



Scientific Materialism, Consciousness and the New Idealism: An exploration of some implications for education

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Abstract: In response to the intractability of the hard problem of consciousness, a number of scientists and philosophers – in particular Bernardo Kastrup, Steve Taylor, Donald Hoffman, and Iain McGilchrist – have advanced arguments for new forms of idealism which challenge the basic tenets of scientific materialism. The central claims are that – in spite of the impressive achievements of contemporary science and technology – the metaphysical basis of scientific materialism is not justified by these achievements. Moreover, in addition to the many flaws and shortcomings of materialism – chief amongst which is the abject failure to solve the hard problem of consciousness – idealist perspectives which propose that consciousness is the sole ontological primitive provide a more cogent and parsimonious foundation for our knowledge of the world than scientific materialism. These new conceptions call for a radical transformation of our beliefs and experience of the world and – following an examination of the principal neo-idealist arguments – the implications for education, in particular in the realms of epistemology, ethics and spirituality will be investigated.

Keywords: materialism, consciousness, neo-idealism, spirituality, science

1. INTRODUCTION

The stuff of the world is mind-stuff – something whose nature is not altogether foreign to the feelings in our consciousness

Arthur Eddington (1928, p.276)

The events that happen in our minds are part of the course of nature, and we do not know that the events which happen elsewhere are of a totally different kind

Bertrand Russell (1927, p.311)

My guiding conviction is that mind is not just an afterthought or an accident or an add-on, but a basic aspect of nature

Thomas Nagel (2012, p.16)

There are sound, justifiable reasons for the centrality of scientific endeavour in public discourse and popular culture. In addition to the formidable achievements of science and technology since the Renaissance, there is the undeniable dialectical power of the self-correcting scientific method which underpins rationality and the pursuit of knowledge. Science and scientific activity has never been so popular thanks in large part to the sterling work of popular science writers such as, for example, Richard Dawkins (2017), Stephen Hawking (2018) and Carlo Rovelli (2014). It is also the case that the place of science in the school curriculum may have been subordinated for too long to liberal arts and humanities so that there is some justification for redressing the balance in this respect (STEM Education, 2018).

All such developments may be justifiably welcomed and supported by educators. However, what is rather more questionable is the hyperbolic claim – a form of scientific triumphalism – that science is the only worthwhile form of knowledge and can provide answers to just about any question under the sun. A more significant and potentially dangerous consequence of such one-dimensional thinking, however, is the unjustified assumption that the methods and achievements of science are sufficient to validate a move from scientific materialism to metaphysical materialism which implies that questions

about the ultimate nature of reality must always be settled by the physical data of science. It is this latter assumption – and it is worth noting that it is an *assumption* and not an outcome of scientific investigation – which needs to be challenged since it presents a flawed and unsatisfactory picture of reality.

In order to define clearly the principal aims of this critique, it needs to be stressed that the materialist worldview identified below is inextricably connected by critical commentators with the ordinary language or everyday meaning of materialism (as distinct, for example, from its technical use in Marxist and postmodern analyses, see Olssen, 2006). Mal Leicester (1999) describes what materialism in terms of:

inordinate, or excessive, valuing of material objects and activities. This includes valuing material objects and activities as an end in themselves; it also implies a hierarchical valuing of material objects and activities over the emotional, intellectual, psychological or spiritual needs of others and/or the self. Crass materialism may be seen in such behaviours and attitudes as possessiveness, covetousness, envy, non-generosity, hedonism, acquisitiveness, and greed (p.263).

The links between such materialistic values and scientific materialism are located in the mainstream scientific picture of a world of shadowy material objects – at bottom just quantum fields – whose true or real nature is forever closed off to individual centres of consciousness isolated from each other and from a world which is indifferent to human purposes. As the philosophers, Thomas Nagel (2012) and William Jaworski (2016) have claimed, not everything can be reduced to physics and chemistry, and attempts to do so have conjured up visions of bleak and soulless worlds.

The principal aims of this examination are, firstly, to outline the emerging critiques of scientific materialism and the arguments for their replacement by the idealistic perspectives and, secondly, to explore some educational implications of the newly emerging picture. Epistemology, ethics and spirituality were selected since the new idealism raises particular issues within these domains. Moreover, such spheres of knowledge and understanding are, arguably, at the heart of the philosophical foundations of the educational enterprise (Peters, 1966)

2. CRITIQUES OF SCIENTIFIC MATERIALISM

As a useful preface to the principal critiques of materialism developed by neo-idealist thinkers, it is worth looking at the many problems of contemporary science in general. Of course, as the critics such as Sheldrake (2012), Kastrup (2019), and Taylor (2018) are careful to stress, the achievements of science over the last few centuries or so are mightily impressive. The world we live in today would be unimaginable without the spectacular scientific advances in medicine, physics, biology and general technology over the last few decades. As Sheldrake puts it, science has ‘touched everyone’s lives...its intellectual prestige is almost unchallenged. Its influence is greater than that of any other system of thought in all of human history’ (2012,p.13).

Along with such achievements, however, comes the hubris and intransigence which Sheldrake’s critique is intended to challenge and redress. A recent example of extremely pompous scientific triumphalism was demonstrated in Hawking and Mlodinow’s *The Grand Design* (2010) in which the physicists set out to answer such questions as ‘How does the universe behave?’, ‘What is the nature of reality?’ and ‘Did the universe need a creator?’. They assert that:

Traditionally, these are questions for philosophy, but philosophy is dead. Philosophy has not kept up with modern developments in science, particularly physics. Scientists have become the bearers of the torch of discovery in our quest for knowledge (p.5).

Ambitious claims but – in spite of the recent remarkable discoveries at CERN in relation to the Higgs’ boson, the detection of gravitational waves from the outer reaches of the universe, and, just recently, the spectacular production of an effective Covid vaccine in record time – we need to maintain a sense of proportion and recognise scientific rhetoric for what it is. Philosophy is quite a long way from being dead and – as Nagel (2012) forcefully demonstrates in his recent critique of scientific materialism – science is not even close to solving all our problems or providing satisfactory answers to all the questions we might like to pose about humans and the nature of the cosmos we inhabit.

Indeed, according to the recent survey of contemporary physics by Baggott (2013), the current obsession with purely theoretical constructs such as superstring theory, parallel universes and cosmological explanations involving up to 11 dimensions – none of which is supported by a shred of observational or experimental proof – has led to a dominant methodology which may be described as ‘post-empirical science’ (p.xii). This state of affairs has resulted in a ‘fairy-tale physics’ which serves to divert attention from the range of serious unsolved problems in the field and, more importantly, has effectively transformed science into pure metaphysics which ‘until and unless it can predict something that can be tested by reference to empirical facts, concerning quantity or number, is nothing but sophistry and illusion’ (p.287). Further dents in scientific triumphalism have been revealed in recent discoveries linked to the accelerating rate of the expansion of the universe, an unexpected finding which has led scientists to posit (or, rather, invent) the notion of an antigravity force operating in empty space which has been labelled ‘dark energy’. As Panek (2011) puts it:

This is not “dark” as in black holes or deep space. This is “dark” as in unknown for now, and possibly forever: 23% something mysterious they call dark matter, 73% something even more mysterious they call dark energy. Which leaves only 4% the stuff of us (p.xv).

What needs to be added to this picture are the unacknowledged shortcomings of the scientific materialist view of the world. Goff (2019) explains, in terms of an ontological conception of the cosmos, unvarnished materialism leaves much to be said. As he puts it, ‘physics tells us not what matter is but only what it does’ (p.125). Similarly, Kastrup (2021) reminds us that Bertrand Russell observed that ‘science says nothing about the intrinsic nature of the physical world, but only about its structure and behaviour’ (p.86). More significantly a contemporary of Russell, the physicist Sir Arthur Eddington, argued that ‘the only physical entity we have intrinsic access to is our own nervous system, whose nature is clearly experiential’. Given all this, Kastrup asks:

Might this not be the case for the rest of the physical world as well? Under this panpsychist hypothesis, the explanatory gap disappears: consciousness isn’t generated by physical arrangements but, instead, is the intrinsic nature of the physical world. The latter, in turn, is merely the extrinsic appearance of conscious inner life (Kastrup, 2021, pp.86-87).

This view that the universe is fundamentally mental or experiential in nature – labelled analytic idealism by Kastrup, panspiritism by Taylor, objective idealism or cosmopsychism by Chalmers, and conscious realism by Hoffman – not only satisfies the parsimony demands of Occam’s Razor whilst avoiding the dualism of materialism and physicalism, but also neatly solves the hard problem of consciousness and provides a more satisfactory account of the nature of reality than scientific materialism. The full implications of this idealist version of panpsychism are discussed in the next section but at this stage it is worth outlining the key features of the idealists’ thoroughgoing criticisms of the nature and implications of materialism.

As already noted, science tells us nothing about the intrinsic nature of material objects since it is concerned only *quantities* – mass, spin, charge momentum, and so on which can be measured and labelled with concepts and numbers - whilst saying nothing about the *qualities* which we experience in the world such as colour, taste, smell and, at the root of the mind/body problem, subjective phenomenal experiences such as listening to music or appreciating a beautiful sunset. Moreover, Kastrup (2014) points out the crucial difference ‘between materialism as a *metaphysics* and scientific theories as *models*’ (p.10). Scientific materialism observes patterns and regularities in nature and constructs models which explain objects and forces – such as subatomic particles and negative electric charge – in terms of their relationship to other cognate constructions. Explaining and predicting how aspects of the material world operate relative to other aspects reveals nothing about the fundamental nature of everything in nature. The upshot of this, as Kastrup argues, may be expressed in the following way:

Capturing the observable patterns and regularities of the elements of reality, relative to each other, is an empirical and scientific question. *But pondering about the fundamental nature of these elements is not; it is a philosophical question* (Kastrup, 2014, p.12, original italics).

Consequently, there is no bridge which can join and support the move from scientific materialism to metaphysical materialism. The scientific method is a foundation for knowledge about the cosmos – at

both classical and quantum levels – but it does not justify metaphysical conceptions of reality and provides no evidence for beliefs in metaphysical materialism and so-called common-sense realism. We need to look elsewhere for this.

In addition to these shortcomings scientific materialism displays many flaws and shortcomings which are fully described by neo-idealist critics. Taylor (2018) outlines what he calls the principal tenets of materialism and shows how their inconsistencies and weaknesses may be remedied by idealist conceptions. In place of the materialist conception that life came about through the accidental interaction of certain chemicals, Taylor argues that such origins can be found in the innate tendency of the universe – propelled by consciousness – to move towards greater complexity. On consciousness, Taylor agrees with Kastrup and Hoffman that this is not just generated by the brain but needs to be conceived as a universal quality which brains receive and canalize into our individual phenomenal experiences. Similarly, in place of the objective world posited by mainstream materialist science, there is the idealist conception of the observer-dependent world described by quantum physics in which individual conscious agents combine to produce inter-subjective experiences of reality (Taylor, 2018, pp.227-234).

3. IDEALIST FOUNDATIONS

Many of the shortcomings of materialism outlined above are fully illustrated in the long-standing ‘hard problem of consciousness’ (Chalmers, 1995, 1996), and it is in the search for a solution to this problem that the neo-idealist thinkers have constructed their most innovative and cogent arguments. Many of these arguments make use of the idea of ‘panpsychism’ (Hyland, 2021) though – as noted in the preceding sections – idealists tend to prefer their own terminology and ontology in relation to this phenomenon. Shan Gao (2014) offers a succinct identification of the contemporary background to accounts of panpsychism in noting that:

Consciousness is the most familiar phenomenon. Yet it is the hardest one to explain. There are two distinct processes relating to the phenomenon: one is objective physical processes such as neural processing in the brain, and the other is the concomitant subjective conscious experience (Kindle edn., loc..47).

Forms of panpsychism are thus introduced to make the connection between the objective and subjective aspects of reality. Philip Goff (2018) expresses the basic problem by noting that ‘we know a great deal about the brain, much of it discovered in the last eighty years...But none of this has shed any light on how the brain produces consciousness (p.5). Galen Strawson (2006) – one of the leading exponents of a physicalist form of panpsychism – prefers to characterise the contemporary debate by declaring that:

Consciousness... [by which] I mean what most people mean in this debate: experience of any kind whatever...is the most familiar thing there is, whether it’s experience of emotion, pain, understanding what someone is saying, seeing, hearing, touching, tasting or feeling. It is in fact the only thing in the universe whose ultimate intrinsic nature we can claim to know. It is utterly unmysterious (p.1)

Strawson then goes on to assert that the so-called objective and unmysterious nature of the physical world is, in fact, far from the truth. He concludes that the ‘nature of physical stuff is mysterious except insofar as consciousness is itself a form of physical stuff’ (Strawson, 2006, p.2). Although Strawson’s account does offer some sort of solution to the hard problem, Kastrup (2019, 2021) shows that it is open to all the problems of the Cartesian mental/physical dualism that bedevils scientific materialism and, moreover, is extremely unparsimonious in its implications.

In addition to the glaring inadequacies of the dualism which physicalist panpsychism merely perpetuates, there is the absurdity of positing a theory which involves consciousness somehow emerging from non-conscious material. Moreover, as Kastrup (2021) argues, from a philosophical perspective, ‘materialism is...unparsimonious – that is, uneconomical, unnecessarily extravagant – and arguably incoherent’ (9). He elaborates this notion:

As we have seen, matter is a theoretical abstraction of mind. So when materialists try to reduce mind to matter, they are effectively trying to reduce mind to one of mind’s conceptual creations. This is akin to a dog chasing its own tail. Better yet, it is like a painter who having painted a self-portrait, points at it and proclaims himself to *be* the portrait (p.10).

Kastrup's concludes with the observation that 'materialism is a relic from an older naiver, and less sophisticated age...But it has no place in this day and age'(Kastrup, 2021, p.11).

However, the full idealist project needs to explain how the notion of a mental universe can accommodate our everyday assumptions that world really does seem to be outside of us and that our individual selves are separated from those of other minds. Kastrup (2019) proposes the much simpler and more parsimonious strategy which argues for an 'idealist ontology consistent with empirical observations', and which obviates the so-called mind-body problem of explaining consciousness. The position is summarised as follows:

spatially unbound consciousness is posited to be nature's sole ontological primitive. We, as well as all other living organisms, are dissociated alters of this unbound consciousness. The universe we see around us is the extrinsic appearance of phenomenality surrounding – but dissociated from – our alter. The living organisms we share the world with are the extrinsic appearances of other dissociated alters (Kastrup, 2019, p.57).

On this account, our subjective experience as dissociated alters – that is, individually segmented parts of an all-encompassing mental cosmos – is founded upon and supported by a robust metaphysical idealism which may be used to circumvent the false picture presented by physical science and the illusions of mind-body dualism.

Kastrup goes on to elaborate his thesis that the cosmos is mental and everything is mind by means of a series of ingenious metaphors and analogies which seek to explain the world revealed to us through experience in ways which are both cogent, precise, and more epistemologically and metaphysically satisfying than the mainstream materialist theories. We are asked to picture the ultimate primitive mind or cosmic consciousness as a 'thin, mirror-like membrane with some rigidity, but also some elasticity' such that the 'qualities of experience now correspond to the specific patterns of vibration of the membrane' (Kastrup, 2014, p.138). There is, thus, 'nothing to reality but the medium of mind itself' (ibid.) and all our experiences of the world may be explained in terms of the vibrations and oscillations of the membrane of mind. Subjective individualised experiences of the world may be correlated with the ripples and loops of this membrane which brings about segmented islands of consciousness. The metaphor is thus intended to explain both why we seem to have limited control over the unfolding of events in the world and also why we seem to be separated from each other in terms of our individualised states of consciousness.

In other work, however, Kastrup (2015, 2016, 2019) is concerned to emphasise that both of these characteristics of subjective consciousness – lack of control and individual ego states – are actually largely illusory and, as such, present us with a confused and partial perspective on reality. In order to escape such confuse it is necessary to wield Occam's Razor forcefully and accept that everything is a modification of consciousness. As he explains:

I claim that we do not need more than consciousness to explain reality: *all things and phenomena can be made sense of as excitations of consciousness itself*. According to this more parsimonious view, the ground of all reality is a transpersonal flow of subjective experiences that I metaphorically describe as a stream. Our personal awareness is simply a localization of this flow: a whirlpool in the stream (Kastrup, 2015,p.13, original italics).

Following on from Eddington's assertion that the 'stuff of the world is mind-stuff' and Julian Huxley's idea that 'mind or something of the nature of mind must exist throughout the entire universe' (in Gao, 2014, loc.827), Mathews (2011) argues that 'a holistic or cosmological version of panpsychism, according to which the universe as a whole is the ultimate locus of mind, or of mind-like properties, can function as a rival to materialism' (p.2).

In support of these general ideas, Iain McGilchrist (2021) quotes the Nobel prize-winning scientist, George Wald, who (like Eddington before him) was of the view that 'the stuff of which physical reality is composed is mind-stuff. It is Mind that has composed a physical universe that breeds life, and so eventually evolves creatures that know and create...In them the universe begins to know itself' (Wald in McGilchrist, 2021, p.1691). In a similar vein, McGilchrist concludes by expressing his own position in the following terms:

Suppose that I am right and that everything is ultimately part of one consciousness, that individual consciousnesses are never wholly separate from the whole – much as vortices in the stream, or waves in the sea, are visible, measurable and truly distinguishable, but not separate from the body of water in which they arise – then the individual correctly perceives a self, but a self that is connected to the whole: wholly a self and wholly a part of the whole (McGilchrist, 2021, pp.1694-5).

In addition to this perspective, his pioneering core work on the asymmetric brain – in particular the different features of the left and right hemispheres in terms of function, scope, attention and perspectival focus – adds an important dimension to both the neo-idealist case and the nature of mental health and illness. The divided brain is found in all forms of organic life and is clearly central to evolutionary development connected with survival and reproduction.

McGilchrist's work goes further than the standard accounts of brain science and human development by identifying the differential roles of the left and right hemispheres in all forms of life. As he puts it, 'we can only know the world as we have shaped it by the nature of our attention' (2012, p.9), and the different hemispheres – though collaborating in the process of responding to the world – display quite different forms of attention, focus and objectives. This observation is summarised by noting that 'one way of looking at the difference would be to say that while the left hemisphere's *raison d'être* is to narrow things down to a certainty, the right hemisphere's is to open them up to possibility' (2012, p.13).

In his most recent work, McGilchrist (2021) summarises the chief differences between the left hemisphere (LH) and right hemisphere (RH) in terms of their scope and functions with the LH being 'principally concerned with manipulation of the world; the RH with understanding the world as a whole and how to relate to it...the LH deals with detail, the local, what is central and in the foreground, and easily grasped' (McGilchrist, 2021, pp.46-8).

It is, perhaps, the dominance of left-brain thinking in contemporary science and philosophy that prevents general academic acknowledgement of the potential value of neo-idealist perspectives and, in this respect, the radical work of Donald Hoffman demands full right-brain attention. Hoffman's (2017, 2019) startlingly radical thesis incorporates ideas and data from evolutionary theory, cognitive psychology, neuroscience, quantum physics and philosophy to establish a position which suggests that our assumptions about our knowledge of the objective world are mistaken and, moreover, that forms of consciousness are fundamental to everything that we may claim to know, think and experience. There are two principal aspects of Hoffman's approach: one drawn from evolutionary game theory which purports to explain why our perceptions of reality are mistaken, and another strand which attempts to move beyond the hard problem of consciousness by offering a conception of interacting conscious agents supported by a mathematical model of consciousness.

In dealing with the counter-intuitive notion that our senses deceive us as to the nature of reality – why would evolution, after all, not favour true perceptions of an objective world – Hoffman uses the metaphor of a computer interface (Hoffman, 2019, p.xii). The purpose of a desktop interface, he argues, is not to reveal the "truth" of the computer in terms of its various circuits, voltages and layers of software but to hide this truth to enable the pragmatic task of writing emails and completing internet research. This metaphor is then applied to evolution and our experience of the world in the following way:

This is what evolution has done. It has endowed us with senses that hide the truth and display the simple icons we need to survive long enough to raise offspring...You may want truth, but you don't need truth. Perceiving truth would drive our species extinct. (Hoffman, 2019, pp..xii-xiii).

This argument from evolution is reinforced by data from the field of evolutionary game theory to construct an operationally pragmatic theorem which Hoffman labels 'Fitness-Beats-Truth (FBT)' which is itself based on universal Darwinism by which survival, adaptation and reproduction trumps all other considerations. Applying game theory models to this construction (Prakash, et al, 2017), we arrive at the astonishing conclusion that 'fitness drives truth to extinction' (Hoffman, 2019, p.61). This is expressed in the observation that 'What the FBT theorem reveals is that natural selection, however major or minor a force it may be, does not shape our perceptions to be veridical'. Hoffman then goes on to demonstrate how this perspective influences – indeed, dramatically changes – just

about every feature of human experience across all disciplines. Given that ‘evolution shaped our perceptions to hide the truth and to guide adaptive behaviour’ the key question is how are we to escape from the ‘lifesaving fiction’ (Hoffman, 2019, pp.178-9) of both the everyday and scientific view of reality to arrive at a more accurate picture of the world. To answer this challenge it is necessary to return to foundations and to investigate conscious experience itself.

After examining various speculations – most notably those proposed by Nick Bostrom and others – that consciousness may arise out of a computer simulation (see Hyland, 2019), Hoffman employs the Occam’s Razor mentioned in earlier sections to conclude (as Kastrup does also) that ‘all attempts at a physicalist theory of consciousness have failed’ (2019, p.183). He reasons that:

Occam’s Razor, applied to the science of consciousness, counsels a monism over an amphibious dualism, a theory based on one kind rather than two...If we grant that there are conscious experiences, and that there are conscious agents that enjoy and act on experiences, then we can try to construct a scientific theory of consciousness that posits that conscious agents – not objects in spacetime – are fundamental, and that the world consists entirely of conscious agents (Hoffman, 2019, pp.182-3).

Hoffman accepts that this theory of conscious realism may be mistaken and, in the light of the need for verifiability/falsifiability, he offers a mathematical model of how conscious agents interact within networks and comments that:

Conscious realism makes a bold claim: consciousness, not spacetime and its objects, is fundamental reality and is properly described as a network of conscious agents. To earn its keep, conscious realism must do serious work ahead. It must ground a theory of quantum gravity, explain the emergence of our spacetime interface and its objects, explain the appearance of Darwinian evolution within that interface, and explain the evolutionary emergence of human psychology (Hoffman, 2019, p.198).

Given the enormity of this task, Hoffman insists that his theory goes beyond panpsychism to avoid any hint of a dualism which may, even remotely, allow for materialist conceptions of the world. All such materialist notions fail to acknowledge the limits of our interface and mistakenly take these as a picture of reality. As he expresses it, ‘We have finite capacities of perception and memory. But we are embedded in an infinite network of conscious agents whose complexity exceeds our finite capacities’ (Hoffman, 2019, pp.186-7). In the conclusion, he remarks (using the analogy of the simulated world created in the movie *The Matrix*):

What is spacetime? This book has offered you the red pill. Spacetime is your virtual reality, a headset of your own making. The objects you see are your own invention. You create them with a glance and destroy them with a blink. You have worn this headset all your life. What happens if you take it off? (Hoffman, 2019, p.202).

4. EDUCATION AND THE NEW IDEALISM

Hoffman’s recommendation for the removal of the ‘headset’ of materialism calls for a radical transformation of our knowledge and understanding of the world and entails a revision of standard ideas and engagement with alternative perspectives that is so profound as to entail fundamental implications for teaching and learning at all levels. As indicated in the introduction, I intend to explore the potential implications of such a radical transformation in the areas of epistemology, ethics and spirituality since these are at the heart of the educational enterprise.

Epistemology

The monolithic worldview of materialism is as predominant in contemporary culture as Christianity was in pre-Renaissance times and arguably, as insensitive to and intolerant of competing belief systems (Sheldrake, 2012; Goff, 2019). As Kastrup (2014) puts it, ‘Materialism suffuses the core of our being by a kind of involuntary osmosis. Like a virus, it spreads unnoticed until it’s too late and the infection has already taken a firm hold’ (p.8). Moreover, Kastrup is adamant that the dominance of this world view is the responsibility of the intellectual elite of society, and it follows that education systems have a prominent role to play in this respect.

Consequently, as a bare minimum, the presentation of alternative idealist perspectives can be justified as a worthwhile educational project in itself. This might take the form of presenting to students the

core features of the hard problem of consciousness along with the various attempts – both physicalist and idealist – to respond to the main challenges. A logical consequence of this would be the examination of the shortcomings of scientific materialism and its metaphysics along the lines outlined above. Such critical perspectives might be incorporated into science curricula without unduly influencing the teaching of the values of the scientific method and its achievements since – as the neo-idealists emphasize – it is not the data of science that are being questioned but the invalid inference from these to a metaphysical picture of reality. A.C. Grayling (2010) makes the unexceptionable claim that ‘good science [which] invites rigorous questioning and testing’ (p.51) is an excellent weapon in the battle against religious fundamentalism and the erosion of reason, but such questioning must logically apply to the critique of scientific fundamentalism as well. This is where the teaching of philosophy in schools – still having to struggle for a place in the curriculum – is, arguably, at least as valuable as mainstream science education in the promotion of knowledge and understanding (Hyland, 2003). In addition to its incorporation as a dimension of science teaching, the new idealist picture of experience and reality could make important contributions to a wide range of arts and humanities subjects through the questioning of traditional physicalist assumptions about the nature of our experience of the world.

Ethics

Michael Hand (2014) has suggested that a theory of moral education can – without fear of charges of undue influence over students – include the teaching of moral standards since ‘not everything in the moral sphere is rationally unsettled’ (p.530). Drawing on the legacy of moral philosophers as diverse as Hart, Warnock and Mackie, Hand suggests that certain moral standards are ‘robustly justified’ and these are ones which help us deal with the ‘problem of sociality, the ever-present risk in human social groups of breakdowns in cooperation and outbreaks of conflict’ (ibid.,p.528). There are, in fact, many ways of justifying moral principles without recourse to indoctrinatory or other forms of non-rational cultivation, and the history of ethics is replete with well-established models from duty ethics to forms of utilitarianism (Hudson, 1970; MacIntyre, 1967; Hyland, 2020). Evolutionary theory, as Christopher Boehm’s (2012) monumental work illustrates, also offers many ways of justifying the crucial place of virtue and altruism in human affairs.

However, such ethical foundations are always open to challenge from materialists who are to able to point to alternative interpretations of human behaviour in terms of the role that, for example, competitiveness and rugged individualism play in the march of progress. Indeed, capitalism thrives on the inculcation and maintenance of such values (Lent, 2017), and has even managed to exploit successfully the domain of spiritual values and practice (Purser, 2019). Jeremy Lent (2017) describes how the idea of ‘conquering nature’ (pp.277ff.) derived from the scientific revolution emerging from the Renaissance – particularly from the writings of Bacon, Boyle and Leibniz – led to the exploitation of the earth’s resources for material profit. Such a powerful metaphor later came to legitimize the development of capitalism, possessive individualism, colonial conquest and the ‘untrammelled exploitation’ (ibid., pp.309ff.) of the natural world.

Kastrup (2019) similarly wishes to challenge the ‘physicalist narrative’ which ‘enables a sense of direct egoic control over nature’ (p.211). Such a perspective serves to ‘turn the universe into a mechanical contraption fuelled by mere chance [which] drains the meaning out of life’ (ibid.,p.214). Taylor (2018) is even more forceful in his attack on materialism. He asserts that:

The materialist worldview is bleak and barren; it tells us that life is fundamentally meaningless, that we’re just here for a few decades and it doesn’t really matter what we do...It seems inevitable that people should try to take refuge from the bleakness of materialism, treating themselves to as much fun and as many consumer products as they can afford, or trying to build up their wealth and status and power (pp.229-230)

As an alternative to this bleak vision, a perspective which places consciousness at the heart of existence allows for the fostering of a ‘spiritual worldview [which] tells us that our lives are meaningful and purposeful’ (Taylor, 2018,p.230). Given the current urgent climate initiatives designed to curb global warming – and the active involvement of young people around the world in green movements (Charlton-Perez, 2021; Hyland, 2022) – this critique of materialism supported by

new idealist conceptions could make substantial and valuable contributions to the ethical and personal development of students at all levels of teaching and learning.

Spirituality

David Carr (2003) has usefully examined a number of rival conceptions of spirituality such as the Kantian notions of wonder, awe, the sublime and the ineffable which may be connected with aesthetic and affective psychological and intellectual processes. Dawkins (2017) favours versions of spirituality derived from contemplating the wonders and majesty of the natural world, and Harris (2006) explains spirituality in terms of ‘investigating the nature of consciousness directly through sustained introspection’ (p.209). What is common to all these versions of spirituality is some notion of holistic and transcendent understanding typical of metaphysical questioning – common in philosophy since the Ancient Greek thinkers – aimed at exploring the nature of human existence and our place in the world.

As mentioned earlier, Hawking and Mlodinow (2010) – in claiming to be better than philosophers in answering the big questions such as ‘what is the nature of reality?’ and ‘where did all this come from?’ (p.5) – offer as their final answer something called ‘M-theory...the only candidate for a complete theory of the universe’ and the ‘unified theory Einstein was hoping to find’ (p.181). But this is really a metaphysical and speculative theory rather than a definitive answer since we are asked to contemplate – without any experimental evidence to support it – a cosmos with perhaps 11 dimensions and which ‘allows for 10⁵⁰⁰ different universes, each with its own laws’ (ibid., p.118). We might be forgiven for responding to this abstract vision by declaring – borrowing the words that T.S. Eliot used in the *Love Song of J. Alfred Prufrock* (1961 edn) – ‘That is not what I meant at all. That is not it, at all’ (p.14).

Alternative visions are readily available in the neo-idealist perspectives which posit consciousness as the ultimate primitive which generates and grounds all experiences of the world. Hoffman (2019) expresses the point very well in his observation:

I think that conscious realism can breach the wall between science and spirituality. The ideological barrier is a needless illusion, enforced by hoary misconceptions: that science requires a physicalist ontology that is anathema to spirituality, and that spirituality is impervious to the methods of science (p.199).

Materialism posits a cosmos of isolated individuals alienated from an outside world of objects, and this perspective has helped to produce a culture of selfish individualism, manic consumerism and the near destruction of the planet. As Taylor (2018) concludes, ‘moving beyond materialism means becoming able to perceive the vividness and sacredness of the world around us...transcending our sense of separateness so that we can experience our connectedness with nature and other living beings’ (p.231). As Carr (2003) suggests, a spiritual dimension to learning is sadly missing from the contemporary curriculum, and this is a pity since – in addition to its contribution to fostering ethical, affective and personal development in students – greater attention to this domain can serve to integrate the theoretical and practical in many spheres of learning.

5. CONCLUSION: EDUCATION, CREATIVITY AND CRITICAL THINKING

As mentioned above, the new idealist perspectives on consciousness and the nature of reality call for a serious revision of contemporary standard ideas in a wide range of disciplines and domains. Consequently, the presentation of such alternative perspectives may be justified as a worthwhile educational project in itself since it contributes to critical thinking and the development of expansive knowledge, understanding and values. In a cultural climate characterised by irrational post-truth conspiracy theories and an obsession with shallow populist social media propaganda, there has never been a more urgent time to emphasise the importance of questioning the mainstream conceptions of reality supported by scientific materialism and the values which that view of the world carries with it (Sheldrake, 2017; Hyland, 2017).

Contemporary critical commentators on educational policy and practice routinely offer standard recommendations for the incorporation of greater scope for the fostering of critical thinking, creativity and imagination in school and post-compulsory curricula (Kaufman, 2016; Bonnett, 2003; Cigman & Davis, 2008). Such developments call for the encouragement and stimulation of what McGilchrist

calls right-brain thinking in all spheres of learning. It is difficult to imagine a more radical transformation of the standard curriculum provision in this respect than the gradual displacement of orthodox scientific materialism by the perspectives offered by the new idealist thinkers.

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