenomenologists seek to understand the 'contact' with the 'primitive fact' of immediate experience. For Merleau-Ponty, this 'contact' is not made solely by mind, but by the union of mind and body: that is, the *body-subject* or an *embodied consciousness*. Indeed, in Merleau-Ponty's (1947/ 1967) view, if one seeks the 'truth' of the world, one must begin with the body-subject and the sensuous acts of perception, for "the experience of perception is our presence at the moment when things, truth, values are constituted for us; …perception [according to Merleau-Ponty] is a nascent *logos*."

For Merleau-Ponty, the notion of intentionality as "consciousness of…" suggests that consciousness must already possess that which it seeks - otherwise it would not be able to locate it.[1] He does not see this as a paradox. In this regard, Merleau-Ponty declares that consciousness possesses that unique ability of "placing before" itself exactly what it intends to find. This notion of "placing before", when used in Merleau-Ponty's extended notion of intentionality as intentional arc, suggests a previous transaction that underlies the intentional thread.

Merleau-Ponty's insight is that knowledge itself is not a "primitive" or primary link with "reality", because "knowledge of…" or "consciousness of…" presupposes a previous exchange from which one's knowledge of a thing has been derived. Hence intentionality, defined as "consciousness of…", is not primary in a fundamental sense. Rather, it suggests an intimate encounter with a reality of which one's reflective knowledge is but a second order representation of the immediate experience it has been derived from - an exchange that Merleau-Ponty expresses with his description of intentionality as "intentional arc".

[1] Meno's paradox; i.e. the Socratic problem: "How will you set about looking for that thing, the nature of which is totally unknown to you? Which, among the things you do not know, is the one which you propose to look for? And if by chance you should stumble upon it, how will you know that it is indeed that thing, since you are in ignorance of it?" (Merleau-Ponty, 1945/1962, p. 371)

Far from skirting the obvious paradox of asserting a feature of consciousness that places before itself what it intends to find, Merleau-Ponty embraces it and attempts to turn it into a positive component of his philosophy. "Reflective consciousness", being of the order of "I think…", is intentionally directed towards the "object". "Reflective consciousness" has the object arrayed before consciousness and is able to seek it out by virtue of the "intentional arc": that is, that feature of consciousness that subtends reflective consciousness and reaches ahead of itself, polarising thought and presenting consciousness with a meaningful something to see. It is as if we are ontologically hard-wired to know the world as "seeable", graspable, and so forth, prior to the exercise of reflective consciousness. Finally, within the core of this intentional arc exists an inter-participatory nexus of the immediately given dimensions of one's being that is comprised of key elements including sensation, motility [structure of human movement], sexuality, and language.[2] And it is the combination of these elements, all of which inter-relate and inform one another, that is responsible for generating a 'world of thought' and a world of meaning.

For Merleau-Ponty, the intentional arc is that dimension of embodied-consciousness that does not consciously 'weigh up' the given of a situation before acting. Instead, it is the manner in which one becomes "involved in the world through stable organs and pre-established circuits" (Merleau-Ponty, 1945/1962, p. 87); the development, thus, of a "pre-patterned existence" that acts on the subject's behalf, such that one acquires a kind of "knowledge" that sinks behind reflective consciousness, and is attended to by the intentional arc. It is this feature of consciousness that places before consciousness what is to be seen, and subsequently withdraws in order to free (Merleau-Ponty, ibid.)[3] consciousness to be "consciousness of…".[4] Motility is one way in which the body establishes a set of patterned responses that make decisions on the subject's behalf. We will now take a closer look at this.

Human Motility and Merleau-Ponty's Notion of Habit

Merleau-Ponty notes that, when an insect's leg is removed, the function of the lost limb is "replaced" by an equivalent limb. But, when the insect's leg is tied up, no substitution is made and the insect continues to stumble on as if it were in full possession of "all its powers" (Merleau-Ponty, 1945/1962, p. 78). From this observation, Merleau-Ponty reasons that the insect, with all its limbs, "belongs" to a certain kind of "world", not via an "objective consciousness" but via a "practical significance" towards the "self-evident demands of the task" (Merleau-Ponty, 1945/1962, p. 77). In other words, the undamaged insect is *a priori* predisposed towards the world according to the determinants of its bodily structure and motile capacity. The "world", and the insect's actions within it, are said to be given by the determinants of the insect's motile structure and the unique geographical structure of the world (Merleau-Ponty, 1945/1962, p. 79). Hence, when the leg is lost, the bodily structure of the insect is fundamentally altered and as such the insect 'replaces' the movement. But, when the insect's leg is tied up, the insect maintains what Merleau-Ponty calls its particular being-in-the-world[5] and continues to operate within this "world" unaware of the encumbrance (Merleau-Ponty, 1945/1962, p. 77). Here, the term being-in-the-world is not one that designates a world objectively appropriated or possessed; rather, it designates the total manner of pre-reflectively being in the world. This mode of being is one's foundational 'gearing' towards the world that delimits all possible motor options and subsequently the range of all possible actions.[6]

[2] While it is important to note that these categories are not exhaustive, the specific dimensions of these particular components of the intentional arc are elaborated in detail in Merleau-Ponty's *Phenomenology of Perception* (1945/1962), i.e., Sensation, pp. 203-242; Motility, pp. 73-90, 98-153; Sexuality, pp. 154-173; Language, pp. 174-202.

[3] "Thus it is by giving up part of his spontaneity, by becoming involved in the world through stable organs and pre-established circuits that man can acquire the mental and practical space which will theoretically free him from his environment and allow him to *see* it." (Merleau-Ponty, 1945/1962, p. 87)

[4] As Merleau-Ponty says, "… beneath intelligence as beneath perception [traditional sense], we discover a more fundamental function … the life of consciousness - cognitive life, the life of desire or perceptual life - is subtended by an 'intentional arc' which projects around about us our past, our future, our human setting, our physical, ideological and moral situation, or rather which results in our being situated in all these respects. It is this intentional arc which brings about the unity of the senses, of intelligence, of sensibility and motility."

[5] The insect's particular existential and immediately lived orientation within a given situation.

[6] It is important to note that the insect's particular bodily structure does not entirely determine the insect's movements. A certain amount of 'free-play' is discerned. For example, when a spider spins a web it does so according to a particular 'style' or 'method'. However, the web, spun on a daily basis, is constructed on different surfaces and during differing wind and climatic conditions,

In this example, the insect has its body, or is its body, and continues to "stumble on" when its leg is tied because it retains its "normal" orientation towards the world. This is not to say that the insect has this "orientation" by virtue of a reflective act. Rather, it is suggested that the insect has an immediate "bodily recognition" of its motile structure. Thus, the nature of the reflex is that it "predelineates a certain milieu of possible behaviour, before any 'stimulation' whatsoever" (Zaner, 1964).

Merleau-Ponty makes the same point with human examples. He cites patients who, despite having lost their vision, maintain their "visual world" and "can be seen colliding with objects everywhere" (Merleau-Ponty, 1945/1962, p. 80). Conversely, those whose vision is slowly degenerating become premature invalids by resigning from their habitual ways of life and "breaking their vital contact with the world before losing sensory contact with it" (Merleau-Ponty, ibid.). In both cases, it can be seen that a previous orientation or being-to-the-world is either retained or abandoned in a way that is at odds with reality. The blind retain their visual orientation despite its unreality. Those slowly going blind abandon it despite its reality.[7] Merleau-Ponty concludes that there is a pre-personal, pre-reflective world underlying reflective consciousness that gives one's world a certain constancy, thus allowing the agent to operate without having to deliberate over every movement - a process that is deemed pre-reflective or pre-objective precisely because these operations are not vouchsafed by a reflective consciousness before being enacted. It is that feature of one's existence - one's being-in-the-world - which "buries … (one's) perceptual and practical intentions in objects which ultimately appear prior" (Merleau-Ponty, 1945/1962, p. 82) to consciousness, and by virtue of which consciousness is able to see them or recognise them as such. It is also a mysterious process, a kind of energy or "pulsation of existence" which knows better than reflective consciousness what can be achieved: "the scope of our life".

One application of this theory is used by Merleau-Ponty to understand patients with phantom limbs[8] and anosognosia[9]. In the case of anosognosia, the patient perceives the absence of a limb that is physically present. In the case of phantom limbs, the patient perceives the presence of a limb that is physically absent. Given these conditions, the question is asked, "How can a suitable explanation be given that describes a condition whereby the patient cognitively affirms a reality that is not the case?" In other words, how does one explain the absence of a presence [anosognosia] on the one hand, and the presence of an absence [phantom limb] on the other?

Given that, in the case of a phantom limb, there is in reality no arm, for instance, it is difficult to see how an appeal to purely empirical 'physiological facts' can alone explain the condition without an appeal to psychological considerations too. Conversely, it is equally difficult to see how an appeal to purely intellectual 'psychic facts' will suffice when "no psychological explanation can overlook the fact that the severance of the nerves to the brain abolishes the phantom limb" (Merleau-Ponty, 1945/1962, p. 77). As for anosognosia, it is said that the patient refers to the arm as "a long, cold snake" (Merleau-Ponty, 1945/ 1962, p. 76), a response which rules out both cognitive ignorance and bodily anaesthesia. Clearly, then, "the phantom limb is not the mere outcome of objective causality; no more is it a *cogitation*" (Merleau-Ponty, 1945/1962, p. 77). Therefore, to adequately describe anosognosia and phantom limbs, Merleau-Ponty seeks a hybrid theory: a link between the physiological and the psychic. The difficulty of finding the common-ground between something that exists in space [physiological facts] and that which exists nowhere [psychic facts] is freely admitted; yet it is argued that this union can be forged provided that the existence of a middle term can be demonstrated (Merleau-Ponty, ibid.).

The middle term is supplied to Merleau-Ponty by the notions of *habit-body* and the *intentional arc*. The habit-body suggests that an agent is in full possession of his or her body and does not need to discover the

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the uniqueness of which is allocated for in the design. Therefore, within this 'patterned' or 'instinctual' act a combination of rigidity and spontaneity is allowed.

[7] "There is, then, a certain **constancy in our 'world', relatively independent of stimuli,** which refuses to allow us to treat being-in-the-world as a collection of reflexes - a certain energy in the pulsation of existence, relatively independent of our voluntary thoughts, which prevents us from treating it as an *act* of consciousness. It is because it is a pre-objective view that being-in-the-world can be distinguished from every third person process, from every modality of the *res extensa*, as from every *cogitatio*, from every first person form of knowledge - and that it can effect the union of the 'psychic' and the 'physiological." (Merleau-Ponty, 1945/1962, p. 80; emphasis added)

[8] The failure or refusal to acknowledge the absence or mutilation of a limb; for example, a patient who affirms the existence of a limb that he or she does not possess.

[9] Anosognosia is a severe mental condition involving a failure to acknowledge a disease or disability. Although it has a much wider field of application, here we concentrate on Merleau-Ponty's examples.

appropriate bodily part in order to instigate an action, by virtue of a pre-established motor pattern that is already charged with significance. For example, when a baby seeks out an object, she watches the object and not her hand. Here, the 'hand' is that which the baby is in intimate possession of and does not have to consciously find before it can be used. Importantly, the baby's "movement is not thought about movement" (Merleau-Ponty, 1945/1962, p. 137), and the fact that the baby unequivocally reaches out suggests that the object sought has already been invested with meaning. In other words, the object sought is already understood as a thing-to-be-touched, a-thing-that-can-be-grasped, and the hand is already understood as that-which-can-grasp. This knowledge has thus withdrawn from reflective consciousness into the domain of the intentional arc. This is why Merleau-Ponty suggests that "movement … is basic intentionality, and consciousness is not in the first instance an 'I think that' but an 'I can'" (ibid.). More profoundly, he declares that "motility, in its pure state, possesses the basic power of giving a meaning (*Sinngebung*)", asserting further that "(m)otility is the primary sphere in which initially all significance *is* engendered" (ibid., p. 142).

Merleau-Ponty is now able to explain phantom limbs and anosognosia: an armless patient continues to reach for a glass because she retains her being-in-the-world, a world which includes reachable objects. As such, the patient continues to reach for a glass with an arm that is not there or to stand upon a limb that is absent. The patient's phantom limb is not simply imaginary; nor is it a psychic memory in the sense that it is the repressed experience of an actual limb - "a former present that cannot decide to recede into the past" (Merleau-Ponty, 1945/1962, p. 85); nor is it simply the vague recollection of a previous moment. Instead, the phantom limb is a "former present" that is prevented from receding by an established physiological pre-patterned motor-system that operates below the level of cognitive reflection within the motor dimension of one's intentional arc. More importantly, as this arc possesses the ability to cast before consciousness what consciousness is to be of, there appears to be no easy way that the phantom limb patient can discover his or her condition. Thus, any treatment that ignores the physiological in favour of the psychic, or the psychic in favour of the physiological, will fail to discover the human significance of the actual event and ultimately fail to adequately treat the patient. Therefore, it is only by rediscovering the subject's particular being-in-the-world - the existential determinants of a lived-through-physical-psychic-life - that the conditions can be understood and successfully treated.

These examples of morbid motility highlight the manner in which the body establishes motor patterns which overlay upon the world a motor significance. In this sense, one does not simply have a body, but one *is* one's body. In Merleau-Ponty's words, "I am not in front of my body, I am in it, or rather I am it" (1945/1962, p. 150). That is, a person is not simply an assemblage of juxtaposed organs, but a being who has an undivided acquisition of itself.[10]

Merleau-Ponty's example of the blind man and his cane is particularly useful in understanding habitual movement. The blind man's repeated use of the cane results in the cane becoming "incorporated" (Merleau-Ponty, 1945/1962, p. 139) into the man's body-image (ibid. p. 141). The cane becomes "a bodily auxiliary, an extension of the bodily synthesis" (ibid., p. 153), and the man's practical use of the cane becomes a habitual pattern subsumed as a motor intentionality. From repeated practice, the habit of using the cane becomes increasingly more refined until eventually there is no longer a need for the man to interpret the pressures of the cane on his skin, nor to objectively measure the length of the cane in order to gauge distances. Indeed, at this stage there is no need to objectively interpret any data whatsoever, in that all this is performed for him by a habitual function that "relieves" him of the necessity of doing so (ibid., p. 152).

In Merleau-Ponty's terminology, the world projected around the man, and the particular habitual patterns acquired, are the sediment left over from mental processes that have become immediately-given pre-patterned actions (Merleau-Ponty, 1945/1962, p. 130). However, it must be acknowledged that these sediments are far from static. Merleau-Ponty argues that they remain so long as one retains in one's hands the relevant intentions corresponding to a given situation. These pre-reflective movements - the

[10] According to Merleau-Ponty, within the Cartesian tradition there are but two interpretations of the term 'exist': either "one exists as a thing or else one exists as a consciousness" (1945/1962, p. 198). Our exploration of the existential manner in which the body is *lived* suggests that this distinction is not clear-cut. To make this explicit, when reflection is turned upon one's own body, the object [in-itself] and the subject [for-itself] are found to co-exist in a kind of mutual reversibility or *circularity*. That is, when a subject reaches out to touch an object with one hand, while the other hand grasps the wrist of the hand reaching, the body that 'reaches' becomes the body 'touched': "The body turns back on itself and takes itself for its own object" (Madison, 1981). While it must be said that the body can never be both subject and object at the same time, the body-subject is shown as a being with two 'sides' whose relationship is *circular*. Thus the body-subject is seen as being both thing and consciousness, object and subject.

tapping of the cane - extend into the world, but they are sustained by a reflective consciousness that reaffirms the act: "they offer me a meaning, but I give it back" (ibid., p.130). One's sediment of habitual pre-patterned movements determines an outline and subsequently retreats (ibid., p. 152). Furthermore, the body-image of the blind man is not confined to the outline of his skin. That is, the traditional border between the cane [a traditional object] and the man [traditional subject] is 'blurred' by virtue of the fact that the cane has become an "extension of his bodily synthesis" (ibid., p. 152).

Conclusion

We are now in a position to return to Libet's paradox - that there seems to be a case of backward causation - and to our original question: How can a subject be aware of a sensation - that is, be conscious of it - if the subject's brain has not registered that "awareness"? In this discussion of the intentional arc and the structure of human motility - particularly habitual motor patterning - it can be clearly seen that subjects sustain around them "a system of meanings whose reciprocities, relationships and involvements need not be made explicit in order to be exploited" (Merleau-Ponty, 1945/1962, p. 129). Furthermore, they do not require the intervention of reflective consciousness for their enactment. However, the question to be asked is, "If habit is neither a form of knowledge nor an involuntary action, what then is it?" One reply offered by Merleau-Ponty is that "It is knowledge of the hands**,** which is forthcoming only when bodily effort is made, and cannot be formulated in detachment from that effort" (ibid., p. 144). By this Merleau-Ponty is not suggesting that the kind of knowledge acquired by the habitual body is knowledge in the traditional sense. Habitual knowledge is not knowledge objectively arrayed before reflective consciousness. What is being suggested is that the phenomenon of habit forces traditional notions of knowledge and understanding to be revised (ibid., p. 144).

This investigation of the lived-experience of human movement reveals a body whose motor actions are - for the most part - initiated from a pre-reflective realm informed by immediate experience. In addition, the exploration of the formation of patterned motor habit suggests that whatever form of pre-personal knowledge Merleau-Ponty is arguing for in his *Phenomenology of Perception*, it is arguably both "original and perhaps primary" (Merleau-Ponty, 1945/ 1962, p. 140): that is, habitual knowledge is original in the sense that it is irreducible and inaccessible to intellectual analysis (Hammond, Howarth, & Keat, 1991, p. 179). As we have set out to demonstrate, at the level of habitual or pre-reflective movement there is no objective body. The traditional object is not an accurate phenomenal representation of the thing, so long as the subject is conceived of as a detached observer. Indeed, the significance and meaning of the thing is now seen as the outcome of a lived-through relationship between thing, self and world wherein the 'seam' between subject and object has been significantly effaced.[11]

Merleau-Ponty's positing of the intentional arc, of which motility is one component, proceeds from a nexus of inter-related and inter-participatory meaning-giving dimensions. It is that aspect of one's lived-through experience that allows reflective consciousness to be "consciousness of…". Therefore, Merleau-Ponty's notion of this mode of pre-personal knowing is perhaps primary because, unlike reflective consciousness, immediately lived bodily experience and the realm of the primitive fact (Hammond, Howarth, & Keat, 1991, p. 179) are synonymous. That is, one's immediate presence to is an intimate communion with the world "at the moment when things, truth, values are constituted for us" (Merleau-Ponty, 1947/1967, p. 41). Consequently, because motility is conceived of as being essentially a meaning giving act (Merleau-Ponty, 1945/1962, p. 142), it is arguable that the specific determinants of one's motile structure fundamentally influence the meaning invested in objects and indeed the very significance of the world.

If it is true that "consciousness is being-towards-the-thing though the intermediary of the body" (Merleau-Ponty, 1945/1962, p. 138), and since it appears that one's motile structure is a "basic [form of] intentionality", then arguably one's body is implicated (along with the other components of the intentional arc) in the engendering of meaning and significance. Bodily motility, in its pre-reflective reaching out towards an object, is an act subtended by an intentional thread already charged with meaning and significance. As such, decisions like 'it is a graspable thing', 'it is a thing 'for-me'', 'it can be reached from here', and 'it is something 'I' want',[12] are all meaningful gestures or actions that occur without the need of a reflectively conscious

[11] The reference here is to Montaigne's confession in "On Friendship" (1588/1958) regarding the nature of the friendship between himself and Ētienne de la Boétie.

[12] The 'I' here refers to the pre-reflective 'I' that determines on behalf of the reflective 'I' what the thing wanted is. Merleau-Ponty would call this the *tacit cogito*, as opposed to the *spoken cogito*. For a detailed account of this, see Merleau-Ponty, 1945/1962, pp. 369-409.

composer. For these reasons, the body is clearly not merely the "handmaid of consciousness" (Merleau-Ponty, 1945/1962, p. 139), obediently obeying the dictates of the intellectualist's mind. And, finally, since the body is an active agent investing things, others and the world with vital value, and not simply an inert or passive receptor, as traditional empiricism once led us to believe, it appears that one can reasonably affirm Libet's speculation and conclude that it is possible that it was an embodied consciousness that responded to the stimuli without the aid of reflective consciousness and the associated presence of neural adequacy readings, precisely because the body, and not solely the mind, is a thinking thing. Moreover, such an analysis has the benefits of explaining Libet's data without recourse to the highly contentious notion of backward causation, and of providing illuminating frameworks for understanding theories of the "adaptive unconscious" and the "extended mind" (Clark, 2002; Clark & Dennett, 1998; Wilson, 2002). Indeed, we may be coming to a point where neuroscience can provide an alternative language to articulate Merleau-Ponty's ontological speculations.

About the Authors

T. Brian Mooney is currently Associate Professor of Philosophy in the School of Social Sciences at Singapore Management University. He has also lectured in several Australian Universities, as well as at the University of Ghana, Legon. Originally from Belfast in the North of Ireland, he completed his PhD at La Trobe University, Australia, on *The Philosophy of Love and Friendship*. His central research interests are in the area of Moral Philosophy, and he has authored a book on *Terrorism: Causes and Cures - Philosophical, Political and Legal Perspectives* (Ashgate Press, *in press*).

Damien Norris graduated with a Master's degree in Human Rights Practice from Curtin University of Technology and an Honours degree in Philosophy from the University of Notre Dame in Australia. He has worked as campaign coordinator for Amnesty International in Perth (2000-2001); Lecturer for the Centre for Social Justice at the University of Notre Dame (2001-2005) and Immersion Coordinator for the Edmund Rice Centre for Social Justice in Fremantle (2005-2006); and Senior Policy Officer for the Youth Affairs Council of Western Australia (2006-2007). Currently he is practising as an independent human rights practitioner, consultant and special interest lobbyist specialising in human rights advocacy, community development, campaign development and community education in human rights, social and eco-justice.

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References

Brasil-Neto, J. P., Pascaul-Leone, A., Valls-Sole, J., Cohen, L. G., & Hallett, M. (1992). Focal transcranial magnetic stimulation and response bias in a forced-choice task. *Journal of Neurology, Neurosurgery, and Psychiatry*, *55*, 964-966.

Churchland, P. S. (1991a). On the alleged backwards referral of experiences and its relevance to the mind-body problem. *Philosophy of Science*, *48*, 165-181.

Churchland, P. S. (1991b). The timing of sensations: Reply to Libet. *Philosophy of Science*, *48*, 492-497.

Clark, A. (2002). Minds, brains and tools (with a response by Daniel Dennett). In H. Clapin (Ed.), *Philosophy of mental representation* (pp. 121-145). Oxford: Clarendon Press.

Clark, A., & Chalmers, D. (1998). The extended mind. *Analysis*, *58*, 7-19.

Dennett, D. C. (1991). *Consciousness explained.* London/New York: Penguin Books.

Dennett, D. C., & Kinsbourne, M. (1992). Time and the observer: The where and when of consciousness in the brain. *Behavioural and Brain Sciences*, *15*, 183-200.

Hammond, M., Howarth, J., & Keat, R. (1991). *Understanding phenomenology*. Oxford, UK: Basil Blackwell.

Libet, B. (1964). Brain stimulation and the threshold of conscious experience. In J. C. Eccles (Ed.), *Brain and conscious experience: Study week September 28 to October 4, 1964, Pontifica Academia Scientiarum* (pp. 165–181). New York: Springer-Verlag.

Libet, B. (1973). Electrical stimulation of cortex in human subjects, and conscious sensory aspects. In A. Iggo (Ed.), *Somatosensory system: Vol II* (pp.743–790). Berlin: Springer-Verlag.

Libet, B. (1993). *Neurophysiology of consciousness: Selected papers and new essays by Benjamin Libet.* Boston: Birkhauser.

Libet, B., Alberts, W. W., Wright, E. W., Delattre, L. D., Levin, G., & Feinstein, B. (1964). Production of threshold levels of conscious sensation by electrical stimulation of human somatosensory cortex. *Journal of Neurophysiology, 27***,** 546–578.

Libet, B., Alberts, W. W., Wright, E. W., & Feinstein, B. (1967). Responses of human somatosensory cortex to stimuli below threshold for conscious sensation. *Science,* 158, 1597–1600.

Libet, B., Alberts, W. W., Wright, E. W., & Feinstein, B. (1972). Cortical and thalamic activation in conscious sensory experience. In G. G. Somjen (Ed.), *Neurophysiology studied in man* (pp. 157–168). Amsterdam: Exerpta Medica.

Libet, B., Alberts, W. W., Wright, E. W., Lewis, M., & Feinstein, B. (1975). Cortical representation of evoked potentials relative to conscious sensory responses and of somatosensory qualities in man. In H. H. Kornhuber (Ed.), *The somatosensory system* (pp. 292–307). Stuttgart: Georg Thieme.

Libet, B., Gleason, C. A., Wright, E. W., & Pearl, D. K. (1983). Time of conscious intention to act in relation to onset of cerebral activity (readiness potential): The unconscious initiation of a freely voluntary act. *Brain, 106*, 623–642.

Libet, B., Pearl, D. K., Morledge, D. E., Gleason, C. A., Hosobuchi, Y., & Barbaro, N. M. (1991). Control of the transition from sensory detection to sensory awareness in man by the duration of a thalamic stimulus. *Brain, 114*, 1731–1757.

Libet, B., Wright, E. W., Feinstein, B., & Pearl, D. K. (1979). Subjective referral of the timing for a conscious sensory experience: A functional role for the somatosensory specific projection system in man. *Brain, 102***,** 193–224.

Madison, G. B. (1981). *The phenomenology of Merleau-Ponty: A search for the limits of consciousness.* Ohio: Ohio University Press.

Merleau-Ponty, M. (1962). *Phenomenology of perception* [Colin Smith, Trans.]. London, UK: Routledge & Kegan Paul. (Original work published 1945)

Merleau-Ponty, M. (1967). The primacy of perception and its philosophical consequences (William Cobb, Trans.). In N. M. Lawrence & D. D. O'Connor, (Eds.), *Readings in Existential Phenomenology* (pp. 21-78). New Jersey: Prentice Hall Inc. (Original address to the Société Française de Philosophie on November 23rd 1946 published in *Bulletin de la Société Française de Philosophie*, *XLIX* (December 1947), 119-153)

Montaigne, M. (1958). On friendship. In *Essays* (Donald M. Frame, Trans.) (pp. 77-103). Harmondsworth, Middlesex, UK: Penguin Books. (Original work published 1588)

Wegner, D. (2002). *The illusion of conscious will*. Cambridge, MA: MIT Press.

Wegner, D., & Wheatley, T. (1999). Apparent mental causation: Sources of the experience of the will. *American Psychologist*, *54*, 480-492.

Wilson, T. D. (2002). *Strangers to ourselves: Discovering the adaptive unconscious*. Cambridge: Belknap Press.

Zaner, R. (1964). *The problem of embodiment: Some contributions to a phenomenology of the body*. The Hague: Martinus Nijhoff.
