

Mindfulness and the Brain: A Christian Critique of Some Aspects of Neuroscience

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Abstract

The aim in this paper is to critique some aspects of neuro-scientific studies on mindfulness and mindful practices. Firstly, because of the often mistaken assumption that it is something totally new; its roots in fact lie in religious and philosophical views which are the antithesis of a Christian worldview. Secondly, because of opposing views of what the mind is, and how the mind relates to the brain, Christians have come under pressure to show how their claims about God are different from those of epileptics and atheists. In order to deal with these issues, this study commences with a brief introduction to the concept of mindfulness, its historical roots and the scientific claims in support of mindful practices. A philosophical critique of physicalism and panpsychism is then offered from a biblical perspective, followed by a discussion of some of the dangers lurking in the neighbourhood of mindful practices. The conclusion is that the philosophical and religious assumptions that underlie scientific views of ourselves and spiritual growth matter enormously; they deserve continual scrutiny.

¹ The views expressed herein are those of the author and do not necessarily represent the beliefs of the South African Theological Seminary.

Introduction

It seems that neuroscience has become a 'hot commodity'. On the one hand, some believe that 'bit by experimental bit, neuroscience is morphing our conception of what we are', which excludes any conception of a human person in terms of an immaterial soul (Churchland 2002:1). On the other hand, there are those who believe that 'neuroscience acts like a magnifying glass, enabling us to see detail about the human condition that we might otherwise overlook' (Thompson 2010:205).

Trends in the fields of mental and physiological health also reveal an increasing interest in neuroscience and the study of spirituality and religion. In such studies, the brain and mindfulness take center stage. A principal claim is that mindful practices have 'life-changing effects' and lead to definite 'psychospiritual transformation' (Beauregard and O'Leary 2007:290; cf. Knight 2008; Lui 2005; Saure et al. 2011; Siegel 2006, 2007a, 2007b; Thompson 2010; Whitesman 2008). The scientific credibility of mindfulness, and the mindful practices associated with it, has consequently grown in popularity as a way to promote better brain function.

Its scientific coverage and increasing popularity among Christians warrant exposé, for at least three reasons. Firstly, it is often incorrectly assumed that mindfulness, and the associated mindful practices are something totally new; its roots in fact lie in ancient religious and philosophical views which are the antithesis to a Christian theistic view of the world. The second motive relates to the following question: what is the mind, and how does it relate to the brain? Thirdly, in light of the two diametrically opposed answers to the above question, Christians have come under pressure to show how their claims about God are

different to those of epileptics, atheists, and people holding different beliefs.

In order to deal with such issues, the study will commence with the presentation of introductory issues (i.e. the concept of mindfulness, its historical roots, and the scientific claims in support of mindful practices). Of importance will be to understand how neuroscientists obtain and interpret data. Attention will then turn to a philosophical critique of materialism and panpsychism from a biblical perspective. Of importance also will be to see why a human person—an immaterial soul—is not a brain, and why it is a mistake to assume that matter can be 'enminded'.² The aim in the third section of this paper is to highlight some of the dangers in the neighborhood of mindful practices.

1. Mindfulness, its Historical Roots, Main Doctrines, and Scientific Claims

Whitesman (2008:12) defined 'mindfulness' as a 'moment-to-moment, non-judgemental awareness', [the] focusing of one's complete attention on what one now experiences, without evaluating, judging, or critically engaging the experience. Sauer et al. (2011:5) explains that 'mindfulness is an old concept; its theoretical roots were formulated by the Buddha...' Buddhism not only developed out of Hinduism (Taliaferro 2009), but shares with both Hinduism and Taoism the common belief in *monism*. Proponents of monism hold that there exists only one reality—the absolute reality. All other realities are aspects or manifestations of this one reality (Momen 1999:191–199). Absolute reality is viewed as an impersonal reality, void of personal features—a typical component of the Christian worldview. Such an understanding

² All types of panpsychists believe that mind somehow inheres in matter, including atoms and subatomic particles, hence the term *enminded* (see Skrbina 2005).

of epistemology entails that all human knowledge is necessarily relative, which means that knowledge about anything is only true from a particular perspective or point of view. One of the aims of Mahayana Buddhism is to 'remove all notions and conceptualizations of the truth' (ibid, 197).

The Buddha, who lived sometime between 566–486 BC, explained the human condition in terms of 'Four Noble Truths.' The fourth truth specifies an eightfold path to freedom from suffering. The seventh path is the path of 'right mindfulness'—the focus of attention and awareness on whatever one may be doing at a certain moment. Krüger et al. (1996:111) stated that 'in Buddhism the ability to develop *full awareness* is a most important step in spiritual growth.' Central to the project of achieving 'full awareness' are mindful practices such as meditation, yoga,³ tai chi chuan,⁴ qigong/qui quong,⁵ visualization, and breath control (Siegel 2006, 2007a, 2007b). The 'Christianised' version of mindful practices are not limited to these practices; they include metallizing (i.e. imagining or visualising), centering (i.e. focusing one's attention on some object—real or imagined), confession, study, reading and writing, and fasting (Thompson 2010).

³ Hunt and McMahon (1988:46) noted the following: 'The average Yoga student in the West is not aware that Yoga was introduced by Lord Krishna in the Bhagavad-Gita as the sure way to the Hindu heaven, or that Shiva, "The Destroyer" (and one of the three most powerful and feared of Hindu deities) is addressed as Yogeshwara, or Lord of Yoga... Nor does the average Yoga instructor mention or likely even know the many warnings contained in ancient Yoga texts that even 'Hatha Yoga [the so-called *physical* Yoga] is a dangerous tool'.'

⁴ The Chinese martial art practiced for both its defense training and its health benefits.

⁵ The Chinese philosophy and practice of aligning breathing, physical activity, awareness with mental, spiritual, and physical health, as well as the development of human potential. It includes aspects of Chinese martial arts and is purportedly the spiritual awakening to one's true nature.

A large body of scientific research suggests that mindfulness has a positive impact on a variety of mental health symptoms, such as stress, anxiety, some personality disorders, chronic pain, substance abuse, and endocrinological and physiological function (Sauer et al. 2011).⁶ The research shows that changing an individual's perception and mindset about reality (even such things as oneself, other people, physical health and mental disorders) improves brain function and one's health. For example, anxiety is not necessarily seen as a problem; it is only a problem if one *thinks* it is a problem. In other words, if anxiety is viewed from a different perspective, one is changing reality (the problem). But what does the brain have to do with mindfulness? How and why did the convergence between brain biology and mindfulness occur?

One issue that has captured the attention of many scientists over the years is whether brain states are associated with consciousness, contemplation, and mystical experiences (e.g. Beauregard and O'Leary 2007; Knight 2008; Siegel 2007b). This is no surprise, considering that Buddhist monks have pursued meditation for about two and a half millennia. The advent of neuroimaging or brain scanning technologies made the study of neuronal states, associated with mystical consciousness, a reality. However, it will be worthwhile to highlight how neuroscientists make inferences about the relationship between the brain and the positive effects of meditation. Three points require mention.

Firstly, neuroscientists cannot study the brain directly (i.e. open a person's skull during meditation in order to observe what is happening in the brain). Rather, such data is obtained by monitoring brain activity, and studying and comparing photo-images of the brain. Secondly,

⁶ See Siegel (2007b) for a summary of these research studies.

neuroscientists cannot determine what a person is actually thinking or feeling during meditation. That information is obtained via self-reports from meditators. This, in itself, indicates the highly subjective nature of data. However, both of the abovementioned methods of data collection are subject to interpretation. Thirdly, and perhaps most importantly, if consciousness and mental states (e.g. sensations, thinking, believing, desiring, judging, or choosing) are immaterial in nature, then neuroscientists cannot see or image it. However, just because the mind cannot be seen does not mean that the mind does not exist, or that the brain and its processes are all there is.

So, how do neuroscientists interpret their data? A number of methods exist, but two interpretations will aid to appreciate its problematic nature. Firstly, from alterations in brain activity (e.g. increased neuronal firings) and various blood flow pathways (often mistakenly interpreted as information flow in the brain), *stems* the interpretation that the mind is either in the brain (i.e. the physical process, since the mind cannot be observed), has emerged from the brain, or, is produced (caused) by the brain (Siegel 2007a, 2007b). This is clearly evident in how the mind is defined. In the words of Daniel Siegel (2006:2): 'The mind can be *defined* as an embodied process that regulates the flow of energy and information' (emphasis in the original). Elsewhere, Siegel (2007:14) said that, 'To visualize this perspective we can say that the "mind rides along the neural firing patterns in the brain" and realize that this firing is a correlation with bidirectional causal influences.'

Secondly, from brain activity and heightened awareness that correlate positive thoughts and feelings, follows the interpretation that meditation has a positive effect on health.⁷ The problematic nature of scientific

⁷ It is a fact that meditation produces brain states not associated with ordinary awareness (Beauregard and O'Leary 2007). For a critical view of the conceptions of

interpretations should therefore be evident. Immaterial things cannot be visualized. What is observed by the neuroscientist is the mind's *action* on the brain, and not the mind itself. Moreover, if a neuroscientist finds regular correlations between a person's mental life, brain activity, and a positive effect on health, then that bears a relevant similarity to the Spirit of God and Creation in Genesis 1:2, which means that those correlations must be unnatural for the scientist, not natural.

2. The Relationship between the Mind and Brain

An introductory remark is in order. Scientific research concluding that a change of a person's perception and mindset (about reality, oneself, and other people) **has** a corresponding effect on physiological health, is no surprise to a Christian. The Bible is unequivocally clear about the relationship between a person's spiritual state (the heart), thinking, and physical health. A few examples will illustrate this truth: 'Be gracious to me, O Lord, for I am in distress; my eye is wasted away from grief, my soul and my body also' (Ps 31:9); 'When I kept silent about my sin, my body wasted away...' (Ps 32:3); 'Anxiety in the heart of man weighs it down...' (Prov 12:25); 'A tranquil heart is life to the body, but passion is rottenness to the bones' (Prov 14:30); 'A joyful heart is good medicine, but a broken spirit dries up the bones' (Prov 17:22); 'For as he thinks within himself, so he is. He says to you, "eat and drink!" but his heart is not with you' (Prov 23:7). The amazing thing about these texts is that the writers achieved this knowledge without understanding the brain. This, together with the scientific fact that no

neuroscientists and their interpretations of brain data, see Rees and Rose (2004), Bennett and Hacker (2003), and Bennett et al. (2007). For a critical analysis of the role of beliefs that underlie interpretations and the confusions related to correlations and the use of metaphors to describe brain data, see Regine Kollek (in Rees and Rose 2004:71–87).

person has access to his/her own brain, makes one wonder whether any knowledge of the brain is necessary for Christians to grow in godliness, or to improve their relationship with other people or God (contrary to what proponents of mindfulness and mindful practices would like us to believe [cf. Thomson 2010]).

In this segment of the article, in light of the question *what are human beings*, I hope to evaluate the materialistic interpretation of the mind and brain according to Matthew 10:28 and 1 Corinthians 2:11. Focus will then shift to panpsychism, the rival view to both materialism (atheism) and Christian theism. The final segment will highlight reasons as to why panpsychist assumptions about consciousness and living matter are erroneous.

2.1. Materialism/physicalism

Who or what is a human person? Is a person an immaterial soul and mental substance, or merely a material brain/body? Neuroscientist Michael Gazzaniga recently estimated that '98 to 99 percent' of 'cognitive neuroscientists share a common commitment to reductive materialism in seeking to explain mental phenomena' (cited by Snead 2007:15; see also Beauregard and O'Leary 2007:x). The term often associated with materialism is physicalism.⁸ Physicalists hold that all existent entities consist solely of matter.⁹ Philosopher of neuroscience, Patricia Churchland (2003:1), expressed the physicalist stance this way: 'The weight of [neuroscientific] evidence now implies that it is the

⁸ Philosophers George Botterill and Peter Carruthers (1999:4) acknowledged that physicalism of one sort or another is now the unquestioned approach in the philosophy of mind.

⁹ A physicalist naturalist would view all existent entities as products of evolution—laws and processes of nature, and chance.

brain, rather than some nonphysical stuff, that feels, thinks, and decides. That means there is no soul ... to spend its postmortem eternity blissful in Heaven or miserable in Hell.'¹⁰ The physicalist stance thus implies an atheistic worldview.

If there is no soul, and if the brain is the thing that feels, thinks, decides, perceives, and creates reality (Siegel 2006:8), what happened to the mind? What is the mind? For psychiatrists Daniel Siegel (2006) and Curt Thompson (2010), the mind is an embodied process. The illustration of water boiling is helpful. The water is the brain, and the boiling process the mind. So the boiling is just another aspect of what is happening in or with the water, but in no way different from it in kind. In other words, the difference between the mind and brain is merely conceptual or imaginary.

To make their case, physicalists need metaphysical identity: whatever can be said of the mind can be said of the brain, and *vice versa*. To put it differently, if something can be said about the soul/mind that is not true of the brain/body, then what physicalists assert about human beings and the brain, is false. In essence, then, persons are not brains at all. Brief examination of two biblical passages will outline the Christian view on the matter,¹¹ and only items considered relevant to the argument will be touched on.

¹⁰ Christian philosopher and theologian Nancey Murphy's (2006:ix) conviction is that we are our bodies. For her neuroscience has completed the Darwinian revolution, bringing the mind into the purview of biology. Thus, human capacities once attributed to the immaterial mind or soul are now yielding to the insights of neurobiology. She asks us 'to accept the fact that God has to do with brains—crude though this may sound' (Murphy: 88, 96).

¹¹ The exposition of the texts is that of the author of this paper, whose specialty is the philosophy of mind. The aim is therefore not to interact with other exegetes of the texts, but to combine a metaphysical understanding of immaterial entities with a plain

2.2. Matthew 10:28

It is important to look first at the context in which Jesus uttered the following words: 'And do not fear those who kill the body, but are unable to kill the soul; but fear Him who is able to destroy both soul and body in hell.' Verse 1 informs us that Jesus 'summoned his twelve disciples' and 'gave them authority over unclean spirits, to cast them out.' One of the warnings to his disciples was the certainty of persecution and suffering (vv. 17–18). However, Jesus did not encourage his disciples not to fear anything (v. 26), but rather, to fear within the correct perspective (v. 28).

The context indicates that there are three types of persons capable of interacting with matter (bodies)—three immaterial, one of which has matter as part of its constitution (the human person). The first kind of immaterial entity is a tormented *disembodied* unclean spirit (demon). Scripture often represents such entities as desiring a body to inhabit (human or animal); since a body is the vehicle through which they manifest themselves (cf. Mark 5:1–15). The second kind of immaterial entity is the *unembodied* Holy Spirit, who does not need a body, but is nevertheless capable of entering one (cf. Gen 2:7; Acts 2:1–4, 38). How that is so is of lesser importance than the fact that it is so. The important point to see is that the metaphysical identity of an immaterial spiritual entity neither depends on, nor is determined by, the material bodies they enter. If this is true of the disembodied devils and the unembodied Holy Spirit, then it is also true of human persons.

reading of the text and, by so doing, to refute claims that an immaterial person is a material body or brain. For insight on the constitutional nature of the soul, see Moreland (1998), and for insight into the 'problem of identity', see Moreland and Craig (2003:192–201), and Loux (2006:97–102).

Seemingly, therefore, physicalists face at least three difficulties, namely, (a) the spirit entities cannot be reduced to, or be equated with, matter, (b) such phenomena cannot be explained scientifically (empirically), and (c) none of the spirit entities 'emerged'¹² from or are caused by matter. The fact is, these spirit entities favour a *substantial self*, different from the body they inhabit. In the light of this, we may infer the following from the teachings of Jesus:

1. There are things that God is able to do to the soul that is beyond the reach of men. Had the soul and body been identical, men who killed the body would likewise be able to kill the soul.
2. The soul and body are further contrasted to express the truth of point 1.
3. It seems that Jesus had a specific purpose for making the distinction between soul and body, namely, it is a matter of life and death.
4. The soul survives the death of the body (cf. Eccl 12:7; Jas 2:26)—there is a destiny awaiting every person after death.
5. The fear of God ought to exceed the fear of the prospect of what men can do to the body.

2.3. Corinthians 2:11

In 1 Corinthians 2:11, the apostle Paul writes, 'For who among men knows the thoughts of a man except the spirit of man, which is in him.'

¹²*Emergentism* is a physicalist explanatory theory of consciousness, mental states and personal agency. Emergentism comprises two theses: (1) there is no such thing as a pure spiritual mental being because there is nothing that can have a mental property without having a physical property, and (2) whatever mental properties an entity may have, they emerged from, depend on and are determined by matter (see Clayton 2004). Both theses are assumed to be consistent with the evolutionary story of how life originated from non-living physical materials.

Even so the thoughts of God no one knows except the Spirit of God.' The analogy of relationship seems clear: the human spirit is to the human body what God's Holy Spirit is to God. A few observations are in order.

Firstly, the word 'thought' in the text is known, in psychology and metaphysics, as a mental state or entity (as also a belief, sensation, desire, and volition); when a person is thinking or knows something, his spirit is in a state of thinking and knowing something. Secondly, a mental state has intentionality, since it is *of* or *about* something beyond itself, and therefore, it has content and meaning. Put another way, the spirit's mental state allows it to know itself and interact with objects in the world. Thirdly, a mental state (e.g. a thought about a spider) is characterised by certain attitudes (e.g. fear in the case of the spider). Fourthly, a mental state, such as a thought, is characterised by self-presenting properties—features of things which a person has direct awareness in him or herself (e.g. the properties of an apple, such as its redness, surface, shape, or taste). Fifthly, and most remarkably, mental states are conscious states of the spirit (or soul). If a person lacks consciousness, then that person will not know what he/she believes, thinks about, desires, touches, feels, or wills.

We can now state the relationship between the spirit and the knowing of its own thoughts as follows:

1. If the human spirit (or God's) has thoughts, then the spirit is necessarily such that whenever a thought is exemplified, it exemplifies the spirit.
2. If the human spirit (or God's) entails thoughts, then the spirit is necessarily such that when a thought is attributed to it, then a capacity (to think) is attributed to it. In other words, when a

thought is attributed to the spirit, then it is reasonable to believe that a thought belongs to it.

This characterisation makes it reasonable to say that if conscious, thinking, self-awareness, and intentionality (knowing what one's thinking is of or about) are essential properties of both the immaterial Spirit of God and the spirit of man, then, they are self-presenting properties. That is, these properties are distinctive properties of a conscious, knowing, and intentional entity, a subject or self, and are therefore describable from a first-person perspective. This means that one can adopt certain attitudes toward objects (e.g. to believe they exist, fear or hate them, even resist them).

If the function of a self-presenting property is to present the objects of mental states to a thinking subject (a self), then one can know directly and immediately what one is thinking, desiring, or feeling at that particular moment. It seems that this is what Paul was trying to communicate in verse 10—he knew the thoughts of God, for he revealed them to him, a spiritual mental person. There is no reason to assume that Paul had to listen to his brain first. It seems that God would have no need to communicate first to one's brain (unconscious matter) before communicating with him/her as an immaterial person. In short, 1 Corinthians 2:11 underlines three truths, namely, (a) private awareness of one's own mental life, (b) direct and immediate awareness of one's mental life, and (c) the existence of an immaterial spirit and mental capacities.

If a person (Joe) is nothing other than a material brain, then none of the abovementioned points would be true. Firstly, Joe would have no access to his brain whatsoever, but he would know that he is feeling pain when pricked with a pin. A neuroscientist may know all there is to know about brains, but still not be in a position of truly knowing what Joe is

thinking, by simply observing and interpreting charts and images of Joe's brain activity. For example, if Joe is thinking about a red rose, the brain scan cannot point out the color red, or the rose, no matter how gifted the interpreter. And yet, there exists a sensation of red in his immaterial soul/mind. The above example indicates that Joe and his mental states are not the same as his body or brain matter, for none of the cited aspects have any material properties (i.e. weight, width, length, density, or elasticity).

So far, the discussion has identified two obstacles to the study of the brain and attempts to image the relationship between the mind (and consciousness) and the brain. First, for physicalists, the question of how consciousness 'emerges' from matter is simply a question about how the brain works to produce mental states, even though neurons (brain cells) are not conscious¹³—even though neurons (brain cells) are unconscious.

The second obstacle is this: consciousness of invisible, immaterial entities is not 'imageable' (i.e. cannot be pictured in the mind) and, therefore, cannot be explained through visual metaphors. If a neuroscientist can find regular correlations between a person's mental life and brain activity, then that bears a relevant similarity to the Spirit

¹³ Naturalist philosopher David Chalmers (in Velmans and Schneider 2007) stated it as follows: 'almost everyone allows that experience arises one way or another from brain processes, and it makes sense to identify the sort of process from which it arises' (231). The naturalist logic of 'arise' or 'emerged' from means, of course, *caused* by the brain. This logic accordingly leads to the bizarre idea that experiences produce an 'experiencer'. There are two problems which Professor Chalmers identified for his fellow naturalists. The first is that they 'have no good explanation of how and why' that could happen (226), and the second is that 'cognitive science and neuroscience fail to account for conscious experience ... [N]othing that they give to us can yield an explanation' (232).

of God and creation in Genesis 1:2. This means that those correlations must be unnatural for the physicalist, not natural. But since we cannot image or picture the mind and consciousness, we are not able to image the causal interaction between the mind and brain.

It will be useful to conclude this discussion with a few remarks. When physicalists postulate the existence of spirit entities, such as the soul, spirit, or the mind, they are falsifying physicalism. Spirit is simply not a natural entity that fits in a physicalist ontological view of the world. This is why Christian physicalists, like Professor Nancey Murphy (2006) *must* reject the existence of the spirit, soul, and mind (see fn. 9). From this follows another problem: once a person rejects the existence of spiritual entities, then that person cannot appeal to them to explain anything. Therefore, for a physicalist to accept the mental realm amounts to either (a) an acceptance of the ontological difference between matter and mental spiritual entities (substance dualism), or (b) accepting the refutation of physicalism. If one is willing to admit that consciousness and mental states are unique compared to all other entities in the world, then that radical uniqueness makes consciousness and mental states unnatural for a physicalist. Therefore, just because one cannot see consciousness on a brain scanning machine, it does not imply or entail that it does not exist.

One final remark; if a human being (an immaterial person) emerged from an ape, as physicalists with a naturalist bent hold, then there is absolutely no reason not to think angels (immaterial spirits) could also have emerged from an ape. The point is simple: what we are confronted with in the 'emergent' story of human origins is something so implausible that it cannot be true. To think that life just spontaneously began from lifeless, mindless chemical processes seems rather irrational. This is why reductionist physicalists, in contrast to emergent

physicalists, such as philosopher of mind and neuroscience Paul Churchland (1984:21) reasoned that,

The important point about the standard evolutionary story is that the human species and all of its features are the wholly physical outcome of a purely physical process ... if this is the correct account of our origins, then there seems neither need, nor room, to fit any nonphysical substances or properties into our theoretical account of ourselves. We are creatures of matter. And we should learn to live with that fact.

It stands to reason, what comes from the physical by means of the physical can only be physical. However, the problem for physicalists is to explain how human beings could be conscious if they are nothing more than physical or material beings. To this problem, proponents of panpsychism offer a solution, identified in the following segment.

2.4. Panpsychism

Whereas physicalism reduces everything that exists to matter, panpsychism reduces everything to mind. In the latter case, the material world is either seen as an illusion (such as in Buddhism and Taoism) or seen as just an aspect¹⁴ or manifestation of mind; as in versions of process theology, Panentheism, or Mormonism. Physicalism and panpsychism are thus both monistic, in contrast to a substance dualist view of the world. On the substance dualist view, matter is not just an aspect of the soul or mind, but a radically different ontological reality, as demonstrated earlier in the essay.

¹⁴ Beauregard and O'Leary's (2007:292) view is that *psyche* (the mind) cannot be reduced to *physis* (matter). Mind and brain are rather complementary aspects of the same underlying principle.

What exactly is panpsychism? Quite a handful of definitions have been advanced by proponents of this worldview: all objects in the world possess an inner or psychological nature; physical reality is conscious or sentient; mind is a fundamental property of everything that exists (Moreland 2008). Although definitions overlap, they all share this in common: everything is conscious; therefore, everything has a mind. From this, it follows that all material objects have experiences for themselves. It is therefore not strange to hear from neuroscientists and psychiatrists that the brain can feel, think, communicate, create reality, monitor, and appraise things. Intuitively, one might think that if the brain can do all these things, then the brain can be spiritual (as the title of Beauregard and O'Leary's [2007] book, *The Spiritual Brain*, clearly illustrates). So, what are the objections against a panpsychist view of 'enminded' matter?

If all matter consists of and exemplifies mind; if panpsychism entails a 'participatory worldview' (Skrbina 2005) in terms of which each existing thing participates in everything else; if the individual mind is a particular manifestation of a universal mind (World-Soul/Mind); and if panpsychism is a correct view of reality, then it makes sense to think that ignoring our brain is the equivalent of ignoring God, or that the more we are listening to 'what our brains are telling us, the more we are ultimately paying attention to God' (Thompson 2010:57, 59). Why should we believe this? If God is in all things, and everywhere present in the world, then all things participate in God and share in his mind and Spirit, and panpsychism/pantheism is the true view of the world. At least two reasons demonstrate that panpsychism (so construed) rests on a misunderstanding of reality, both of which relate to the analogy panpsychists draw between God's relation to the world and the relation of the mind to the brain/body.

First, how is God's presence 'in' the world to be understood? We can construe God's presence in the world as a matter of causality and knowledge. This means that God 'has immediate awareness of and causal access to, all spatial locations. Thus, God is not literally spatially in each such location' (Moreland 2008:122). The alternative is to say that God is omnipresent in the world in the sense 'that he is "fully present" everywhere in space' (ibid). In other words, God is entirely present in all places at once, but not located at only one particular point.

If what was argued in the previous section is correct, then neuroscientists cannot localise God or a soul/mind in a material brain. However, if a person (soul/mind) is to be identified with any part of a human body (e.g. the brain), a loss of any part of the brain is a loss of parts of the soul/mind. This, however, is simply not true. A person who lost both eyes in an accident has not lost two parts of his/her soul/mind, for the mind has no parts *per se*. The same applies to God and his relation to creation. If God is present in a tree, for example, then three things follow: (a) the tree is divine; (b) if the tree dies, then some part of God must also die, and (c) God changes all the time, since a tree grows and changes throughout its existence. By implication, if the world changes, then so must God.

Space does not permit a development of the argument, but it is suffice to say that God—a transcendent being—must be changeless, immaterial, and timeless. Why? 'Timelessness entails changelessness, and changelessness implies immateriality' (Copan and Craig 2004:253). In other words, 'Something is temporal if two questions can be asked of it: when was it? How long was it? The former is a question of temporal location, the latter of temporal duration. A timeless entity involves neither.' (Habermas and Moreland 1998:226). Therefore, if God is present everywhere in the world, as the soul/mind is in a body, but not located or identified with any material part, then claims like *ignoring*

your brain is the equivalent of ignoring God, or the more we are listening to what our brains are telling us, the more we are ultimately paying attention to God, are false. It is a conceptually incoherent notion that amounts to a serious confusion of metaphysical realities.

The second reason why panpsychism is incoherent is due to the faulty analogy on which it is built. If human beings and God are persons, then it makes sense to say that only persons, rather than brains, communicate with each other. It follows that if one is to attribute abilities to a material brain which belong only to an immaterial soul/mind (person), then one confuses categories of reality. For example, every state of the soul/mind is *of* or *about* something; a physical thing has no sense *of* or *about* anything, for it lacks consciousness. Nagasawa (2006:1) came to the same conclusion from his analysis of panexperientialism (a variant of panpsychism): 'panexperientialism is either extremely implausible or irrelevant to the mystery of consciousness.'

If the mind is as an embodied brain, as panpsychist physicalists hold, then the mind is nothing but a 'bundle' of experiences *in* or *of* the brain. The question that arises is this: who or what coordinates or organizes the various sensations, thoughts, and experiences into a unity or coherent whole? According to Thompson (2010), it is the brain that is both monitoring its own activity, *and* self-organising itself. Moreover, people not only create 'grooves in the neural networks' of their brains, but 'will remain' in them if their left and right brains are not integrated (ibid, 81). It seems, then, that the difference between the mind and matter (the brain) is only *imaginary*. This is another difficulty facing the panpsychist worldview.

If immaterial entities (e.g. God and a soul/mind) cannot be located in matter, captured at a specific point in space, or observed with the eyes, then, talking about persons (souls/minds/selves) in the 'grooves' of their

brains make little sense. If personhood (mental, spiritual, and moral capacities and states) is to be located inside the skull, then the metaphysics of panpsychism amounts to a view of the person as locatable in the brain, or at least, a view of the mind as the physical processes or activities of or in the brain. Thus, to make sense of this inconsistency is to see that mental *terms* are retained in talk but mean nothing other than physical processes of or in the brain, an entity that exists in time, that is locatable in skulls, and which neuroscientists can handle with their hands. But, as we have seen in the previous section, there are things that are true of persons (souls/minds/selves—immaterial things) that are not true of brains (physical things). Therefore, the panpsychism's view of the mind is simply not true.

No Christian would deny the important role of the brain in human make-up, as with other organs of the human body, but increasing emphasis on brainpower and techniques to improve brain function based on neuroscientific 'insights', has led to a few disconcerting facts that deserve mention.

Firstly, a reading of the works of New Age 'enlightened ones' and 'postmodern Christians' reveals that they reject dualism (the view that reality consists of both matter and spirit and as radically different ontological entities), truth and falsehood, and right and wrong. They prefer 'holism' (oneness, integration, synthesis), a relational ontology (view of reality), and an epistemology based on subjective experiences and feelings. Secondly, they are deeply disturbed by discussions of the soul (what a human person is), essences or natures (what makes humans what they are), and substances (what has unified parts and properties, qualities and attributes).¹⁵ Therefore, both issues have major implications for our understanding of the Bible and 'the faith which was

¹⁵Cf. Brown and Jeeves 1998; Green 1998, 2009; Murphy 2006.

once for all delivered to the saints' (Jude 3). With this in mind, we can now focus on the neuroscientific interpretation of brain data and mystical experiences, and consider some of the dangers associated with mindful practices.

3. Neuroscience, Mystical Experiences, and Dangers Associated with Mindful Practices

Taking brain data (i.e. blood flow, neuronal firings, and correlations between brain areas and positive feelings and thoughts) as criteria by which to formulise claims relating to people's spirituality and general well-being, gives us reason to pause. Reservations derive from neuroscientific experiments, such as those of physicalist Michael Persinger (1987), in light of claims that people are experiencing God during meditation. Activating the temporal-lobe neurons (those areas of the brain associated with feelings and epilepsy) of persons not suffering from epilepsy, lead to some very interesting results. Persons reported highly unusual feelings; about 80 per cent of the people reported *feeling as though there was a presence nearby*, even if out of view. Atheists said they felt a 'oneness with the universe'. One person had a visual experience involving an angelic appearance, accompanied by sublime feelings.

Persinger's data suggests that all of these experiences are the result of neural activity; altering neural activity in the temporal-lobe has nothing to do with being in 'contact' with a supreme being. What are Christians to make of this? There are at least three things we can say. Firstly, Persinger's interpretation of the data places a burden of proof on the Christian to show why a natural explanation (e.g. a neuronal cause) for both epileptics and normal people is not sufficient to conclude that Christians' spiritual experiences are not caused by God. In other words,

Christians have to show why their case is different and why one type of explanation cannot serve all relevantly similar examples. One response is this: just because feelings associated with certain brain areas correlate with the same brain areas as those of epileptics and religious people, it does not entail that epilepsy and religious experiences are the same things. It is an acknowledged fact that not all epileptics are religious, and not all religious people are epileptic (Beauregard 2007).

Secondly, Persinger's data may lead to the conclusion that all experiences—those of epileptics, atheists and religious people—confirm contact with God. Why would this not follow? This possibility is excluded by the atheists who, despite their feeling of 'oneness with the universe', do not believe in the existence of God. The least we can say is that reports of sublime feelings, heightened awareness, and positive thoughts are weak criteria by which to assess spiritual experiences and/or interpreting them as 'contact' with God.

Thirdly, there is an epistemological problem. When people experience various feelings, they usually interpret the feelings, and not everyone interprets the feelings as those caused by God; some do, and others experience 'oneness with the universe'. One would want to know, for example, whether a Pantheist's, Buddhist's, and a Christian's interpretation of his or her spiritual experiences are all on the same level. Moreover, how should one interpret the experiences of atheists, who consider themselves spiritual (cf. Comte-Sponville 2008:137), without God? How would one know that Pantheists and theists were contacted by the same God during a mindful practice? If it is all a matter of interpretation, then there is reason to think that spiritual experiences and feelings are weak criteria by which to make judgments about their causes, let alone judging the truth of the interpretations.

The epistemological problem becomes exacerbated by the recommendations from professional therapists as far as they pertain to mindful practices. Consider the following suggestions by Christian psychiatrist Curt Thompson (2010:143):

1. Allow yourself to sense God's presence. There is no right or wrong way for him to appear or to be revealed. You may even perceive his physicality to the point of being in bodily form.
2. [I]magine, hearing God clearly say to you directly ...: 'You are my daughter, and I do so love you, I am so pleased with you'.
3. Sense, if you can, God looking you directly in the eyes.

Item (1) raises the following question: if Christians are to expect God to appear to them, as Dr Thompson suggests, with no right or wrong way of appearance, even in bodily form, then how would they know that it was indeed God that appeared, especially in light of the apostle Paul's warning that 'even Satan disguises himself as an angel of light (2 Cor 11:14)? With regard to item (2), how would we distinguish between God's voice, our own deceptive hearts (Jer 17:9), and that of a demonic entity? It is concerning that Thompson leaves meditators and visualizers with no guidelines to detect the difference. If a Christian is to 'sense' during meditation that God is looking them directly in the eyes (item (3), how is the Christian to know that it is God himself, and not some entity masquerading as God? Again, Thompson is silent on this. He merely states that 'all this' will initially *only* take place during meditation.

But why mention meditation specifically? Is it a mere coincidence that a nonjudgmental attitude is a precondition for mindfulness and mindful practice to yield its fruits? People like Thompson hold that logical, and right and wrong thinking associated with analyses and critical reasoning, are highly problematic, especially for people living in the

West. Such thinking, he explains, 'separates us from the objects we wish to examine and analyze ... [e.g.] other people and God' (Thompson 2010:37). Why should we not believe this?

The following example demonstrates the contrary. If one wishes to interact successfully with a dog, awareness and understanding of the dog's character and nature is imperative, for such information ensures interaction that is appropriate to the dog's nature. In a similar vein, RC Sproul et al. (1984:x) wrote: 'It is because we believe that the capacity of the heart to increase its passion for God is inseparably bound up with the increase of the understanding of the character of God, that we care so much for the intellectual dimension of faith. The more we know of God, the greater is our capacity to love him.' Therefore, it seems that there is something inconsistent about Thompson's logic. It is inconsistent for Thompson to hold that knowledge of neuroscientific insights into the brain (gained through the intellect) will bring him—and us—closer to each other and God, yet, in the same breath, to suggest that intellectual examination of the nature of God and people, in light of Scripture, will cause a separation between Christians—and between them and God.

Conclusion

What are Christian physicalists telling us about the immaterial person when they are using biology, the brain, and central nervous system as a basis for spiritual teaching? Firstly, they hold that the person is not a substance; that the 'I', an immaterial self, is located somewhere in the brain, or is nothing else but a sense of inwardness (a 'bundle of experiences or feelings' [Taylor 2004:119]). In other words, the human agent is a brain in a body.

Secondly, they accept that the brain is the key to unlocking mental and spiritual well-being, because it is 'scientific'. This may have two unintended consequences: (a) it is likely to divert people's attention from the reality of the *soul* as the seat of thoughts, beliefs, volition, motives, desires, emotion, choices, and action. In other words, away from the *real person*; and (b) it is likely to lead people to think that the brain can explain why they are the way they are, and how they can change their brains!

It is evident from the discussions in this paper that there is a burden of proof on those who claim that people are identical to their brains (or bodies). Advocates of physicalist monism must do at least three things, namely, (a) explain New Testament revelation that counts against this view, (b) explain personal identity during a disembodied intermediate state between death and the final resurrection, and (c) explain how the now physical body can and will become a spiritual body, if the person is identical with a physical body/brain now.

The question that now presents itself is this: what is a more appropriate, as opposed to the only, approach to spiritual transformation? The first point pertains to the inseparable connection between beliefs, character, and action. At the outset, one must acknowledge that beliefs are *not* blind; in fact, the same is true of love (cf. Phil 1:9). Beliefs involve thinking, and the thinking depends on the *what* (the content) of our beliefs. A belief's impact on one's action will also depend on the intensity with which the belief is held (the degree to which we are convinced of the *truthfulness* of the belief, based on evidence or support), and the importance it plays relative to our entire set of beliefs (our worldview). If beliefs influence our thinking, action, and character formation, how can a person change his or her beliefs about something? Obviously, various options are available: a person can embark on a course of study, think about certain things (e.g. the scriptures), gather

evidence and ponder arguments in favour for or against a particular point of view, and try various ways to find a solution to a problem. The point we have to see is this: if the soul is a unity of faculties (mental, spiritual, and moral), then what happens in one will have an effect on the others. In other words, intellectual growth can exert influence on all the other aspects of the self.

In conclusion, philosophical and religious assumptions that underlie scientific views of ourselves and spiritual growth matter enormously; they deserve continual scrutiny.

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