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Morphic Fields and Extended Mind

An Examination of the Theoretical Concepts of Rupert Sheldrake

Abstract: *This paper examines the central theoretical concepts in the work of Rupert Sheldrake. The first section examines Sheldrake's account of morphic fields and questions whether difficulties arise when these concepts are extended upwards from the biological level. The second section reviews Sheldrake's concept of extended mind and considers the criticism that it is reductionist about mentality. In considering both of these criticisms it is argued that Sheldrake's theories can be taken in a reductive direction, but need not be. The third and final section draws on the work of Joseph Bracken and David Ray Griffin to suggest a panpsychist metaphysics of field as one possible way that Sheldrake could sidestep these dangers and strengthen his approach.*

An Examination of the Work of Rupert Sheldrake

This essay will examine the striking and controversial theoretical proposals of Rupert Sheldrake concerning both the development of biological form and the question of consciousness.¹ Sheldrake is no stranger

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[1] This essay is the outcome of a regular series of discussions with Philip Clayton, Russell Re Manning, Leon Turner, and Fraser Watts on Sheldrake's work which took place in Queens' College, Cambridge. The essay is greatly indebted to the help and ideas of the above as well as to Rupert Sheldrake, who was present at the final meeting of the group on 17 February 2010 to discuss and defend his theories.

to the *Journal of Consciousness Studies*, which devoted an issue in 2005 to evaluating his empirical research (volume 12, issue 6). Much of the debate about Sheldrake's work so far has been focused on methodological questions, and whether they do actually support the sense of being stared at (or *scopaesthesia*, as Carpenter suggested in the special issue that it should be called). As would be expected, a variety of strong views were expressed about the validity of Sheldrake's empirical claims. My own assessment is that the data are sufficiently suggestive to warrant further investigation, albeit inconclusive at the present time (a view with which Sheldrake would probably not disagree).

Less attention has been given to explaining *scopaesthesia*, assuming the reality of the phenomenon is confirmed. This represents a significant theoretical challenge, as the phenomenon, if real, is not readily compatible with current paradigmatic assumptions about perception, which are based on the view that perception is an intro-missive process. Various alternative explanations of *scopaesthesia* were proposed in the Special Issue, one of the more interesting suggestions being that of Clarke, drawing on the physics of consciousness. However, it would be beyond the scope of this paper to consider the full range of possible explanations. Rather, the purpose here is to make a careful assessment of the originality and coherence of Sheldrake's own theoretical position, which has been developed, cumulatively, over more than twenty years, and to suggest one way of developing it further, if panpsychist assumptions are adopted.

Sheldrake initially came to public attention in 1981 through his claims in *A New Science of Life* that nature has an inherent memory and is itself radically evolving. He carried these ideas further in his second major work, *The Presence of the Past* (1995a), exploring the consequences of his 'morphic fields' hypothesis not only in the chemical and biological realms, as in his first publication, but also in the realms of psychology, society, and culture. In these two books — which constitute his two main theoretical works — Sheldrake set himself against orthodox scientific theories that regard the laws of nature as unchanging. In *Seven Experiments That Could Change the World* (1995b), and in his most recent publication *The Sense of Being Stared At* (2003), Sheldrake has put forward the additional hypothesis that mind is extended.

The first section of this essay will give an account of Sheldrake's concept of morphic fields and examine the difficulties that arise when this concept is extended upwards from the biological level. The second section will examine Sheldrake's concept of extended mind, and raise the question how reductionist it is about mentality. In the third

and final section we will consider a panpsychist metaphysics of field drawing on the work of Joseph Bracken and David Ray Griffin as one possible way that Sheldrake could strengthen his system.

Part I: Morphic Fields

First, it is necessary to examine Sheldrake's understanding of physical and biological fields, and to discuss issues that arise with the generalization of the field concept upward to the social and psychological levels. Sheldrake has taken the concept of morphogenetic fields, that has had an important place in twentieth century biology (see Gilbert, Opitz and Raff, 1996), and developed it in significant ways.

In *The Presence of the Past* Sheldrake defines fields quite generally as 'non-material regions of influence' which are physically 'real' (Sheldrake, 1995a, pp. 97–8), although not directly detectable with our senses. They have a continuous, holistic quality, and cannot be divided. These generalizations hold for the familiar physical fields. However, Sheldrake believes that 'there are many more kinds of fields than those currently recognised by physics' (*ibid.*, p. 99) which can also fall under this broad definition. The biological *morphogenetic* fields, which he appeals to, in addition to the known physical fields, are defined as follows: 'A [biological] *field* is the condition to which a living system owes its typical organization and its *specific* activities... the action of the fields... produce spatial order' (*ibid.*, p. 100).²

On the one hand, Sheldrake claims that 'the field concept implies the existence of *profound analogies* between the organizing principles of the biological realm and the known fields of physics' (*ibid.*, my italics). The idea of fields producing spatial order is especially important here. On the other hand, he is preserving and developing some of the key features of the vitalist notion of 'entelechy'. In particular, Sheldrake maintains the idea that fields are capable of self-organization and goal-directedness, as well as playing a unique causal role in guiding the systems under their influence towards characteristic patterns of organization. These features of morphogenetic fields are absent in the idea of 'field' as traditionally defined by the physicist.

The same is true of Sheldrake's further suggestion that they evolve and have an inherent memory, can be influenced by what has happened before, and build up habits within themselves. 'If morphogenetic fields contain an inherent memory, their evolution can be conceived of in a radically different way... They evolve *within* the

[2] This is Paul Weiss's definition, cited approvingly by Sheldrake.

realm of nature, and they are influenced by what has happened before. Habits build up within them... The idea that morphogenetic fields contain an inherent memory is the starting point for the hypothesis of formative causation' (*ibid.*, p. 107; *cf.* pp. 116, 114, 300–1). This is Sheldrake's concept of 'morphic resonance', a new type of 'formative' causation irreducible to the recognized energetic sort, which he introduces to explain how biological forms can be inherited. 'Biological forms are repeated not because they are determined by changeless laws or eternal Forms, but because of a *causal influence from previous similar forms*. This influence would require an action across space and time unlike any known type of physical action' (Sheldrake, 1981, p. 93, italics original).

Sheldrake invites his readers to think of morphic resonance by analogy with energetic resonance; like the latter, it takes place between vibrating systems although the analogy is only very approximate since morphic resonance does *not* involve a transmission of energy (*ibid.*, p. 95).³ This results in a further difference from energetic vibration, i.e. that it is not necessarily attenuated by spatial or temporal separation since, 'it could be just as effective over ten thousand miles as over a yard, and over a century as an hour' (*ibid.*, p. 96). However, this general *prima facie* lack of analogy between physical and putative morphogenetic fields from a traditional viewpoint is not a problem for Sheldrake's theory because of his prior metaphysical assumptions. Sheldrake is committed to a radical evolutionism and a general Whiteheadian organicism, and therefore does not subscribe to the traditional definition of field as eternal and utterly devoid of mentality.⁴ According to Sheldrake, the physical fields evolve too, and have their own sort of very rudimentary memory and goal-directedness. Contrary to the initial impression that Sheldrake's choice of the word 'field' can make on the reader, who is probably inclined to think first

[3] 'What is being suggested here is that by morphic resonance the form of a system, including its characteristic internal structure and vibrational frequencies, becomes *present* to a subsequent system with a similar form; the spatio-temporal pattern of the former *superimposes* itself on the latter' (Sheldrake, 1981, p. 96).

[4] Sheldrake has a commitment to 'an evolutionary vision of reality at every level: subatomic, atomic, chemical, biological, social, ecological, cultural, mental, economic, astronomical, and cosmic' (1995a, p. 3). On his intellectual debt to Whitehead: 'In Whitehead's phrase, organisms are "structures of activity" at all levels of complexity. Even subatomic particles, atoms, molecules, and crystals are organisms, and hence in some sense alive. From the organismic point of view, life is not something that has emerged from dead matter, and that needs to be explained in terms of the added vital factors of vitalism. *All* nature is alive. The organizing principles of living organisms are different in degree but not different in kind from the organizing principles of molecules or of societies or of galaxies. "Biology is the study of the larger organisms, whereas physics is the study of the smaller organisms", as Whitehead put it' (*ibid.*, pp. 54–5).

of the fields of physics, Sheldrake is not generalizing upwards from physical fields as traditionally understood but rather starting from biological 'fields' and generalizing upwards and downwards from there (see Sheldrake, 1981, p. 115; 1995a, p. 300). This means, for example, that Sheldrake understands the physical fields as lower forms of biological fields, having not only organizing properties but also very rudimentary memory, duration, and goal-directedness (and thus a degree of mentality).⁵ On this basis he can claim to find 'profound analogies' between physical and biological fields. If we set aside the fact that he defines 'field' in a way that is different from common usage, Sheldrake's incipiently panpsychist metaphysic is, at least at the levels of physics and biology, a perfectly workable one.

A potential difficulty, however, arises when Sheldrake tries to apply the concept of the morphic field to levels above the biological one at which it was first thought out. An example of such a difficulty is Sheldrake's handling of the problem of consciousness. Sheldrake appears to take qualia seriously in his account of mentality since he distinguishes 'conscious mental activity' from behaviour and postulates an additional type of field — *mental* fields — to account for the former. 'Behavioural fields organize our habitual activities, and usually do so without our being conscious of them. However, conscious mental activity, such as that involved in thinking out alternative courses of action, does not necessarily involve overt behaviour... The fields that... are associated with this mental activity are therefore different from behavioural fields and can more appropriately be described as mental fields, rather than behavioural fields' (Sheldrake, 1995a, p. 199).

An important issue that arises in applying the field concept to the psychological level is whether *qualia* (amongst other things) are non-spatial; only if they are spatial can they be 'in', and organized by, a 'mental field' (which has a *spatial* connotation). The difficulty here seems to be that Sheldrake is seeking to generalize a biological concept — morphogenetic/behavioural field — which is perhaps adequate to explain the genesis of (spatially extended) organic forms and the behaviour of their possessors, to cover psychological phenomena, which seem necessarily inextended (or at least not to have the kind of extension that organic bodies have).

[5] Sheldrake accounts for how physical entities *seem* to be changeless and utterly without duration as follows: 'In the case of morphic units which have existed for a very long time — thousands of millions of years in the case of the hydrogen atom — the morphogenetic field will be so well established [through morphic resonance] as to be effectively changeless' (Sheldrake, 1981, p. 104).

Another important question arises regarding the origins of these fields. Sheldrake prefers a metaphysical agnosticism on this point. He states, '[f]ields of new kinds of organisms *must* somehow come into being for the first time. Where do they come from? Perhaps they do not come *from* anywhere, but somehow arise spontaneously. Perhaps they are organised by some "higher" kind of field. Or perhaps they represent a manifestation of pre-existing archetypes which until then were entirely transcendent' (*ibid.*, p. 114).⁶

However, despite his professed agnosticism, the 'spontaneous' option seems to be the one which fits most elegantly with Sheldrake's belief in the fundamental reality of time, since the hypothesis of a pre-existing 'higher' type of field or pre-existing archetypes could only be defended at the expense of setting limits to his apparent commitment to radical evolutionism: the world would evolve, but the ultimate cause or causes of the world would not. Because of the reality of time, if Sheldrake wants to adhere strictly to a radical evolutionism, pre-existing archetypes and a prior 'higher' type of field are ruled out *ex hypothesi*.⁷

Although Sheldrake is agnostic about the origin of novelty, then, it would be most consistent with his commitment to a thorough-going temporalized metaphysics to rule out prior conscious causation as the cause of new forms. At times this seems to be the direction in which his thought moves. He writes that conscious causation 'cannot account for the major motor fields in the context of which it is expressed, nor can it be regarded as a cause of the characteristic form of the species. Still less can it help to explain the origin of new forms in the plant kingdom. So the problem of evolutionary creativity remains unsolved' (Sheldrake, 1981, p. 205).

Part II: Extended Mind

We turn now to Sheldrake's more recent extended mind hypothesis (it should be noted here that Sheldrake uses 'extended mind' in a different sense from that of Chalmers and Clarke — see Menary, 2010 — who use it to refer to an active externalism that emphasizes the active role of the environment in driving cognitive processes). Sheldrake argues that extended mind can adequately explain both ordinary human

[6] One motivation for this position is the fact that these questions cannot be dealt with experimentally (see Sheldrake, 1981, p. 93).

[7] On this point there are important differences between Sheldrake's perspective and the more rigorous development of the morphogenetic paradigm suggested by the biologist Brian Goodwin. Note particularly *Form and Transformation* (Goodwin and Webster, 1996).

(and animal) perception as well as more unusual forms of apparently extrasensory human (and animal) perception, such as the sense of being stared at, telepathy, and precognition; all of which have hitherto been firmly ignored by the scientific mainstream. He proposes that we broaden our idea of sensory perception to make room for these peculiar but apparently quite real capacities.

There is, of course, a great deal of controversy around whether extrasensory perception occurs at all (see Henry, 2005), and Sheldrake's more sceptical critics have tried to fault his supposed demonstrations of the occurrence of such extrasensory perception on various methodological grounds. Sheldrake has responded cogently to these criticisms, though opinion remains divided about whether or not his empirical work is convincing. Whilst these methodological issues are important, the purpose of this paper is the somewhat different task of assessing the coherence of Sheldrake's theories.

The main features of Sheldrake's extended mind are evident in his treatment of memory in his main theoretical work *The Presence of the Past*, but the concept makes its first fully fledged appearance in his *Seven Experiments That Could Change the World* and is discussed more fully in *The Sense of Being Stared At*. In these two works, Sheldrake postulates that human (and animal) minds are extended, and he makes it clear that his extended mind theory is supposed to transcend both reductive materialism and dualism in favour of a third option. He therefore sees his extended mind hypothesis as a contribution to the contemporary mind-body debate. As Sheldrake often reminds his reader, however, the theory is still only very incompletely worked out, so one should not expect the same kind of detailed account of extended mind as one finds with morphic fields.

Although Sheldrake claims in *The Sense of Being Stared At* that extended mind also makes better sense of ordinary perception, the chief motivation in postulating the theory seems to have been his wish to account for various unexplained human (and, he claims, animal) abilities such as telepathy, the sense of being stared at, and purported premonitions, which he regards as 'not paranormal, but normal, part of our biological nature' (Sheldrake, 2003, p. ix). His interest in the parapsychological extends back at least as far as his *A New Science of Life*. In the first chapter he fleetingly suggests that the 'unsolved problems' of parapsychology may find some sort of explanation in terms of morphic fields (Sheldrake, 1981, pp. 28–9). In *The Presence of the Past* he also makes brief references to telepathy and similar phenomena (1995a, p. 221). His fullest treatment of these phenomena, which he explains (along with ordinary perception) in terms of extended

mind, is to be found in *The Sense of Being Stared At*. The basic claim of Sheldrake's extended mind hypothesis is that minds 'stretch out into the world around bodies', and that this extension happens 'through fields that link organisms to their environment and to each other' (Sheldrake, 2003, p. 9). In this respect, Sheldrake's hypothesis is an extension of his theory of morphic fields.

In *The Sense of Being Stared At* Sheldrake classes *mental* fields, along with morphogenetic and behavioural ones, as a subtype of the general class of morphic fields. After having briefly run through examples of morphogenetic and behavioural fields, he defines mental fields in the following way:

Morphic fields also underlie our perceptions, thoughts and other mental processes. The morphic fields of mental activities are called mental fields. Through mental fields, the extended mind reaches out into the environment through attention and intention, and connects with other members of social groups. These fields help explain telepathy, the sense of being stared at, clairvoyance and psychokinesis. They may also help in the understanding of premonitions and precognitions through intentions projecting into the future. (Sheldrake, 2003, p. 277)

These mental fields are said to be 'rooted in the activity of brains, but... far more extensive than brains' (*ibid.*). Although Sheldrake does not say so explicitly, we should presumably assume that 'rooted' implies some sort of dependence relation between mental fields and the brain. He furthermore notes that mental fields 'contain an inherent memory, through morphic resonance. They also project out far beyond the brain through attention and intention' (*ibid.*). Critics of Sheldrake's position might suggest that he is denying the reality of the mind-brain link, but this does not seem to be the case. He appears to be making emergentist assumptions in saying both that the mind is rooted in the brain, and that it transcends its origins in the brain, in particular in terms of extension.

In order to further help us to grasp this novel concept of mind, Sheldrake suggests that we think of mind metaphorically as functioning like the single-celled amoeba. 'Amoebas move around by sending out projections into the world around them. These are called pseudopodia... [t]he pseudopodia project out in any direction... Some projections can be retracted while others form, stretching out in a different direction' (*ibid.*, p. 261). Sheldrake further points out that amoeba-like cells are also part of our own cellular make-up, and mentions the amoeboid behaviour of the macrophage white blood cells and particularly the nerves, which 'have enormously elongated pseudopod-like projections, which serve as the nerve fibres that

conduct nerve impulses' (*ibid.*, p. 262). He then implies that there is a profound similarity running from single-celled amoebae through the amoeboid cells of human bodies up to mentality itself. 'It is no coincidence that the mind is rooted in networks of nerve cells, with pseudopod-like axons stretching out far beyond the main part of the cell body. The mind in turn is capable of sending out mental pseudopodia into the world beyond the body, and is forming networks of interconnections with other minds' (*ibid.*).

'It is no coincidence' would seem to suggest that despite his invitation to the reader to think of mind metaphorically in terms of amoebae, Sheldrake does not see the relation between the two as merely metaphorical. He seems to see real analogies between amoebae, amoeboid cells in the human body, and mentality, so that the 'aboutness' or intentionality which is characteristic of consciousness could somehow be thought of as a higher-order version of the projections of pseudopodia we can observe at the cellular level. 'In visual attention, the mind is focused on a particular person, animal, plant, machine, place, object, or field of view. A visual pseudopodium reaches out from the body to touch the object of attention and, by doing so, affects it. Of course visual pseudopodia shoot out very fast, in the twinkling of an eye' (*ibid.*, p. 263).

Sheldrake claims that images are projected 'outside our heads' via mental fields. Much of Sheldrake's explanation of how this projection takes place rests on his revival of an older theory of visual perception. Sheldrake begins by agreeing with the contemporary theory of visual perception, acknowledging that vision is to be explained by an inward movement of light, the lenses of the eyes then focusing the light and forming upside-down images on the retina. But then he suggests that after the inward movement of light into the eyes there is an 'outward projection of images' (*ibid.*, p. 11). Vision is a two-way process. The first part involves the reception of light into the eyes, and via the nerves to the cells of the brain. During this process, we suppose, the mind creates images out of this information. Then, in a second part, the mind somehow projects these images out to where the object which was initially perceived is, and this has an evolutionary advantage for us in helping us orientate ourselves in the world. Sheldrake supports this conclusion through a set of experiments that purportedly show that people can 'feel' when they are being stared at.

Notice again the heavy reliance upon spatial language in this account. Through these spatial descriptors such as 'outward projection', 'fields', and 'mental pseudopodia' Sheldrake is attempting to naturalize 'extrasensory' perception by broadening the definition of

sensation to include what he sees as hitherto underappreciated faculties of perception. However, this approach raises a number of issues.

Sheldrake plainly wants to avoid the strong reductionism of the typical scientific theories of perception that fail to explain the *experience* of perceiving (*ibid.*, p. 201). However, Sheldrake's tendency to describe mental phenomena in terms of some sort of physical extension could, if not handled carefully, lead back to a conflation of the physical and the mental. Some projection theorists of consciousness stress that the mental 'projection' they describe is metaphorical, whereas Sheldrake sees mental projection as more literally extended in space; his position here is similar in some ways to that of Velmans (e.g. 2008). Sheldrake gives an account of projection and qualia as though they were essentially similar to phenomena studied by biology, such as amoebae and amoeboid cells in the human body, which physically stretch out.⁸ Yet there seems to be a critical disanalogy between the two. Whilst the amoeba can only extend its pseudopodia and make contact with something which is actually there — its making physical contact with *x* logically entails *x*'s existence — the fact that I am thinking of or desiring a centaur does not logically entail the (extramental) existence of that centaur; the existence of a mental object does not seem to require its extramental existence in the same way that touching a physical object seems to require its existence.⁹

Consider the question of privacy of mind as well. Sheldrake's claim that 'the images of the things we see around us are just where they seem to be: outside our heads' (Sheldrake, 2003, p. 206) seems to imply that images exist in external, intersubjectively checkable reality. This is difficult to understand, for in this case we should all be able to see the images 'in' each other's minds, which clearly contradicts the commonly recognized criterion of mental states — that direct access to any given state of the former kind is enjoyed by a single subject, the person to whom the mental state is occurring.¹⁰

[8] Philip Clayton notes that 'science cannot reduce higher-level phenomena to lower-level explanations; it cannot explain wholes in terms of the parts alone; it cannot use physical explanations to exhaustively explain biological or psychological phenomena' (2004, p. 47). Similarly, Sheldrake cannot use biological explanations to exhaustively explain psychological phenomena.

[9] Franz Brentano made this feature of mentality (the 'intentional inexistence' of psychological phenomena) the main criterion for separating the mental from the physical (see Kim, 1996, p. 21). Ralph Ellis makes more or less the same objection to Sheldrake's construal of the mental in his own critique of the latter's extended mind hypothesis, pointing out that 'phenomenologists are very careful to make and clarify the distinction between physical objects and intentional objects as they appear to us' (Ellis, 2005, p. 85).

[10] On the 'privacy' or 'first-person privilege' criterion of mentality, see Kim (1996, p. 16).

This is not to say that the analogies that Sheldrake is drawing between biological and mental domains should be discarded, but merely that there are complexities here that need to be handled carefully. An adequate account of the mind must encompass both first- and third-person description, whereas the idea of a 'field' along with the other spatial descriptions that Sheldrake uses seem to be exclusively third-person type descriptions.¹¹ Thus, claims like 'trying to understand minds without recognising the extended fields on which they depend is like trying to understand the effects of magnets without acknowledging that they are surrounded by magnetic fields' (Sheldrake, 2003, p. 207) should be taken with caution, for when we observe the effects of magnets we do so from a third-person perspective (i.e. noting the 'behaviour' of the magnet and, say, the iron filings in its immediate environment, from which we can infer that an invisible and intangible but nevertheless real field is having a causal influence on it). The problem here seems to be that consciousness must be known 'from the inside' and it is a difficult task indeed to adapt these third-person, spatial descriptions for that task.¹²

It should be noted, however, that Sheldrake has important reasons for describing these mental phenomena in a naturalistic manner. He is aware that one of the main presuppositions which militates against the inclusion of such phenomena into a 'scientific' account of reality is the preference for impact causality — the belief that any sort of 'action at a distance' (i.e. not between contiguous physical objects) is impossible. He is attempting to eliminate the necessity for a dualist account of paranormal perception by suggesting that there are extra *senses* which we use (consciously or unconsciously) to perceive objects at a further distance from us than would be picked up in the range of the ordinary senses. Sheldrake's extended mind seems to be an attempt to overcome the resistance to taking parapsychological data seriously by suggesting that minds extend out within fields to 'touch' objects at a distance, so that the mind can be said *not* to have truly acted at a distance, but to have literally gone to the object it intends and 'touched' it. Thus he can claim that paranormal phenomena imply 'a kind of sensory system over and above the known senses, but a sense just the same. As a sense, it is rooted in time and place; it is

[11] Cf. Clayton: 'any account of consciousness faces two major challenges. It must explain what role brain structures and processes play in higher order cognitive functions, and it must account for our own lived experience of the conscious life' (2004, p. 117).

[12] Chris Clarke has further critiqued this analogy arguing that, unlike magnetic fields, Sheldrake's 'mental fields' can only be said to be descriptive rather than explanatory (Clarke, 2005, pp. 80–1).

biological, not supernatural. It extends beyond the body, though how it works is still unknown' (Sheldrake, 2003, p. 4). This approach provides Sheldrake with a potentially persuasive way to begin to acknowledge these phenomena within the traditional scientific paradigm.

Yet, this approach to mental causality may in itself also have its problems. C.D. Broad, in his essay *Normal Cognition, Clairvoyance and Telepathy* (1953), raises the reasonable question of how we know whether extrasensory abilities resemble anything like a sensation in the first place. As Sheldrake himself points out, these abilities 'seem to be in a different category both from the five normal senses, and also from so-called sixth senses based on known physical principles' (2003, p. 5).¹³ But in that case, what justifies the analogy? If, for example, we can know the identity of a certain card in the middle of a sealed pack of cards in an extrasensory way, is it meaningful to say that we 'sense' the card? And how intelligible is it to suppose that mind extends one of its pseudopodia and knows the identity of that card by making contact with it? Broad has the following to say about such a case:

Unless clairvoyance be analogous to a physically emissive form of sense-perception, like sight or hearing, it can hardly be analogous to *any* form of normal sense-perception. If we tried to compare it with touch, we should have to suppose that the clairvoyant's body is provided with invisible and intangible organs, supplied with sensitive spots on their surface and with conducting nerves. We should have to suppose that he can thrust these out and poke them between two cards which are, and remain throughout the experiment, visibly in continuous contact with each other. And we should have to suppose that the square areas on the card which differ from the background by selectively reflecting red-stimulating light-waves also differ from the background by giving a special kind of stimulus to the sensitive spots on this quasi-tactile organ. It seems hardly worth while to linger over these fantastic suppositions, or to consider what others might be needed in addition to them. (Broad, 1953, p. 43)¹⁴

Furthermore, our ordinary experience of sensation involves the idea of limitation: objects can get in the way of our sensing something, distance can make a difference, etc. However, with psi — and especially with super-psi — our abilities can seem semi-omnipotent.

[13] By 'sixth sense' Sheldrake means the electrical and magnetic senses of animals, such as the electrical fields some species of eels can generate around themselves, etc.

[14] It is to be noted, however, that Broad is also unsatisfied with dualist 'solutions': 'Perhaps some psychological researchers will welcome these conclusions. They will remind us that they have always insisted that clairvoyance cannot be analogous to any form of sense-perception... I cannot share their satisfaction. Have those who believe that clairvoyance occurs, and deny that it is analogous to any form of sense-perception, any positive notion of its psychological nature or its *modus operandi*?... If they have not, they are just postulating what Locke would have called "a something, I know not what"' (Broad, 1953, p. 43).

These difficulties have not escaped the notice of some of Sheldrake's critics. William Braud (2005), for example, has suggested that there is no particularly good reason why the sense of being stared at should be understood as involving a form of sensing rather than a form of direct knowing.¹⁵ In this respect he revives C.D. Broad's position, but he adds a powerful piece of corroborating evidence in favour of it; namely, laboratory findings that staring detection can occur even when the staree is viewed *indirectly*, via one-way mirrors or closed circuit television. The idea that one's extromissive stare or 'beam of vision', as it were, could travel out of the eye, through a television screen, and then somehow pass out through the lens of a CCTV camera to touch its object is highly implausible, so a more traditional account in terms of direct knowing seems the preferable candidate for an adequate explanation of what Braud prefers to call 'staring detection'. Furthermore, Braud detects 'a general discomfort with action at a distance' in Sheldrake's extended mind account. According to Braud, we are 'strongly disposed to fill [gaps in observed phenomena] with bridging, continuously connecting processes such as material substances, channels, and "energies"' (Braud, 2005, p. 68). However, if the laboratory investigations of staring detection using CCTV cameras are genuinely as significant statistically as Braud reports, and provide good evidence for the occurrence of such phenomena, this suggests that Sheldrake's explanation of staring detection in terms of an extramissive mental projection which physically touches its object is otiose: one only need posit some sort of remote attention or intention, as Braud proposes. Indeed, the investigations using CCTV cameras suggest that staring at somebody is not the principle cause of that person feeling 'stared' at, but rather the consciousness-related processes of attention and intention. On Braud's reading the (misnamed) sense of being stared would be continuous with other forms of deployment of attention such as distant healing, etc.

Sheldrake's hypothesis, by contrast, rejects 'direct knowing' as an explanation of such phenomena and (in Braud's terms) fills the gaps with bridging. Indeed, if we consider the history of the interpretation of parapsychological data we can see that Sheldrake's extended mind hypothesis bears a certain resemblance to theories which interpreted these recalcitrant data in terms of an expanded physicalism.¹⁶ As Alvarado (2003) has pointed out, there is a long tradition in psychical

[15] See also A.P. Atkinson's critique of Sheldrake's description of remote staring as a sense, which Atkinson regards as a misnomer (Atkinson, 2005, p. 50).

[16] Of course, Sheldrake is far from endorsing eliminative materialism — in fact, he suggests that psi phenomena constitute an independent means of falsifying the mind-brain identity

research of offering (expanded) materialist explanations of such phenomena. Those who offered such explanations were not materialists who believed that all phenomena will eventually be explained only in terms of those physical processes which we are presently aware of. Rather, they believed that all phenomena will eventually be explained in terms of physical processes, some of which we may/will only discover in the future. Sheldrake is certainly not a materialist of the former sort, but in certain respects he bears some resemblance to one of the latter sort. At the very least, his extended mind hypothesis has a family resemblance to many of these older theories.

Still, it seems clear that all of these issues are really more *potential* weaknesses of Sheldrake's system, rather than fully fledged flaws. Sheldrake's account of mind could be taken in a reductive direction, but it need not. Our task in the final section is to illustrate a fruitful way that this danger could be avoided.

Part III: Developments

In the previous two sections of this essay we have considered Sheldrake's morphic fields and extended mind hypotheses, and have suggested some potential tensions in both accounts. In this final section we suggest that Sheldrake might avoid these dangers through constructing a pansychist metaphysics of field.

As we have noted above, Sheldrake acknowledges a debt to pansychists such as Bergson and Whitehead. In a review of Sheldrake's *A New Science of Life* the prominent pansychist David Ray Griffin described Sheldrake's position as having 'many affinities with Whitehead's organismic philosophy' and as 'offer[ing] several ways in which some of the distinctive implications of organicism can be empirically tested' (Griffin, 1982). Griffin furthermore notes that if Sheldrake brings about his revolution in biology, 'this change in the scientific paradigm would make views of the Whiteheadian sort much more natural than they seem from the viewpoint of the mechanistic paradigm', and he additionally believes that Sheldrake's hypothesis, if confirmed, 'would provide strong empirical support for many of Whitehead's central ideas, including some implications of his position to which Whiteheadians thus far have not paid much attention, i.e., that aspect which allows for so-called paranormal phenomena' (*ibid.*).

In 1988 Griffin included a summary by Sheldrake of the morphic fields theory in his edited volume *The Reenchantment of Science:*

theory. One of Sheldrake's motivations in appealing to extrasensory perception seems to be to show that eliminative materialism cannot be true.

Postmodern Proposals, in which he sets out to argue that the contemporary disenchanted world-view can only be defeated by overcoming mechanism in science (this is, in fact, against the grain of Sheldrake's favoured position of metaphysical agnosticism, the main feature of Sheldrake's thinking with which Griffin takes issue). The early Sheldrake seems to endorse the idea that one only needs to point out the inherent limitations of science and leave the larger questions to metaphysics. In contrast, Griffin argues that the 'problem with this solution is that the ideal of an "inherently limited science" does not work in practice. Science is inherently not only realistic, trying to describe the way things really are, but also imperialistic, bent on providing the only genuine description' (Griffin, 1988, p. 6). Griffin disagrees, then, that Sheldrake's theories have no metaphysical implications, and we can infer that he would want to persuade Sheldrake that the implicit metaphysics of his scientific theories was panpsychist.

Sheldrake himself is more reluctant to state a metaphysical position, and claims that his theories are compatible with more than one metaphysical position. In *A New Science of Life*, for example, he suggests that his theory of morphic fields is also compatible with a modified (i.e. non-reductive) materialism. However, his modified materialism also turns out to involve including morphic fields within the concept of matter (on the grounds that they are associated with material systems), expanding the current definition of the word (which, as Sheldrake points out, has no fixed meaning) to accommodate them. Permitting morphic fields (which are said to have memory) to count as material entities implies substantially rethinking the traditional concept of matter such that every entity must have a sentient/mental dimension, if only in a very rudimentary way. This move seems to blur the boundaries between materialism and panpsychism, so that it is probably best regarded as a nascently panpsychist position.

The parallels between Sheldrake's theories and standard panpsychist positions are not far to seek. Sheldrake, like the panpsychist, rejects idealism, dualism, and traditional materialism. He also has a concept of matter (into which he has incorporated morphic fields) that is devoid neither of experience nor spontaneity. Griffin has noted that Sheldrake's widening of the definition of matter to include morphogenetic fields (i.e. a new type of non-energetic causation) is similar to Whitehead's widening of the notion of 'physical existents' so that the 'creativity' of an actual occasion is not thought of as exhausted by the physicist's energy (Griffin, 1982). Moreover, Sheldrake believes (again like the panpsychist) that this broader understanding of matter can solve (or at least mitigate) the traditional mind-body difficulties

which confront both dualists and traditional materialists without involving any appeal on his part to the supernatural. Like the Whiteheadians, he assumes that both materialists and dualists have failed to solve the mind–body problem because they have both made illicit assumptions about the nature of matter, i.e. as devoid of experience, spontaneity, and temporality (Griffin, 2000, p. 165).

A second parallel, and one which Griffin particularly stresses in his review of *A New Science of Life*, is Sheldrake's concept of 'morphic resonance', which implies a kind of causality which can act *across space and time*. This theory, as Griffin notes, is the stuff of parapsychology, but nevertheless Whitehead's philosophy 'supports Sheldrake even here. Whitehead refers positively to telepathy and says that "action at a distance" should be expected' (Griffin, 1982). Moreover, Griffin notes that an additional element in Sheldrake's morphic resonance hypothesis — that the more often a particular form is repeated, the stronger its effects — seems to find a close parallel in Whitehead's view that 'the uniformity [of a form/forms] along the historic route increases the degree of conformity which that route exacts from the future' (*ibid.*, p. 38).

Thirdly, Sheldrake (like Griffin and other panpsychists) also recognizes the fundamental nature of temporality, which commits him to the corollary (a familiar panpsychist doctrine) that 'laws of nature' are simply '*habits of nature*' (Griffin, 2000, p. 178). This prompts a hierarchical view of reality as consisting of multiple levels, each of which differs only in degree and not in kind from its neighbouring ones. This positions him in the tradition of process thinking represented by Bergson. As Griffin notes:

A crucial event in the history of th[e] solution to the mind–body problem... occurred between the first and second books published by Henri Bergson. In his first book, *Time and Free Will* (1889), Bergson articulated an absolute dualism between physical nature, which was described as spatial but nontemporal, and the mind, which was described in terms of temporal duration. Bergson soon realized, however, that this made the interaction of mind and matter, which he presupposed, unintelligible. In his next book, *Matter and Memory* (1896), he overcame this dualism by attributing a primitive memory and thereby temporal duration to that which we, from without, call matter. The ultimate units of the universe, in other words, are not purely spatial bits of matter but spatial-temporal events, with temporal as well as spatial extension. With the dualism overcome, mind–body interaction could be understood as a purely natural occurrence. (Griffin, 2000, p. 169)

Likewise Sheldrake sees matter as fundamentally temporal and evolving, undergirded by memory.

Despite these similarities, there are a number of features of Sheldrake's thought which do not fit quite so neatly within a panpsychist — or for that matter a non-reductive physicalist — framework. In particular, his generalization upwards of a biologically focused concept of field is potentially reductionist in a way neither the non-reductive physicalist nor the panpsychist can countenance. Nancey Murphy argues that '[i]f we take the hierarchy of levels to include the moral and the social (with its political, economic, legal dimensions) we can see that we will have here a vast array of concepts that most philosophers would agree are not logically reducible to neurological variables' (Murphy, 1998, p. 137). Sheldrake, however, tends to generalize lower level (biological) concepts upwards, which results in a biological reductionism; unlike Murphy, who claims that at the psychological level we can 'only make causal sense of a series of human actions by attending to the mental-level description, which includes reasons, judgments, and so on' (*ibid.*, p. 139), Sheldrake believes that we can also make causal sense of a series of human actions by offering a description of them in terms of *fields* rather than in terms of reasons, judgments, etc. Admittedly his higher fields do not simply reduce to lower ones, but at the same time he does not recognize discrete levels of explanation, tending to give explanations, for example, not in terms of folk psychological explanations but in terms of (motor and mental) fields. This is unsatisfactory as much from a panpsychist as from a non-reductive materialist standpoint, since whereas the former differs from the latter in believing that a general description (starting at the level of human mentality) can be offered which is valid at all levels, they both agree that higher descriptions cannot be reduced to lower ones, whether physical or biological.

One way to deal with this issue, as well as with the related tensions noted in the earlier parts of this paper, is through reformulating the theory in a manner that is more consistently panpsychist. In doing this Sheldrake could make use of the work of the Christian philosopher Joseph Bracken's refashioning of Whiteheadian process philosophy in terms of field. This, along with Griffin's panpsychist incorporation of parapsychological data, would offer Sheldrake a reasonably consistent panpsychist metaphysics which preserves the main elements of his theories. In what follows we will outline Bracken and Griffin's positions and show how they could provide a metaphysical framework for Sheldrake's theories.

To begin with we will look at Bracken's interpretation of the key Whiteheadian concept of 'society' in terms of field and argue that it helps to overcome what we have suggested is an unwitting tendency

towards biological reductionism in Sheldrake's present field concept. Bracken's *The One in the Many* (2001), offers 'a somewhat modified version of the process-relational philosophy of Alfred North Whitehead', seeing Whitehead's philosophy as the best starting-point for a specifically 'social ontology' (Bracken, 2001, p. 2). Although Whitehead himself retained the classical stress on *individual* entities as the basically real things, Bracken points out that 'these momentary subjects of experience are rarely found except in combination as members of temporally and spatially organized "societies"' (*ibid.*, p. 3). Bracken foregrounds the latter concept of 'society', claiming that Whitehead's thought can serve as a foundation for a new social ontology 'if one allows for the virtual equiprimordiality of Whiteheadian "societies" with Whiteheadian "actual occasions" within his metaphysical scheme... Within a *bona fide* social ontology one would expect corporate realities to enjoy an ontological priority over individual entities as their constituent members' (*ibid.*). According to Bracken, it is these 'societies' which 'represent the broader social dimension of Whitehead's thought which he seems not to have thought through in all its complexity... societies are the "layers of social order" which inevitably coexist along with the individual actual occasions present in the universe at any given moment' (*ibid.*, pp. 3–4). Bracken identifies these societies with fields, giving a general definition. 'My purpose... will be to propose the notion of field as a philosophical rather than a strictly scientific term. That is,... "field", properly understood, in many ways corresponds to the classical notion of substance as the underlying principle of continuity or endurance within a philosophical cosmology' (*ibid.*, p. 11).

Sheldrake in *The Sense of Being Stared At* gives an account of subjectivity, describing it in terms of biological metaphors of pseudopodia and mental fields modelled on morphogenetic/behavioural ones, that sounds compatible with some forms of reductionism. In contrast, Bracken's fundamental metaphor for his field metaphysic is that of intersubjectivity.¹⁷ Since subjects of experience in dynamic interrelation make up the building-blocks of the universe in Whitehead's philosophy, it therefore also follows that 'even inanimate things are ultimately composed of subjects of experience in dynamic interrelation' (Bracken, 2001, p. 120). Intersubjectivity, therefore, and not morphogenesis/behaviour, is Bracken's starting point and guiding model:

[17] '[I]n view of the fact that for Whitehead "the final real things that exist" are actual entities or momentary subjects of experience, it makes sense to think of his philosophy as involving an implicit logic of intersubjectivity' (Bracken, 2001, p. 120).

Whitehead's broader understanding of intersubjectivity in terms of actual entities in dynamic interrelation is... an unexpected asset for a systematic understanding of the phenomenon of intersubjectivity. Provided that human intersubjectivity in its mode of operation is *basically akin to the operation of intersubjectivity among non-human subjects of experience* (even among the submicroscopic components of inanimate things), one is in a position to think in terms of a metaphysics based on the principle of intersubjectivity rather than simply an anthropology derived from that same principle. (*Ibid.*, pp.120–1, my italics)

Bracken relies on a *kinship* between intersubjectivity at the level of persons and at the lower levels of sub-human subjects to overcome dualism: if intersubjectivity (or being-in-societies/fields) goes all the way up and all the way down, there is, for example, no insuperable difficulty about understanding the interaction of mind and body in the case of humans. Moreover, for Bracken, the fact that intersubjectivity goes all the way up explains the traditional Christian teaching of God's Trinitarian nature. Bracken can 'introduce the logic of intersubjectivity not only between God and creatures but even within the internal reality of God considered apart from creatures... there are three interrelated subjectivities within God who are governed by a logic of intersubjectivity in their relations with one another' (*ibid.*, p. 127).

There are also resources here that Sheldrake could use to develop his concept of morphic resonance (which, as Griffin has suggested, resembles Whitehead's concept of prehension) in a less reductionistic direction, through Bracken's speculations about how fields and entities within fields evolve. Bracken sees fields as layered within one another 'so that the defining characteristics of the broader field of activity nevertheless influence and thereby condition the existence and behaviour of entities located within a smaller, more sharply defined field of interaction' (*ibid.*, p. 148). Unlike Sheldrake, the causality of the mental fields of activity is not described in impact causality terms:

My proposal [is] that the subjectivity as a power of self-constitution is indeed gone (as Whitehead likewise says) but that the feelings remain as part of the encompassing energy-field and thus are available for prehension by subsequent actual entities occupying the same field. Those successor actual entities, accordingly, would prehend at the same time both the feelings emanating from their predecessors in the same society and their 'common element of form' or intelligible pattern of interrelation. (*Ibid.*, p. 153)

Bracken insists that 'the ultimate components of natural systems are actual occasions or momentary subjects of experience *which are context-*

dependent for their internal structure and organization' (*ibid.*, p. 134, my italics). In other words, societies, or fields, *evolve* (to use Sheldrake's term). Bracken notes that 'the field endures as the context out of which each new generation of entities arises and to which each generation contributes its own very modest modification of the pattern which it inherited from its predecessors' (*ibid.*, p. 148). Note the way that this metaphysics of intersubjectivity is able to describe 'field-beings' at a higher than biological level while avoiding the biological reductionism of Sheldrake's theories.

Turning now from Bracken to Griffin, we argue that the latter's panpsychist incorporation of the parapsychological data could additionally supply Sheldrake with a consistently panpsychist (rather than quasi-materialist) way of explaining the phenomena, and thus help him to avoid unwitting reductionism.

Griffin, like Sheldrake, believes that a dualistic explanation of psi must be avoided, but explains the sort of extrasensory perception Sheldrake also sets out to explain in terms of the Whiteheadian concept of prehension. Griffin claims that the power to exert or receive influence at a distance — which he sees as the basic presupposition of extrasensory perception — no longer seems mysterious once one accepts the panpsychist position that the basic units of the world are experiences:

[The] concept [of occult powers of matter] lost repute after the introduction of the idea of matter as devoid of any inside... Given such an account of the ultimate units of nature, it seemed self-evident that causation could only be exerted by contact. Given the idea, by contrast, that every basic unit is an 'occasion of experience', it is not self-evident that causal influence can occur only between contiguous things, because it seems at least thinkable that one experience could receive influence from another distant experience... [i]t may be that all such units do have powers, hidden from outside observers, to exert and receive influence at a distance. (Griffin, 2000, p. 221)

Griffin's explanation of extrasensory perception (and other parapsychological data) in terms of prehension is difficult. Sheldrake himself acknowledges affinities between prehension and his own morphic resonance but finds the former concept 'obscure' (Sheldrake, 1995a, p. 134). Still, it has the advantage over Sheldrake's extended mind theory by avoiding causal reductionism. In contrast to Sheldrake's explanation of extrasensory perception (that the mind extends out to certain parts of its environment, however distant, in a quasi-mechanistic way), Griffin suggests that we are prehending the world extrasensorily (but unconsciously) all the time, whereas only a small

proportion of these extrasensory prehensions rise to the level of consciousness:

Extrasensory prehension is, by hypothesis, occurring all the time: One is always prehending the entire past world, not simply that which is contiguous with one's mind. If that is so, however, one is not consciously aware of most of it. In fact, most people, most of the time, are not consciously aware of *any* of the world beyond their own bodies except that which they have perceived through their senses. If we are indeed prehending the world extrasensorily all the time, at least most of these prehensions do not rise to consciousness. (Griffin, 2000, p. 222)

Griffin accounts for the rarity of conscious extrasensory perception with the following speculation:

There is, as it were, a struggle among our numerous prehensions to survive into the final phase of an occasion of experience, where they will be illuminated by consciousness. Only those objects that have been prehended with the greatest intensity will survive to this phase; the rest are blocked from becoming conscious. Memories and sensory perceptions tend to win out over extrasensory perceptions. (*Ibid.*, p. 223)

This type of explanation of extrasensory perception would seem in many ways to suit Sheldrake better, since it is not only capable of accounting for parapsychological data in a non-reductive way but can also be better reconciled with the panpsychist bent of his earlier field speculations. Sheldrake himself has acknowledged the affinities between morphic resonance and the Whiteheadian concept of prehension, such that some sort of reshaping of the former concept in the light of the latter would be a possibility, which could then form the basis for a revised theory of extended mind.

In conclusion, both Bracken and Griffin provide conceptual resources that can be used to develop Sheldrake's theory, with a more metaphysical concept of 'field' at the level of intersubjectivity rather than of biology, and reinterpreting the parapsychological data in a consistently panpsychist way. This would provide a philosophical conceptuality that would enable the theory both to preserve the concepts of morphic resonance and extended mind within a more explicit metaphysics. As has been observed, Sheldrake's own preference is for avoiding metaphysical commitments at this stage, which is an understandable strategy at an early stage of developing a theory that makes unorthodox assumptions. However, in this paper we have indicated one way in which the theory could profitably be developed if metaphysical commitments were made.

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