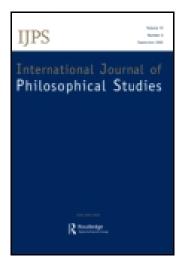
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International Journal of Philosophical Studies Vol.9(1), 85-121;



Book Reviews

New Books on Darwinism

Finding Darwin's God By Kenneth R. Miller HarperCollins, 1999. Pp. 338. ISBN 0-06-017593-1. \$25.00

Intelligent Design By William A. Dembski InterVarsity, 1999. Pp. 312. ISBN 0-8308-1581-3. \$19.99

In 1872 Charles Darwin turned the discipline of biology upside down, with the publication of *The Origin of Species*. The disciplines of philosophy and theology, among many others, haven't been quite the same since either. Darwin combined random variation (mutation) and natural selection to explain how all biological life, including human biological life, has developed since its origin. The origin of species, he contended, can be explained in terms of the twofold mechanism of mutation and natural selection. This mechanism is natural in that it belongs to the domain of physical spacetime and physical causal relations.

The fallout of Darwinism for the areas of philosophy and theology has been far-reaching by any standard. What happens in Darwin's aftermath to the supposed role of *purpose*, or meaning, in human life? What happens to the assumed *distinctiveness* of human life? What happens to the presumed role of *God* in purposefully originating and sustaining human life? The general answer on all fronts is: much indeed happens. Any move toward a more specific answer, however, attracts controversy, seemingly endless controversy.

Two reactions to Darwin are noteworthy. The first is that Darwin demolished purposeful life, human distinctiveness, and God's place in creation, at least as many people have thought of these phenomena. Richard Dawkins and Daniel Dennett have suggested the first reaction, with considerable rhetorical flourish. The second reaction, as defended by Williams Dembski, is 'that Darwinism is *on its own terms* a failed scientific research program – that it does not constitute a well-supported scientific theory, that its explanatory power is severely limited and that it fails abysmally when it tries to account for the grand sweep of natural history' (p. 112). Proponents of 'Intelligent Design' support the latter reaction. Aiming to restore an intelligent non-natural designer to biology, they look for scientific support mainly in biochemist Michael Behe's *Darwin's Black Box* (New York: Free Press, 1996). Their case for intelligent design aims to come from the demands of adequate empirical scientific explanation, not from an antecedent theology or special philosophy. They insist that their case against Darwinism is scientific. They aim to challenge naturalism too (the view that nature is self-sufficient and self-contained) on empirical scientific grounds.

Behe claims that cells contain 'irreducibly complex' systems that 'cannot be produced' by a Darwinian mechanism (cf. Dembski, p. 148). By 'irreducibly complex', he means a 'system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning'. The mammalian eye is often cited as an example of an irreducibly complex organ. Dembski remarks: 'By telling us the mammalian eye requires an intelligent cause, intelligent design precludes certain types of scientific explanation', including 'all those unsubstantiated just-so stories that evolutionists spin out in trying to account for the eye through the gradual succession of undirected natural causes' (p. 108). He concludes, more generally, that Darwinism is simply bad science when its mechanism is offered to account for all the diversity of life. Good biological science, according to Dembski, must acknowledge an intelligent designer. As for the moral character or the theological status of a needed designer, any such topic is beyond the scope of the purportedly scientific program called 'Intelligent Design'.

Whereas Behe talks of 'irreducible complexity' as the reliable indicator of intelligent design, Dembski talks of 'specified complexity' (p. 144) and offers a somewhat detailed account in light of information theory and complexity theory. We can now pass over the details, thanks to Dembski's offering Behe's irreducibly complex systems as bona fide cases of specified complexity (p. 149). His quick summary statement is that 'complexity ensures that the object is not so simple that it can readily be explained by chance, [and] specification ensures that the object exhibits the type of pattern characteristic of intelligence' (p. 128). The substantive debate will focus, of course, on whether any biological pattern actually calls for acknowledging an intelligent cause beyond a natural cause. In any case, a criterion of specified complexity can benefit science, according to Dembski, owing to its prompting scientists to look for an actual function of relevant phenomena (e.g. so-called vestigial organs or junk DNA) in cases where Darwinism perhaps would not (p. 150).

Note, in the previous summary, Behe's talk of 'cannot be produced by a Darwinian mechanism' and Dembski's talk of 'requires an intelligent cause'. This is strong language indeed for people claiming to do

probabilistic, empirical science. Surprisingly, it is rather common language for Dembski. He claims that 'intelligent causes are necessary to explain the complex, information-rich structures of biology and that these causes are empirically detectable' (p. 106; italics mine). In addition, he claims that 'what chance cannot generate is information that is both complex and specified' (p. 165; italics mine). He adds that 'science is now in a position to demonstrate design rigorously' (p. 107; italics mine). The basis of this strong language is Dembski's assumption that 'once the improbabilities (i.e., complexities) become too vast and specifications too tight, chance is eliminated and design is implicated' (p. 166). The troublesome issue, however, is how strongly chance is eliminated. Darwinian biologists need not, and rarely do, appeal just to pure chance in biological explanation. Even so, Dembski, following Behe, goes well beyond our empirical evidence in assuming that chance and natural, unintelligent causes cannot yield or account for the biological complexity in question. This modal assumption outstrips our empirical evidence in a manner that makes it non-scientific. The aforementioned modal language takes us beyond the empirical domain to the domain of modal philosophy.

Dembski offers Intelligent Design as a scientific research programme. So we should expect him to offer intelligent causes not as *necessary* explainers but just as the *best available* explainers of certain biological phenomena. Some of his claims do indeed tone down the stronger modal language. For instance, he acknowledges that his criterion for design 'cannot achieve logical demonstration' but can achieve 'statistical justification so compelling as to demand assent' (p. 149). This improves on the previous modal language and bold talk of 'demonstration', but a problem remains. Does the proposed statistical justification really *demand* assent? The talk of *demand* here suggests a requirement of statistical rationality. A direct implication is that a Darwinian biologist who does not countenance intelligent design in, for instance, the formation of the mammalian eye is statistically *irrational*. The only way to assess such an implication is to consider the actual explanatory resources of Darwinian biology.

Thanks to cell biologist Kenneth Miller, we now have a forceful and lucid challenge to Behe's hypothesis of irreducible complexity in biology. Miller explains:

The crux of [Behe's] design theory is the idea that by themselves, the individual parts or structures of a complex organ are useless. The evolutionist says no, that's not true. Those individual parts can indeed be useful, and it's by working on those 'imperfect and simple' structures that natural selection eventually produces complex organs. In the case of the eye, biologists have realized that any ability, no matter how slight, to sense light would have had adaptive value. Bacteria and algae, after all, manage to swim to and from the light with nothing more than an eyespot – a lensless, nerveless cluster of pigments and proteins.... The existence of so many working 'pseudo-eyes' and 'semi-eyes' in nature convinced natural scientists that Darwin's imagined intermediates between primitive light-sensing systems and complex eyes were feasible and real.

(pp. 135-6)

Behe thus underestimates the biological significance of less advanced functions antecedent to the function of a developed system deemed 'irreducibly complex'. Miller draws from recent cell biology, including recently published experimental studies, to disarm Behe's contention that Darwinian evolution *cannot* account for biochemical systems called 'irreducibly complex'. Miller's case is straightforward and compelling, anchored in salient evidence from biochemistry and biology. Darwinism, in Miller's hands, is much more resilient than certain proponents of Intelligent Design would have us believe. At a minimum, the aforementioned strong modal language of Behe and Dembski is now definitely out of place.

Miller does not settle for deflating the anti-Darwinian cases of scientific creationists and Intelligent-Design theorists. He also opposes an 'absolute materialism' that implies that full predictability and ultimate explanation are, or at least will be, available for the material world. Physics leads the way here, and evolutionary biology follows suit:

Quantum physics tells us that absolute knowledge, complete understanding, a total grasp of universal reality, will *never* be ours. Not only have our hopes been dashed for ultimate theoretical knowledge of the behaviour of a single subatomic particle, but it turns out that in many respects life is organized in such a way that its behavior is inherently unpredictable, too. It's not just a pair of colliding electrons that defy prediction. The mutations and genetic interactions that drive evolution are also unpredictable, even in principle... Life surely is explicable in terms of the laws of physics and chemistry ... but the catch is that those laws themselves deny us an ultimate knowledge of what causes what, and what will happen next.

(pp. 208–9)

Since we are unable to link causes and effects for something as fundamental as electron emission, we lack the kind of knowledge needed for absolute materialism. Cognitive modesty is thus recommended by the sciences themselves.

Miller now has theoretical room to achieve his main goal: to explain why there is no incompatibility between Darwinism and the monotheism of Judaism, Christianity, and Islam. His case rests on this observation: 'the breaks in causality at the atomic level make it fundamentally *impossible*

to exclude the idea that what we have really caught a glimpse of might indeed reflect the mind of God' (p. 214). The uncertainty featured by quantum reality blocks our having a complete understanding of nature that would preclude God's involvement. As Miller notes, 'the indeterminate nature of quantum events would allow a clever and subtle God to influence events in ways that are profound, but scientifically undetectable to us' (p. 241). This is not the basis of an argument for God's existence; Miller is properly clear on this (p. 251). It is rather the identification of a foundational component of science that precludes the conclusive rejection of theism on scientific grounds. It thus underwrites the logical compatibility of theism and contemporary science. Miller's case is compelling indeed on this score.

Miller proposes that God may have used quantum physics and Darwinian evolution as the tools to enable human freedom:

if there is a God, consider what a master stroke quantum indeterminacy was. To create an orderly material world that didn't require constant intervention, the Creator *had* to make things obey defined laws. But if those laws were to run all the way down to the building blocks of matter, they would also have denied free will.

(p. 251)

Free will is thus a live option, given our best science. In addition, the indeterminism of physical reality would allow God to influence the development of physical events in ways unknown to us. Miller agrees with Ian Barbour: 'Natural laws and chance may equally be instruments of God's intentions. There can be purpose without an exact predetermined plan' (p. 238).

So far, so good, for Miller's compatibility thesis. A problem arises, however, with his talk of evolution as 'blind', 'random', and 'undirected' and of nature as a 'self-sufficient' system (cf. pp. 137, 196, 244, 266). If quantum events do indeed 'allow a clever and subtle God to influence events in ways that are profound but scientifically undetectable to us', then we should refrain from claiming that the natural world is blind, random, or undirected. It may be unpredictable to us, but (so far as we know) it may be directed as well, at least at some points. Given a scientifically undetectable God allowed by quantum physics, Miller should back off his recurring portrayal of nature and evolution as blind and undirected. As far as our best science goes, nature and evolution may be influence the complexity-increasing march of evolution. Evolution may be unguided at some points but divinely guided at other, key points. Our best science allows as much, even on Miller's account.

In conclusion, then, we should seek a pluralistic scientific truce between the likes of Behe and Dembski, on the one hand, and Miller, on the other. Their battle concerns the parameters of genuine science. As truth-seekers and explanation-seekers, we do well to let a variety of species of science flourish. One species of science, naturalistic science, will seek only empirical causes. Another species, design science, will make explanatory use of intelligent, non-empirical causes. Such methodological diversity is cognitively acceptable so long as each approach acknowledges its obvious fallibility and promises to enhance explanatory value in ways neglected by the other approach. Neither naturalistic science nor design science merits a monopoly. A scientist might plausibly say: I aim to pursue only empirical causes to see how much explanatory mileage is thereby achievable. Contrary to Dembski (p. 119), such an approach is not functionally equivalent to metaphysical naturalism. Unlike metaphysical naturalism, the suggested approach would be open to intelligent causes in cases where good scientific explanation definitely calls for them. This truce highlights the obvious fallibility of the competing explanatory methods for the sciences. In doing so, it remains as a truce worth designing and developing for the explanatory good of all concerned.

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Darwinism's Struggle for Survival: Heredity and the Hypothesis of Natural Selection

By Jean Gayon. Translation of *Darwin et l'après Darwin* by Matthew Cobb

Cambridge University Press, 1998. Pp. 516. ISBN 0521562503. \$69.95

Darwin et l'après Darwin secures Jean Gayon's position as the most important living French philosopher of biology. His masterful conceptual history of Darwinism is both a philosophically sophisticated and an extremely rich historical study of the central notion in modern biology: evolution through natural selection. The English edition contains a number of important revisions, and comes with a new preface. Matthew Cobb's translation is excellent, and will bring this important book a wider audience in the English-speaking world.

Aside from its importance as a major contribution to the history and philosophy of science, Gayon's book will also prove interesting to readers of the *International Journal of Philosophical Studies* insofar as it marks an important point in the development of philosophy in France over the past ten years or so. In the preface to the English edition, Gayson's brief intellectual autobiography self-consciously locates his intellectual project between the Anglo-American and French philosophical traditions. For

those of us interested in the possibilities available for philosophical crosspollination between so-called analytic and continental philosophy, this book is certainly a good sign.

One could imagine some of the more notorious 'postmodern' sociologists and philosophers of science dismissing Gayon's book as an uncritically internalist work in the history of science. However, it's not that Gayon has forgotten all of the lessons of science studies; instead, his work is intended to serve as a kind of antidote to the more extreme forms of relativism and constructivism that have reared their many heads in science studies over the past few decades. One of Gayon's purposes in this book is stated explicitly early on:

Having grown up in a country where, for many people, the Darwinian theory of evolution is not a science but at best metaphysics and at worst ideology, I wanted to refute this opinion.

(p. xv)

Of course, there is no shortage of people in the United States and elsewhere who hold similar anti-Darwinian positions, but usually for far less sophisticated-seeming reasons than their French counterparts. Scepticism with respect to Darwinism's status as a genuine scientific theory derives from many sources, but one reason why a well-meaning critics might worry about Darwinism is the apparent discontinuity in the history of the development of the theory since the publication of *The Origin of Species*.

Gayon describes his intention to offer a rational reconstruction of the history of Darwinism, claiming that such a project amounts to 'a history of the theoretical or experimental difficulties that produced a rational debate and also its solution' (p. xv), As such, the book is a 'history of events as they happened along the axis of concept and method' (p. xv). Gayon's rationalism is quite sophisticated; rather than equating rationality in science with orderly linear development, he finds rationality in the ability of a tradition to negotiate dilemmas and challenges while maintaining a set of principles or hypotheses that orient scientific research. The central thesis of the work is that today's Darwinism shares an essential conceptual core, the hypothesis of natural selection, with Darwin's *Origin of Species*, and that the history of Darwinism is a history of this hypothesis in changing experimental and theoretical contests.

Of course, there is no explicit argument for the notion that we can actually trace a concept through history in such a fashion. Instead, the 'rational reconstruction' is itself a way of demonstrating the continuity that Gayon finds in the development of the theory. This approach to the history of science has a number of venerable antecedents and along with Gayon, some other important recent works in the history and philosophy of science have explicitly emphasized their focus on continuity and pattern in the history of science. Tian Yu Cao, in his *Conceptual Foundations of Quantum Field Theory*, for instance, puts the contrast between the social constructivist and the intellectual historian of science very succinctly:

The reason for its [social constructivism] being flawed is that the constructivist account omits or even deliberately rejects the fact that all scientific activities are severely constrained and persistently guided by the aim of knowledge of nature. In fact the aim of knowledge of nature is built into the very concept of science as a particular social institution. . . . For this reason I take conceptual history, which summarizes humanity's persistent intellectual pursuit, rather than social history as the main body of the history of science.

(p. 15)

Gayon takes a similar tack in this book. However, there are a number of significant obstacles to writing a conceptual history of this kind for a notion like natural selection. The problem lies in capturing the precise meaning of the concept, given its appearance in diverse experimental contexts and its application to a range of distinct levels of phenomena. Of course, Gayon is aware of this problem, and it serves as a way of organizing his chronicle of the history of the concept of natural selection from Darwin to Kimura.

His account is inspired by what he sees as a paradox. The paradox, according to Gayon, is that we can still read the *Origin of Species*, given that Darwin did not have a clear operational understanding of the notion of 'population' and that his theory of inheritance was basically incorrect. Gayon wonders too about the fifty years of controversy immediately following the publication of the *Origin of Species*, a time when, despite significant criticism, Darwin's work took on the status of an exemplar, to use Kuhn's term. In the face of these 'paradoxes', Gayon manages to uncover 'the rationality of natural selection' (p. 497).

Gayon's treatment of the years following the publication of the Origin of Species is excellent. He traces the declining fortunes of Darwinism and describes attempts to provide a rational and realistic defence of the hypothesis of natural selection. His narrative begins with a perceptive analysis of Fleming Jenkin's 1867 criticism and Darwin's attempts to reply. This early debate clearly highlights some of the difficulties that Darwinism would eventually face. Gayon uncovers a number of neglected historical details and offers a careful account of the differences that separated Darwin and Wallace in terms of what we could call today the units of selection problem. In both instances, Gayon's analysis demonstrates the extent to which work in the philosophy of biology may contribute significantly to the history of the subject. As a history of Darwinism, Gayon's book contains a number of other important highlights. He describes how heredity became the primary concern of researchers after Darwin, supporting his analysis with a number of sometimes quite novel historical subplots. These include an excellent account of Galton's work, a discussion of the significance of the biometrical tradition in the formation of modern population thinking, and a description of the mutations' 'pure lines' argument against Darwin.

The third part of the book deals with Darwinism after Weismann, and will probably be more interesting to philosophers than historians. Gayon does not attempt to provide an exhaustive historical account of neo-Darwinism, but instead, tries to understand the place of natural selection within what he calls the twentieth century's 'Mendelised neo-Darwinism'. Weismann's influence in the formation of twentieth-century Darwinism is pivotal in this regard, especially his rejection of the inheritance of acquired characteristics and his emphasis on the sufficiency of natural selection.

The book closes with a consideration of Motoo Kimura's 'neutral mutation-random drift theory of molecular evolution'. Kimura believed that it was unreasonable to suppose that natural selection operated directly on the nucleotide sequences and their polypeptide equivalents. Gayon goes along with Kimura's line of reasoning, and approvingly cites Elliott Sober's characterization of the principle of natural selection in terms of what physicists call a 'consequence-law'. This way of looking at it portrays the principle of natural selection as the result of innumerable interactions, rather than a controlling force determining the microstructure of the organism at all points.

I think that Sober and Gayon are correct in their interpretation of the proper role of natural selection in contemporary biology. Philosophy of biology teaches that the elementarist representation of selection commonly found in the rhetoric of contemporary genetic determinism cannot make sense unless it attempts some kind of structural analogue to the functional level at which differential advantage operates. However, the notion of differential advantage is only applicable, as Kimura pointed out, at the level of the phenotype. Gayon concludes the book by arguing that Kimura's emphasis on understanding selection in terms of morpho-functional patterns shares the spirit of Darwin's original articulation of natural selection in the *Origin of Species*.

By organizing his narrative around what he sees as the conceptual core of Darwin's theory, Gayon successfully gathers a potentially overwhelming history within 500 pages and demonstrates the conceptual continuity at the heart of Darwinism.

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Heidegger's Temporal Idealism By William D. Blattner Cambridge University Press, 1999. ISBN 0-521-62067-8. \$54.95

Despite lively discussions about notions such as being-in-the-world and the One among American Heidegger scholars, the interpretations of Dreyfus, Okrent, Olafson, and others have one thing in common: they focus on the First Division of *Being and Time* rather the Second. Dreyfus appears to express common opinion when he writes in the Preface to his *Being-in-the-World* (Cambridge, MA: MIT Press, 1991) that: 'the whole of Division II seemed to me... to have some errors so serious as to block any consistent reading' (p. viii). Heidegger's analysis of temporality seems to be the prime victim of this bias. But although this part of Heidegger's early philosophy is indeed highly abstract and convoluted, it is presented throughout *Being and Time* as a crucial part of the project of that book. Therefore, the lack of attention for it is a serious deficiency.

Professor Blattner's recent book goes a long way towards making up this deficiency. According to him, the main argument of Heidegger's early philosophy is the following:

Time depends on man (temporal idealism) Being depends on time Ergo: time depends on man (ontological idealism).

The First Division of *Being and Time* presents a novel ontology of man, needed to establish the first and second premises of the argument, in the

Second and planned Third Division respectively. In this way, the Second Division is placed in a philosophical context, which Blattner sketches in Chapter 5 and the Conclusion to his book. There, he connects the analysis of temporality to the Turn and to the work of Kant, Husserl, Plotinus, and Leibniz, whom Blattner regards as earlier proponents of temporal idealism.

How does Heidegger establish temporal idealism? After discussing some concepts from the First Division (especially care) in Chapter 1, Blattner devotes the bulk of his book to answering this question. Central to his answer is the concept of original temporality (OT). OT is a tripartite structure, consisting of future, present, and past. Nevertheless, it is not common-sensical time; rather, it is a non-successive teleological structure, which conjoins three phenomena that constitute our everyday involvement with entities. Thus, the future is the for-the-sake-of-which, i.e. our constant striving to realize one aim or another. In Chapter 2, Blattner shows how OT is supposed to constitute and unify care, which is the basic structure of human existence. A unification of care is required, because it is introduced in the First Division as consisting of three (or four) *prima facie* unrelated phenomena.

However, it does not follow from this that time depends on human existence, which is the thesis to be established. For what has OT to do with time, besides its rather suggestive name? Blattner attempts to answer this question by showing how time depends on OT; since OT is intimately connected to human practices, temporal idealism would follow immediately from this dependency thesis. The thesis is complicated by the introduction of two dependent time-concepts in *Being and Time*, namely world time (time as experienced in everyday practice) and ordinary time: the levelled-off notion of a sequence of nows. Heidegger attempts to derive world-time from OT, and ordinary time from world-time. Blattner reconstructs both theses in Chapters 3 and 4 respectively. In the following I shall focus on Chapter 3. Since Blattner finds a fatal flaw in the derivation of world-time, he uses Chapter 4 mainly for additional historical embedding of Heidegger's programme.

In what way does world-time depend on OT, and how does this earn OT the title of time? To start with the latter question: Blattner quotes a passage from *Being and Time* which says that OT is called time because it is the origin of time. He reconstructs this as saying that OT explains world-time; the main aim of Chapter 3 is to show how. According to Heidegger, world-time has four basic features. Blattner does an admirable job of reconstructing Heidegger's somewhat stunted derivations of these basic features from OT (pp. 168–73). From this, he concludes that OT has earned its title. In my opinion, this is not sufficient. OT is not just the basic concept of time, but the basic concept of Heidegger's existential analytic in general. As such, it should explain the spatiality of human

existence as well as its temporality. Blattner does not take these explanatory functions of OT too seriously. He dismisses the derivation of spatiality from OT in a footnote as bizarre and convoluted (p. 180), echoing the standard complaint on the Second Division as a whole.

The reason for this might be that Blattner actually does not use his rather permissive criterion, but another, more stringent one: OT is called time because world-time arises from it by modification (p. 165). This means that the features of world-time are results of adding some structure to OT, namely sequentiality, i.e. the fact that time flows. At first glance, this does not seem to solve the problem: we add something essentially temporal to something non-temporal in order to obtain temporal features, and pretend that the non-temporal plays the crucial role. However, Blattner argues that Heidegger tried to reduce sequentiality to OT as well, even if there is no explicit argument to be found. According to Blattner, Heidegger shares this reductionism with Plotinus and Leibniz, who also tried to derive time from teleology.

Unsurprisingly, given the failure of other attempts to reduce time, the teleological reduction of time does not succeed. Blattner shows convincingly that some parts of time order cannot be reduced to teleological relations (pp. 181–2). Furthermore, he suggests that the ensuing failure of temporal idealism might have prompted Heidegger to reject ontological idealism, by way of the basic argument of *Being and Time* (pp. 277–9).

A similar result can be obtained by considering the unity of OT. As remarked earlier, Heidegger claims that OT explains the unity of care. But how? It seems that a one-on-one relation between past, present, and future and the three phenomena conjoined in care could explain the unity of the latter. However, care is not explained by time, but by OT. So where does the unity of OT derive from? Blattner's argument is rather weak, namely that '[s]uccessiveness can plausibly be seen as a disunifying feature' (p. 125). Therefore, a structure that equals time minus its successiveness would be a unified phenomenon; since time arises from OT by imposing sequentiality on it, OT is this phenomenon. Even barring the questionable validity of this conceptual arithmetic in general, the argument seems mistaken, for sequentiality is the basis of the connection of past, present, and future; as such, it provides the unity of time. Blattner himself admits this, when he argues that OT explains the unity of time by explaining spannedness and sequentiality (pp. 170-1; 173). Therefore, Heidegger's attempt to present OT as unifying care and time fails.

This brings me to a general complaint about Blattner's reconstruction. The programme of temporal idealism, as he presents it, is easily recognizable as a kind of conceptual analysis, namely to reduce temporal terms to teleological ones. The fate of the causal theory of time shows how difficult this reduction is with clearly defined concepts. Heidegger is not known for his conceptual rigour. Moreover, his retainment of terms such as future,

despite his admonishment that they should not be taken in their ordinary sense, is at best ill-advised from the point of view of conceptual analysis. So hopes for his programme conceived as conceptual analysis should not be too high. Indeed, it takes Blattner a mere two pages (and three more to fend off some objections) to show that it fails.

What should give us pause is that Blattner cannot adduce any direct textual evidence for his assumption that Heidegger actually tried to reduce sequentiality to OT; he uses a detour by way of spannedness to justify it (pp. 173–4). So perhaps Heidegger's ideas on temporality cannot be understood as conceptual analysis, or, if they can, we may presume that Heidegger was misled about what was to be proved on his reduction. Given the deceptive proximity of OT to the ordinary concept of time, he might have overlooked the need to explain sequentiality in terms of temporality.

There appear to be two reasons not to attribute this confusion to Heidegger. The first is one of interpretive charity: we should attempt to construct an argument as rational before we interpret it fallacious. However, my hypothesis hardly seems less charitable than Blattner's; after all, Blattner attributes an aim to Heidegger that we know to be difficult to realize, which he can curtly refute, and to which Heidegger does not explicitly commit himself. A second reason is that Blattner suggests that the Turn might be explained by the failure of temporal idealism: Heidegger's own awareness of the lack of success of his reductive efforts would have prompted him to change his programme of ontological idealism. However, it seems that an equally forceful explanation can be given by pointing out the failure to establish the second premise of the argument for ontological idealism, the dependency of being on time. Blattner shows this failure in Chapter 5 (pp. 256-61). Circumstantial evidence suggests that it is this, rather than the failure of temporal idealism, that motivated the Turn: the dependence of being on time was to be the subject of the Third Division of Being and Time, work on which was suspended early in 1928. So both reasons fail. I am, therefore, doubtful of Blattner's attempt to regard Heidegger as a sophisticated conceptual analyst regarding time and teleology.

Despite this, Blattner has written an admirably clear and well-argued book on a difficult topic, and he illuminates many murky details of the Second Division. Most of all, he proves that the Second Division is not beyond rational reconstruction, as often assumed. Therefore, his book deserves to become a standard reference in future discussions about Heidegger's analysis of temporality.

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The Analytic Freud: Philosophy and Psychoanalysis Edited by Michael P. Levine Routledge, 2000. Pp. 320. ISBN 0-415-18040-6.

This work consists of fifteen papers by various authors, all relating Freud to philosophical issues. It is divided into four sections – 'Mind', 'Ethics', 'Sexuality' and 'Civilization'. All the contributions take a far more sympathetic stance towards Freud than is to be found in many of the most famous analytic philosophical studies of him. Rather than attempt to summarize all fifteen papers, I will make some general remarks, and then pick out some of the highlights.

Over the decades, a great many analytic philosophers writing about Freud have exercised themselves with the question of whether or not psychoanalysis is a science. Adolf Grünbaum's *The Foundations of Psychoanalysis* (University of California Press, 1984) is only the best-known of a host of works which attempt to show, for one reason or another, that it is not. A few brave souls have attempted to argue that it is (for example, in *The Freudian Paradigm*, edited by Md. Mujeeb-ur-Rahman (Nelson-Hall, 1977), but, in general, works on either side of this debate have only highlighted the level of disagreement that exists in philosophy of science as to what constitutes a science anyway. Thus, one's answer to whether psychoanalysis is a science will depend on what criterion of scientificity one accepts. As a result, this debate seems endlessly inconclusive. The unobtainable holy grail of Freud-detractors is a principled demarcation criterion which excludes Freud while simultaneously including all 'respectable' science.

It is refreshing, then, to find a new addition to the small number of works by analytic philosophers which take a different approach to Freud. Works such as Jonathan Lear's Love and its Place in Nature (Yale, 1990) and Marcia Cavell's The Psychoanalytic Mind (Harvard, 1993) by and large ignore the questions of whether psychoanalysis is a science, or Freud a scientist. Instead they focus on questions such as 'can Freud's claims be assessed in other ways - for example, by appeal to commonsense psychology or philosophical argument?', or 'what is useful in Freud's theories?'. In this respect it seems that the continental philosophers were ahead of their analytic counterparts, since Marcuse, Habermas and Ricoeur among others have for a long time been developing analogous views of Freud. All these analytic and continental thinkers avoid making the question of the worth (whether truth or usefulness) of psychoanalytic theories depend entirely on the scientificity or otherwise of the methods by which Freud tried to justify them. On this approach, we can still employ some or all of Freud's justifications for his claims, but we should give up worrying about whether those justifications are scientific or not. Would they automatically be any worse as justifications if they were, say, commonsensical or philosophical? We can also attempt to find arguments in favour of Freudian claims which Freud himself did not offer. Again, these do not have to be scientific – we can use scientific data when it is relevant to assessing the truth or falsity of psychoanalytic claims, but it is not the only way to approach the issue. One other way, which is favoured by many of the contributors to this volume, is to try to show that Freud's theories harmonize with, perhaps even improve on, perfectly respectable theories held by philosophers. We will see some examples of this shortly. If successful, this strategy may leave Freud's theories vulnerable to whatever criticisms those philosophical theories are vulnerable to, but at the very least it places them within the realm of the rationally discussible and philosophically interesting.

The contributors to this volume generally favour an \hat{a} la carte approach to Freud. That is, they take the bits they find plausible or useful, defend and perhaps elaborate them, and simply ignore or discard the rest. Given that Freud's theories are an enormously mixed bag, this is almost certainly the wisest approach, and is probably the approach taken by the more creative of scholars towards their favourite philosophers.

The first paper, 'Psychoanalysis, Metaphor and the Concept of Mind', by Jim Hopkins, begins by drawing parallels between recent theorizing about conceptual metaphor and psychoanalytic accounts of representation. Both show us that much of our language is pervaded by metaphors which get extended to great lengths - for example, a relationship is often described using the metaphor of a journey, which can be going along well, slowing down, getting stuck, and so on. The relationship itself is often spoken of as if it were a vehicle, the type of vehicle varying - for example, it can be taking off (aeroplane) or on the rocks (boat). What psychoanalysis shows is just how pervasive these metaphors can be, and how they can shape our thinking and our actions without our realizing it. To take an example of Freud's, an old bachelor collecting snuffboxes may be finding a substitute for a multitude of sexual conquests. One of the most pervasive of all these metaphors, says Hopkins, is that of the body as a container for the mind. The contents - mental states - are often described as if they were an actual physical substance, which we can keep in or let out in various ways, such as bottling up or venting. Also, we speak of wanting to take in things we like (food for thought, good enough to eat) and keeping out things we do not like (as when we don't swallow an idea). Hopkins suggests, with psychoanalytic support, that the ability to employ such metaphors is necessary for normal social interaction, but that the metaphors can also sometimes seriously mislead us. We may think that we are boiling over with anger, but if we expect to see it splashed on the floor, we have made a mistake. Wittgenstein and Freud converge on the notion that our thinking can be seriously distorted by the unconscious misuse of metaphor. Wittgenstein believed that the problem of other minds and the problem of consciousness are both the result of mistakes of precisely this kind – arising from the metaphor of the mind as contained in the body. Certainly Hopkins is correct that philosophical (as well as other kinds of) pseudo-crises can arise because of inappropriately used metaphor – category mistakes, in other words. And Freud provides many narratives which show this process in action in various spheres of life. Whether this approach to the problem of consciousness succeeds is, of course, another question.

The section on ethics includes a paper by Michael Stocker and Elizabeth Hegeman on 'Aristotelean Akrasia, Weakness of Will, and Psychoanalytic Regression'. Aristotle, the authors remind us, was not interested in just any kind of weakness of will, but in cases where 'people, because of contrary, epithumetic (bodily) desire for epithumetic pleasure, knowingly [fail to do] what they think best' (paradigmatic akrasia) and 'because of contrary emotion-driven desires for certain sorts of pleasures, knowingly [fail to do] what they think is best' (non-paradigmatic akrasia) (p. 135, italics in original). Note that both of these types of cases are characterized not only by the type of object pursued, but by the type of desire involved. Specifically, the desire involved is in both instances characterized in a way which stands in contrast with rational desire (i.e. desiring something because one believes it to be the best). Thus animals and children, who on Aristotle's account lack rational desires, cannot be akratic. The authors argue that Aristotle's description of the adult akratic parallels the psychoanalytic concept of regression - where adults start to exhibit infantile modes of pre-rational activity instead of rational thinking. They then say:

It is always interesting to speculate about what it means when there are similarities in disease/diagnostic categories in two different cultures, far removed in time and space. Dare we ask that if akrasia and regression have something in common, that we could be touching a bedrock of human nature?

(p. 150)

I can hear the sound of several cans of worms opening.

Michael Levine's paper 'Lucky in Love: Love and Emotion' raises two philosophical problems about love and emotion. First, there is the following dilemma: when we love someone, do we love the person for some attributes that person has, or just for him/herself? If the former, then, logically, should we not love everyone else with the same attributes? But how can it be the latter, for how can we consider a person in abstraction from all attributes? Psychoanalysis, Levine argues, gives us reason to believe that when we love someone it is always for attributes the person has, but further, that those attributes are very often not the ones we think we love the person for. However, the problem of meeting another person with the same attributes is imaginary, for the attributes for which we love someone are as complex, idiosyncratic and detailed as our own individual psychology. Further, those attributes are continually developing, and are changed by our love for the person. The second problem Levine raises is the age-old one: are there emotions which we would be better off without? Again appealing to psychoanalysis, Levine argues that there are emotions which are destructive, anti-social and otherwise disagreeable – indeed, psychoanalysis tells us that such emotions are far more prevalent than we might otherwise think. But, he argues, it is a mistake to think that we can get rid of such emotions. In trying to get rid of them we are liable to repress them, with all the dangers that entails. Better, psychoanalysis urges, to face up to them and deal with them consciously.

Other topics covered include: sub-intentional explanation, Freud's theory of consciousness, moral authenticity, psychoanalytic jurisprudence, and jokes.

I strongly urge anyone with philosophical interests who has found Freud unappealing to read this book. The diversity of philosophical topics covered and approaches used, as well as the uniformly high standard of the papers, virtually guarantee that something of interest will be found within its pages. Those who are already interested in Freud will also find plenty of fresh angles and new insights. In any event, it should help to ensure that the field of Freud scholarship will remain exciting and fruitful for many years to come.

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Place and Experience: A Philosophical Topography By J. E. Malpas Cambridge University Press, 1999. Pp. vii + 218. ISBN 0-521-64217-5. £35.00

In conclusion to his transcendental exposition of the concept of space, Kant claimed that 'Space does not represent any property of things in themselves, nor does it represent them in their relation to one another'; he adds, 'Space is nothing but the form of all appearances of outer sense. It is the subjective condition of sensibility, under which alone outer intuition is possible for us', *The Critique of Pure Reason*, A26–B42 (Macmillan, 1929). Malpas's work extends the Kantian claim from space to place (Chapter 5, especially pp. 115ff.).

Two aspects of Kant's claims have been influential in contemporary philosophy: the idea that a grasp of objective space is a prerequisite for a grasp of objectivity (K1); and the idea that the nature of space and hence of objectivity is a function of human mental capacities (K2). Debate in the 'post-analytic' tradition often emphasizes the first thesis (K1) at the expense of the second, spawning a philosophical industry in the nature of spatial representation and its relation to consciousness. The starting point for these works was perhaps Gareth Evans's reflections upon Strawson's question of the possibility of objectivity in a solely auditory universe, a 'no-space universe', (Evans, 'Things without the Mind', *Collected Papers* (Oxford, 1985)). Thus K1 has been taken as the ground for two issues: one is to examine how we, and other animals, represent space; the second is to understand issues of mind and meaning. These issues are interrelated: a certain kind of grasp of space or a grasp of a certain kind of space has been allied to a capacity for objectivity.

While Malpas explores and contributes to these debates, his work often radically departs from familiar approaches to the issues. For example, much of this recent work has typically employed an impoverished notion of space, a tendency perhaps necessary to distinguish different capacities held to be aspects of the full-blown grasp of space or possession of spatial concepts. However, this narrow conception of space comes at quite some cost, as Malpas's exposition of the notion of place makes clear. Malpas argues that to understand the structure and possibility of experience (take the notion of experience here as a non-empiricist one) is inseparable from an understanding and appreciation of the concept of place (p. 33). In making this move Malpas is changing the Kantian agenda, setting place, not space, as the foundation for thought, experience and human agency.

Malpas disputes another traditional reading of Kant. In contrast to the 'post-analytic' tradition's treatment of the Kantian claims, there has been a tendency in 'Continental' philosophy to embrace, often without much analysis, an extreme version of the second Kantian thesis (K2), one which often entails a denial of the very possibility of either objectivity or intersubjectivity (p. 66). Malpas rebuts this interpretation of the second thesis and demonstrates that K2 does not entail a solipsistic subjectivity, properly understood, is interdependent with a grasp of objectivity.

For Malpas the idea of place is not a subjective construct; rather it is the ground for the very nature of human identity: place is 'that wherein the sort of being that is characteristically human has its ground' (p. 33). The Greek notions of *topos* and *chora* are the relevant precursors, Malpas suggests, of the central notions of space and place for both human existence and for philosophy (p. 24). Both *topos* and *chora* suggest dimensionality or extendedness but cannot be reduced to either notion. Malpas notes that in the course of Western thought, the notions were gradually eclipsed by a notion of space as a void, a concept which suggests the idea of a homogeneous and undifferentiated realm of pure extension. Spatiality thus becomes the primary notion – a matter of physical extendedness in which all things are located (p. 26) – while the notion of place is reduced to the idea of simple location within a greater spatial structure (pp. 27–8). And when philosophical discussions of place have emphasized place, place is generally treated as an essentially subjective or psychological phenomenon (p. 29).

Yet while philosophical understanding of the notion of place has been impoverished, other intellectual traditions take place as a notion of primary importance in human existence. The idea that human identity is tied to location has long been explored in poetry and other literary forms, and social sciences such as geography. A familiar theme is that nature is both humanized and humanizing (p. 2). Thereby nature, the environment within which human beings exist, is both a physical and a psychic location for human agency while human identity is typically seen as inseparable from human location (p. 4). But this idea of inseparability is not confined to imaginative literature. For example, a radical version of the inseparability thesis is voiced by phenomenologist Merleau-Ponty, who claimed that 'The world is wholly inside and I am wholly outside.' Merleau-Ponty dissolves the apparent distinction between the idea of an inner space of place in the mind and an outer space of place in the world (pp. 5-6). The inseparability thesis thus has both a positive and a negative aspect: while it opposes dualism between the mental and the physical, it endorses a view of human existence (of thought, experience and action) as inextricable from the physical environment in which those particular existences occur. The two share common features which Malpas exploits: he adopts the inherent anti-reductionism; and he rejects the idea that place (let alone space) is either inherently subjective or objective - space and place are alike in that both notions are interdependent upon the subjective and the objective.

Malpas suggests that the inseparability thesis finds its most complete expression in Proust's work, *A la recherche du temps perdu*, which presents human life as essentially a life of location, where self-identity is a function of one's identity found in place, and where places themselves are somehow suffused with the human (pp. 6, 158–74, and Chapter 8, 'Place, Past and Person'). The idea that human life and human identity is established in some special relationship to a particular landscape is more than a mere literary motif; the idea reveals a fundamental and non-contingent relation between human life, identity and human location (p. 7). Malpas explores what he sees as the central connection between human identity and location, a connection which requires philosophical investigation of different concepts of place, of locality and of space (p. 7). The result is a complex notion of place which founds human experience.

Malpas's conception of human experience is developed through an anti-reductionist strategy which has at least three components: the first reflects the methodology he follows, a mode of analysis that explores the interconnections of structures rather than by reduction or simplification (pp. 39–43, 69); the second stems from Malpas's advocacy of holism not just for the mental and meaning but for human experience in the world (see Chapter 3, 'Holism, Content and self', and Chapter 4, 'Unity, Locality and Agency'); the third is Malpas's rejection of the idea of the self as preceding, and hence the owner of, those mental states attributed to it (Chapters 3 and 4, especially pp. 73–5).

Place is the crucial notion for Malpas's anti-reductionist strategy and for his metaphysics more generally. Just as an account of the very possibility of experience rests upon a holistic account of the overall structural elements (here the notion of experience is to be understood broadly to include mental content, the self, and agency), so too an account of place requires an account of the interdependent elements which give each place its identity and character. These two complex ideas intersect because the notion of place is taken as the firmament for experience, and since experience is a function of a creature's grasp of spatiality, place is thereby a structure which encompasses both the subjective and the objective (p. 41, see Chapter 2, 'The Structure of Spatiality'). For Malpas, the idea of place provides a framework for understanding the complex interconnections of subjective and objective spatiality. Since place cannot be divorced from ideas of space and dimension, the result is that spatiality - 'in any sense rich enough to do justice to the spatial involvements of living creatures' - requires a concept of place (p. 70).

Hence, rather than see space as the outer form of all intuition, Malpas advocates a grasp of place as fundamental. However, since the notion of place rests upon notions of spatiality, Malpas develops three concepts of space as necessary ingredients for explanation of human experience: these are the subjective, the allocentric and the objective. In each case Malpas offers an explication of the concept which differs from most uses of these notions in the contemporary literatures (see the contrast with John Campbell's work, pp. 54-6). For example, the idea of subjective space is not one of the familiar conceptions of an egocentric space according to which subjective space is centred upon the organism's body (or some part). For Malpas, subjective space is a space structured by the causal properties of features evident within that space and by the sensory, cognitive and behavioural capacities related to those features (p. 52). In a sense, subjective space is the immediate environment that figures in the organism's experiences (which include a variety of mental states, rationally but also causally related, and connected to varying degrees by memory). As such subjective space is perspectival (and this feature it shares with egocentric space), but it is not focused on a particular origin of perspectivity. The result

is that a creature's grasp of subjective space is tied in complex ways to its capacity (past and present) for movement and activity in the world about it. In contrast, allocentric space is constituted by being centred on some point or feature (p. 53); thus it is organized around a salient feature or features of the creature's environment. A grasp of allocentric space enables a creature to orient itself, from within its subjective space, in relation to the objective space within which it is located (p. 54). And this capacity for orientation in the world outside the subject's mind is a necessary requirement for organized behaviour. Thus since subjective space is tied to rationally and causally related mental contents, and to occasions of agency, the notion of subjective space inherits properties of allocentric space, especially the semi-objective features of allocentricity (pp. 53-4); hence these spatial concepts are interrelated. The notion of objective space is of a grasp of space as an extended field independent of any particular agent and independent of any particular single feature or location (pp. 54, 59). While objective space cannot be an experiential space (p. 59), Malpas claims that any creature - irrespective of its conceptual capacities - must possess some grasp of objective space if it is able to orient itself spatially. A creature must at least possess a grasp of space which is tied to real features of its environment (though these features may be grasped only from the creature's perspective, p. 60). In such cases objective space is grasped in the manner of an allocentric space: the important claim is that the manner in which objective space is grasped is not an impediment to that space being objective (p. 60). Thus in order to be capable of at least organized behaviour (if not agency with its associations of intentionality), a creature must have at least a minimal grasp of objective space. Through a capacity for behaviour or agency, subjective space is thereby connected to objective space. However, it is not the case - according to Malpas - that the concept of objective space is generated from the idea of subjective space alone. Rather, the issue to explore is the sense in which we properly attribute to the creature a grasp of objective space, not a process of detachment from instances of experiential space which eventually leads to an 'objectified space'. The supposed process of detachment itself rests upon a grasp of a concept of objective space (p. 61) just as the process of abstraction already implies a grasp of objectivity (p. 63). Thus the notion of subjective space is interdependent with the notion of objective space, yet these remain distinct notions: objective space lacks the necessary component of subjective space, which is the idea of an experiential viewpoint (p. 63). Furthermore, Malpas rejects the idea of space as it typically figures in physical theory. A scientific or 'geometric' conception of space does not enable, Malpas claims, examination of that space within which the perceptual presentation of objects - together with thought, movement and activity - is possible (pp. 44-5). Thereby the notions of space are tied to the agency of the organism (and organisms capable of agency are organisms to which we can genuinely attribute

mental states with content). A conception of space which is tied to agency is not, he argues, a purely psychological notion, or one which prioritizes the subjective; instead, the concepts of subjectivity and objectivity are reexamined and shown to be interconnected and interdependent.

A clear limit on Malpas's inquiry is his focus on the cognitive capacities of human beings rather than other kinds of animals. While any organism capable of organized behaviour in the world requires a minimal grasp of the difference between itself and other things it encounters, so such a creature must have some grasp of space. But at the minimal level all that is meant by a grasp of space is the possession of an ability to make use of some spatial framework. The minimal characterization is insufficient ground, according to Malpas, to claim that the creature has a grasp of the concept or idea of space. Malpas's interest lies in those beings (us) who typically possess a grasp of the concept of space, and do not merely possess certain behavioural capacities or dispositions (pp. 45–7). As a result, Malpas is concerned with the possibility of thought or experience which shows the capacities for judgement and the use of concepts: that is, possession of mental content and of psychological states which are rationally – rather than simply causally – related.

I suggest that there is a significant ambiguity in the idea of what constitutes 'a grasp of space'. On one view, this notion can be and must be explicated in terms of a grasp of relevant concepts (that is, the capacity to be a concept-user is a pre-condition of the capacity to demonstrate a grasp of space). On another view, the capacity for a grasp of space is exemplified by practical accomplishments. Clearly the first strategy sets far higher requirements on cognitive capacities. Malpas adopts a version of the first strategy and regards the second as inadequate: while different behaviours may be described by this strategy, what is lacking here for Malpas is precisely what might count as psychological content which clearly demonstrates a grasp of space. Unless the contents of a creature's psychological states can be expressed by means of propositions or some other intersubjective means of representation and communication (p. 67), the very notion of content becomes suspect for Malpas (see Chapter 2). One problem is that there surely needs to be room to explore issues of ontogenetic development of concepts amongst individual creatures, but it is not clear that Malpas's approach allows either for such exploration or for the existence of quite different cognitive capacities amongst human beings, issues which the second strategy might explicate.

Malpas's rejection of a practical demonstration of a grasp of space is in keeping with his rejection of the notion of non-conceptual content and with his insistence upon a complex holism between mental content, place (or locality) and agency, a holism that both rests upon and gives rise to the interdependence of the notions of subjective and objective space (pp. 65–7). Here the ambiguity is akin to issues from accounts of a theory of meaning: we are

familiar with claims that speakers of a language must demonstrate mastery of (say) the rules of that language. A theorist may accept this claim but then question what the claim amounts to, whether it is a claim to explicit or implicit/tacit knowledge. A similar question surely arises when one asks what it is for a creature to possess a grasp of space. For some, and this includes Malpas, the answer must come from a field which describes conceptual abilities, that includes only creatures with concepts where the having of concepts is typically demonstrated by being a language user and perhaps also a speaker. For others, however, the question of what it is to possess a grasp of space requires an answer of a quite different kind, one which investigates the development of certain skills and capacities (which may or may not be conceptual in the sense of requiring that the creature can actually express or represent the ability at stake). For theorists of the second kind, a notion of non-conceptual content may be essential to describe the relevant development of or failings in full-blown conceptual capacities. For Malpas it is not required (p. 86), and his project should perhaps be viewed, on these issues, as a transcendental approach to a grasp of space.

This is a rich, often controversial and rewarding work which provides a formidable array of scholarship on the notion of place as well as a clearly argued revisionary metaphysics.

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The Attack of the Blob: Hannah Arendt's Concept of the Social By Hannah Fenichel Pitkin University of Chicago Press, 1998. Pp. 328. ISBN 0226669904. \$30.00

While controversial, Hannah Arendt's conception of politics – with its strong emphasis on individual action, on the *sui generis* quality of political activity, and on the internal relationship between freedom and participation in self-government – is celebrated by her admirers, and understandable, at least in its theoretical, quasi-republican motivations, to her detractors. By contrast, Arendt's concept of the social has always puzzled commentators, and has been focus of much criticism. And yet, the concept of the social underwrites the all-important distinction between the social and the political in Hannah Arendt's work. It cannot be ignored, since it comes to define what, among other things, politics is not.

Hannah Pitkin's title, *The Attack of the Blob: Hannah Arendt's Concept of the Social*, aptly reflects – in terms explicitly reminiscent of 1950s popular culture – Arendt's characterization of the social as an increasing threat to individuality (p. 14). Following Aristotle's account of the Greek *polis* as a public

sphere that is fundamentally distinct from the private sphere or the oikos (household) - in which an economy of needs is maintained in the family unit to ensure the necessities of life and of mere biological reproduction - Arendt takes the public sphere to be the space of *freedom* where action is staged and heard by a community of equals. In modernity, Arendt argues in The Human Condition, the public space of free action is diminished, because activities and concerns belonging properly to the oikos increasingly invade the political realm. Politics becomes a kind of household management - as reflected, for example, by the rise of political economy and Marxist theory, which make economics, labour, and the relations of production central to politics (p. 12). Arendt calls this new modern way of constructing human association 'the social'. In Arendt's work 'the social' - as in 'socialized man' or 'the socialization of healthcare' - calls up the spectre of a bureaucratic assault on historically developing institutions, the transformation of men and women into masses, the silencing of difference, the refashioning of human action into routinized 'behaviour' answering to the statistical methods and rulebound procedures of scientific population management. 'Such themes are familiar enough in the history of political theory and in the literature about modernity and contemporary public problems', Pitkin rightly remarks (p. 9). The threat articulated here is that 'arrangements that human beings freely create ossify into constraining habits and empty rituals, hindering rather than expressing people's freedom and their power.... The mystery is how we, with our scientific sophistication and technical capacities, have come to be so helplessly trapped by our own activities' (p. 10). In other words, Pitkin frames Arendt's critique of the social, in terms of what Gillian Rose (1978) has called the 'lament over reification'. This in itself constitutes an important insight and directs the argument of the book. Whether Arendt's theory of social reification is simply a lament - a symptom of helplessness - or whether it has theoretical value for social thought as a fruitful analysis of the postindustrial society is the question Pitkin sets out to investigate systematically. She tries to tease out which aspects of Arendt's theory are illuminating, which aspects of her presentation reflect idiosyncratic preoccupations, and which are paradoxical because of a more general dialectic that affects all theorizing about social transformations.

The argument of Pitkin's book runs as follows. From her early concern with the Jewess as a pariah in the nineteenth-century Germany (*Rahel Varnhagen*), to her study of the rise of imperialism and twentieth-century totalitarianism (*The Origins of Totalitarianism*), Arendt gradually developed an idea of 'the social' as a demonic force of modernity. In totalitarianism, which she regards as an outgrowth of modernity, Arendt eventually comes to see, as Pitkin puts it, 'an emerging pattern of events giving it a name, and then thinking of that name as an intentional, active force composed of humans who have lost their human agency – in short, a Blob' (p. 93). Totalitarianism is 'the social' become active: it uses the

state 'for its long-range goal of world conquest', writes Arendt in The Origins of Totalitarianism; 'it establishes the secret police and the executioners and guardians of its domestic experiment of constantly transforming reality into fiction; and it finally erects concentration camps as special laboratories to carry through its experiment in total domination' (cited by Pitkin, p. 95). Pitkin reads The Human Condition as a further chapter in this 'Sorcerer's Apprentice Tale' (p. 95). Here the rise of 'the social' works a monochromatic homogenization of the lifeworld. Distinguishing action becomes a rare thing in scientifically managed and technologically streamlined society. According to Arendt, the positivist discourse of behaviourism that emerges during the postwar period is not a mere disciplinary fiction, but a symptom of the way in which that selfextinguishing herd animal 'modern man' - we should think of Nietzsche here, although Pitkin does not much explore this connection - comes to approach all forms of human activity of late. 'The social', as Pitkin remarks, 'emerges as this new, less cruel but even more terrible threat' (p. 99).

For Pitkin, the puzzling aspect of Arendt's conception of the social is that Arendt herself has come to reify social relations in the process of criticizing precisely this way of thinking. To explain this puzzle, Pitkin argues that there is a dialectic inherent in political theory that accounts for the way in which reason falls into contradiction with itself in this species of its deployment. In a chapter comparing Arendt with Alexis de Tocqueville and Karl Marx, Pitman points to the same type of difficulty in Arendt's 'absent authorities' (Nietzsche is conspicuously missing from Pitkin's list). The immense pressure towards conformity that Tocqueville is so concerned about as a feature of the American democracy becomes a full-fledged despotism in the second volume of Democracy in America, "a type of oppression ... different from anything there has ever been in the world before" ... a despotism without a despot, [a] tyranny without a tyrant' (cited by Pitkin, p. 118). According to Pitkin, the threat of majoritarianism and of the democratic government's active shaping of the citizenry no longer provides Tocqueville with an adequate explanation for the great transformation of American civil society: 'in the end the "immense protective power" that groups and shapes each individual is no actual government, leader, party, or group but "society itself" (pp. 119-20). Pitkin discerns in Tocqueville (and also in Marx) the same tendency observed in Arendt: to construct social forces as a blob, eliminating agency altogether.

In Pitkin's account, Arendt eventually begins to recognize her unwarranted objectification of social relations and to back away from such essentializing discourse. The 'deflationary tone returning "society" to the ranks of ordinary words' in her essay on 'Society and Culture' (1960) suggests as much (p. 203). Her reports from the Eichmann trial in Jerusalem, first published in the *The New Yorker* in 1961, and then as *Eichmann in Jerusalem* in 1963, are taken by Pitkin to constitute a watershed in her thinking in this respect: Arendt, we are told, now becomes convinced that the appeal to a demonic force driving the modern development was wrong and instead speaks of the 'banality of evil', and no longer of 'radical evil', as in the totalitarianism book. Pitkin makes the sticky blob dialectic explicit in the form of two neat antinomies of political theorizing:

political theory has to engage both the free will conundrum and the micro-macro conundrum at every turn, it is about, and addressed to, people who are and are not parts of a unitary whole, who are (or could be) actively testing the limits of what they 'can and cannot do, individual, individually and collectively, trying to address their problems in a way that will let them continue to be a (sort of a) whole together. So the political theorist is forever in the paradoxical position of telling people unchangeable truths about what they are doing, in hopes of getting them to change what they are doing. Bound to talk about collectivities and the large scale, yet bound to talk about conflicting, distinct individual agents; bound to tell people how things inescapably are, yet aiming thereby to help them change things for the better, political theory is perpetually vulnerable, as it were, to attacks of the blob.

(p. 242)

Arendt goes astray, in Pitkin's view, because she is not fully clear on two all-important *as ifs* in theorizing collective action.

It is impossible to quibble with Pitkin's interpretation. Arendt's characterization of Eichmann, for example, rather emphasizes his lacking agency, although it is true that Arendt resists demonizing Eichmann. Also, how does On Revolution (1963), which was written after the Eichmann book, fit with Pitkin's account of Arendt's development? In On Revolution Arendt devotes an entire chapter to 'the social question', arguing that the French Revolution failed because 'the social question' was introduced into the public realm. Pitkin fudges here (pp. 217-22; 317n55), but her strong reading is, nevertheless, helpful in establishing an overall framework for her careful genealogy of 'the social', i.e. for 'tracing the provenance and vicissitudes of [this] concept' (p. 18). Pitkin's book is tremendously clear and well written. The way it frames its subject matter, limits the scope and nature of its claims, and zeroes in on a theoretical problem that has wider implications for political theory recommends it to us as one of the most disciplined and eminently useful contributions to the recent literature on Hannah Arendt. Pitkin subjects Arendt's conceptual schemes to careful analysis, and also examines Arendt's reading of other thinkers, engaging critically and sympathetically with claim after claim in Arendt's work.

Along the way we learn that Arendt appears to have different groups in mind when she speaks of 'the social' in different contexts: 'high society' and 'bourgeois society' in the Rahel Varnhagen book, 'the masses' or 'mass society' in The Origins of Totalitarianism, the bureaucratic organization man in The Human Condition, and the destitute poor or les enragés in On Revolution. Pitkin offers analyses of how Arendt's sometimes idiosyncratic, context-dependent, and also subjectively informed images of these groups might have contributed to the figuring of the abstract, transnational, and ahistorical blob, to which Arendt gives the name of 'the social'. Drawing frequently on Arendt's personal experience (as a Jew in German bourgeois society, as a woman seeking acceptance in professional academic society, as a European in American society, and on her personal relationships (to her lover and teacher, Martin Heidegger, to her mother, and to her husband), Pitkin tracks Arendt's own sense of helplessness and alienation and relates it to the sense of helplessness and alienation Arendt articulates in her theory of social reification. The suspicion pursued here by Pitkin, the genealogist, is that Arendt's construction of 'the social' reflects the impact of Arendt's own felt, social existence elements of which are not theorized, but merely displaced into her thinking. Since a 'feeling of helplessness' is at issue in Arendt's critique of the objectifying force of modernity, Pitkin's critical resort to psychoanalytic methods in buttressing her genealogy has some justification. It also reflects one standard view of German intellectuals during the high modernist period: that their lament over reification in modern industrial society was not well considered, and reflected rather their own bourgeois anti-bourgeois nostalgia for aspects of the Wilhelmine era that melted into thin air during the late nineteenth and early twentieth centuries - one might look to the Wilhelminian architectural designs of the avantgarde critic Siegfried Kracauer to substantiate such claims.

Pitkin's book is strongly recommended not just to specialists, but to anyone interested in Arendt's work and/or the problem of reification. Pitkin's stature as a political theorist permits us to hold her to the highest standards. I therefore allow myself to end with a point of criticism. Are we ever justified in speaking of a diminished agency as a result of a certain type of social order or disorder? And if so, how do we gauge such a thing? Pitkin would appear to answer 'yes' to the first question, but duck the second. From Pitkin, then, I would have liked to learn more about the extent to which Arendt is right or insightful about the various sources and pressures of reification she identifies. Pitkin, in the tradition of neo-Kantianism, however, explicitly restricts her investigation to conceptual analysis: 'That there is an urgent problem to be thought about, which Arendt intended her concept of the social to address, this book will simply assume' (p. 8). The genealogical approach, however, should result in our becoming more historically sensitive, otherwise the inquiry threatens to deteriorate into mere reductivism. Pitkin's hybrid approach, joining analytic method with elements of a genealogical, psychoanalytically informed critique, walks a fine line in this respect.

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Scientific Realism: How Science Tracks Truth By Stathis Psillos Routledge, 1999. Pp. xxv + 341. ISBN 0-415-20818-1. £55.00

This book is divided into four parts. The first part discusses the historical background to the current realism debates. The next two parts of the book deal respectively with objections and alternatives to realism. The final part considers the issues of 'truth-likeness' and the reference of theoretical terms.

Chapters 1-3 review the historical background to the contemporary debates through examination of the writings of Mach and Duhem, and logical empiricists such as Carnap, Hempel, Feigl, and Nagel. Psillos has done some real historical scholarship here, drawing on unpublished material in the Carnap archive. Chapter 4 outlines a positive philosophical argument for scientific realism. Psillos endorses the idea that the success of science is without explanation (miraculous) on instrumentalist accounts. However, he also accepts van Fraassen's protestation that constructive empiricism survives this objection. This motivates consideration of Boyd's more sophisticated arguments for realism based on the success (or instrumental reliability) of scientific methodology. Psillos replies to the accusation that such meta-abductive defences of abduction are viciously circular. Unfortunately, his discussion fails to remedy the more basic defects of this argument, that what is claimed about science is either unclear, or when clarified, doubtful. I am not persuaded that science requires philosophical defence of the sort envisaged here (see pp. 78-9). Philosophers need to understand science rather than to vindicate it. Before returning to the positive tasks of analysing truth-likeness and providing a theory of reference at the end, Psillos responds to standard objections and alternative proposals.

The two objections to realism are the 'pessimistic induction' and the underdetermination thesis. Psillos finds the pessimistic induction in a 1981 paper and sequels by Larry Laudan. Laudan criticized a number of realist claims and arguments by appeal to a large number of purported historical counter-examples. Psillos takes this challenge seriously, and develops replies over three chapters. After first canvassing various realist responses, he presents two more detailed historical case studies (caloric theory and nineteenth-century optics). Psillos credits Worrall with being the first person to attempt the task required to rebut Laudan by specifying what it is about superseded theories that survives revolutions. But he does not think that Worrall's view, that structure rather than content is retained in newer theories, is the right way of demarcating the surviving part of a superseded theory. Psillos' response to underdetermination leans heavily on Laudan's recent suggestion that observing the consequences of theories 'is neither necessary nor sufficient for empirical support' (p. 169).

The pessimistic induction and underdetermination thesis are arguments against realism, but do not of themselves constitute rival philosophies. The two rival accounts Psillos considers are van Fraassen's constructive empiricism and Fine's natural ontological attitude. The chapter on Fine also considers general issues about theories of truth.

Psillos reviews three attempts to formalize notions of truth-likeness and verisimilitude. He includes brief technical details, simple illustrations of how these approaches work, and the Tichy-Miller proof that Popper's definition fails. It could be argued that this demonstration is redundant given that Psillos also argues that such formalizations would not help realists out even if such technical difficulties could be overcome. Its inclusion reveals that this book is to some extent a survey, rather than exclusively a report on the author's own contributions. Psillos concludes the discussion of verisimilitude by recommending an intuitive notion of approximation which does not need to be formalized. The final chapter on reference starts with the causal theory, but realizing that this gets counter-intuitive results, Psillos reintroduces considerations of theoretical descriptions to arrive at a hybrid causal-descriptive theory.

This is rather a good book, but it has a few serious flaws. At the very least it is written in a clear, straightforward, and persuasive manner. I will give a fuller overall evaluation after commenting on some points of detail.

Very few of Psillos' conclusions seem mistaken to me. The case presented for the causal-descriptive theory is inadequate, however. Work on theories of meaning for science published around 1980 suggested that belief theories of meaning could work and would need to be combined with a descriptivist cluster theory of reference rather than a causal theory. Peter Smith developed such a cluster theory and showed how it accommodated intuitions about historical cases. Psillos provides no real argument against cluster theories, and I still prefer Smith to Psillos in relation to discussion of cases such as ether and phlogiston.

On other issues Psillos reaches the right conclusions from incorrect premises. It was a pervasive assumption of logical empiricism that theories would entail observational hypotheses. These 'experimental laws' would be testable directly, and thereby enable the indirect testing of the laws about unobservable matters contained in the theories that entailed them. That this simple picture does not apply to any real scientific theory like Newton's was argued by Putnam in his contribution to the Library of Living Philosophers volume on Popper. Putnam argued that Newton's theory entails no predictions. Psillos may simply not know this work, but he mentions the example of Newton's explanation of Kepler's laws, and so might have arrived at Putnam's conclusion had he thought more deeply about the case. Although many philosophers of science may know Putnam's idea in principle, discussions of issues such as underdetermination still frequently assume that numerous scientific theories all entail the same set of observational laws. Psillos is right in rejecting the underdetermination thesis, that there always are equally well-confirmed alternatives to any favoured scientific theory, but his reasons for this, based on Laudan's view that not all observational consequences confirm a theory, are just not radical enough. Theories have very few, if any, observational consequences. Psillos makes essentially the same mistaken concession in his critique of van Fraassen, that a theory entails all the evidence there is for it (e.g. p. 219).

As mentioned earlier, Psillos devotes three chapters to rebutting the pessimistic induction, i.e. the claim that superseded theories are not even approximately true, and that it is therefore unjustified to think that current science is any more true than the theories of the nineteenth century or before. Psillos attributes this line of thought to Laudan, and discusses caloric and ether theories historically to conclude that 'There is ... much more substantial theoretical continuity in theory-change than Laudan allows' (p. 145). This conclusion is correct, but Psillos is not the first person to have realized this. Psillos sees Worrall, Kitcher, and later Hardin and Rosenberg as the only people to have arrived at comparable conclusions about what is wrong with Laudan's view. He is prepared to defend Laudan's objections to them so as to claim that his view alone survives. But this is to give a completely misleading picture of the history and dialectics of the debate, ignoring the many scientists and philosophers who have defended the view that superseded theories are approximately true. It would be very surprising if Psillos were aware of none of them, as Laudan cites ten authors who have defended some sort of cumulativist picture of relations between successive theories, from Whewell (1840) to Krajewski (1977). A view relevantly similar to recent convergent realist claims can be found in some logical empiricist accounts of scientific progress. Interest in the issue was rekindled after Kuhn and Feyerabend independently challenged the received wisdom that the classical limits of relativity showed that Newton's theory was approximately true (1962). Indeed, what Psillos calls the pessimistic induction is what Putnam (1976) called the 'meta-induction', explicitly tracing its origins to Kuhn. This is no minor point of historical scholarship. Even if Psillos is not attempting to provide a survey of work on this issue, it makes no sense to discuss

Laudan without also considering Putnam. For Laudan does not just present a historical objection to any realist view, but criticizes arguments which are more specific to Putnam. Putnam followed Boyd in suggesting that realism is justified as the best explanation of the success of the feature of scientific methodology whereby scientists look for new theories which will contain existing theories as approximations. There are thus two issues raised by Laudan's work. When we are in possession of a new theory (e.g. Einstein's), can we then justify the claim that the old theory (Newton's) was approximately true? If scientists are trying to improve on an accepted theory (e.g. Newton's), do they only consider new theories which will retain the old one as an approximation? These are controversial issues, but Psillos sheds no new light on them. My view is that Laudan is partly right in objecting to the general claims about history and methodology which Putnam and Boyd had made, but that the core realist idea that we can see some superseded theories as approximately true is left unscathed. A large number of cases of theory-change are relevant here, and we can draw on earlier philosophical discussions of them. Psillos' claims that realists only need to consider two superseded theories (caloric theory and nineteenth-century optics, p. 145), and that he is the first person to have done so properly, are just wrong.

I have said most about the least satisfactory part of this book. More generally, this is a somewhat uneasy mix of survey and original work. Psillos could have written the definitive review of the realism debates, but has not done so because he has ignored so much important work from the period 1960-80. The first part of the book is a good survey, and when later Psillos concentrates on presenting his own arguments (adapted from previous papers), he at least tries to mention the main alternative approaches. So the book can be used as a good way into the literature, following up sources which are cited although not discussed in detail. Psillos is a serious philosopher, and it is helpful to have his discussions of the main issues and arguments in the realism debates collected in one volume. Although one might hope that a philosopher wanting to advance scientific realism would do more than just present counter-arguments to the vocal minority of non-realists (Laudan, van Fraassen, and Fine), Psillos', arguments are generally better than average. Despite the reservations I have expressed, this book is to be broadly welcomed and can be recommended.

Bristol

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On Voluntary Servitude: False Consciousness and the Theory of Ideology By Michael Rosen Polity Press, 1996. Pp. xi + 289. ISBN 0-7456-1596-1

Taking his title from the sixteenth-century humanist Etienne de la Boetie's *De la servitude volontaire*, Michael Rosen has written an engaging treatise on one of political philosophy's perennial questions: is there ideological false consciousness – and how do we know it exists? Theodor Adorno has suggested that, by definition, ideology is 'necessary false consciousness' (p. 1). Rosen's conclusion is that no thinker – including Adorno or de la Boetie – has been able to put forward a coherent, plausible account of false consciousness as of yet.

Finding the theory of ideology to be generally a theory of how different caricatures of consciousness 'stabilize, promote, or maintain a particular society or structure', Rosen seeks to discover whether or not ideological *false* consciousness is cognitive, false, and/or irrational (pp. 33, 52–3). Rosen investigates ideological false consciousness primarily via the works of Hegel, Herder, Hume, Marx, Rousseau, and Smith, as well as the Frankfurt School, on the subject. All such accounts are found inadequate at best.

The book's highlights are Rosen's discussions of Benjamin, Hegel, and Marx. I shall make a few remarks about each. With Benjamin's 'Marxist Kantianism', Rosen discovers an important strain of thinking as Benjamin attempts to provide an alternative to rationalist conceptions of the self, without such a conception being unreasonable. In Rosen's final analysis, this is the path we ought to go down if we are to provide a coherent theory of false consciousness. This state of affairs gives Benjamin a level of recognition he does not normally receive, particularly in reference to Adorno.

Hegel's philosophical reception by contemporary minds has been characterized by a debate over the acceptability of his philosophy in light of his metaphysical system. One camp (Paul Franco, Steven B. Smith, and Mark Tunick, amongst others) argues that we can discuss and utilize Hegel's philosophy without recourse to his metaphysics. In his chapter on Hegel, it is reassuring to find Rosen standing firmly in the opposite camp. He maintains the position of his *Hegel's Dialectic and its Criticism*: it is impossible to separate Hegel's metaphysical 'logic' from his philosophy. Those who might think otherwise would do well to read Rosen's account.

In addition, Rosen exposes Hegel as the first to have a theory of ideology. The constant difficulty with accepting Hegel's answers is its boundedness with an idealist metaphysical system which is quite objectionable. The post-Hegelian project thus becomes one where we strive to have Hegel without Hegel's metaphysics, which is easier said than done. Indeed, often Marx is credited with doing just this. However, Rosen

convincingly demonstrates that Marx may be giving himself undue credit. Marx reaches Hegelian conclusions falsely maintaining his involvement in questionable ontological commitments. Particularly revealing is Rosen's demonstration of Marx's concept of capital in the context of Hegelian logic (pp. 207–19).

Perhaps the only drawback can be found in the chapter on Marx, where Rosen offers an extensive critique of *Karl Marx's Theory of History: A Defence* by his Oxford colleague G. A. Cohen. For someone he does not list as one of 'those figures whom I take to be most significant for the background to the theory of ideology' (p. 13), it may seem odd that Rosen spends the most time – fifty-five pages in one chapter – on Marx.

This may be justified from two standpoints. First of all, Marx was 'the first writer to use the term "ideology" to denote those forms of consciousness by means of which societies ... [are able] to maintain themselves' (p. 168). The exposition of this term in addition to this influence upon the so-called Frankfurt School more than justifies his inclusion in the book. Secondly, Rosen takes some liberty in his opportunity to discuss Marx's philosophy to criticize Cohen's account of Marx – an account which seems to haunt much of the book. I must say that Rosen does appear convincing in his textual support that analytical Marxism would not be adopted by Marx himself. While not topic-specific, Rosen's critique of analytical Marxism is well done and does not act as a distraction in the least.

Overall, Rosen presents us with a very convincing assessment of ideological false consciousness that is quite readable. I have little doubt that this work will be an important point of engagement for all scholars on this topic.

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Theories of Consciousness: An Introduction and Assessment By William Seager Routledge, 1999. Pp. x + 306 ISBN 0-415-18394-4. \$24.95

As the title indicates, this is first and foremost a book about theories of *consciousness*, and only a book about more general theories of *mind* to the extent that they purport to address what the author considers the central twofold issue in any discussion of mind, namely the nature and generation of consciousness. Seager calls this the 'Generation Problem': how is the 'generation' (without specifying in advance the sense of the word) of consciousness by a brain to be explained within the constraints of natural science? The problem, perhaps, may be simplified

by thinking of it as the problem of relating three terms within a 'natural' theory: (1) brain states, (2) consciousness, and (3) intelligent behaviour. Indeed, for Seager, theories of mind are to be assessed precisely in terms of their success at finding a 'natural' role for (2). Seager argues in considerable detail that any resolution which entails the denial of the existence of consciousness is ultimately unsuccessful. Neither reductive (HOT, Identity) nor 'dissolution' theories are found successfully to address this problem.

The book first defines the generation problem within the context of its origins in Descartes, showing that Descartes had, within the limitations of his scientific knowledge, focused on a very attractive theoretical direction in treating consciousness as essentially representational; it then identifies the contending alternatives to this Cartesian insight; it shows in detail how these alternatives fail; it offers a modern elaboration of the Cartesian thesis; and it ends with a virtuoso performance on a theme by Chalmers that involves an intimidating venture into information theory and quantum mechanics, and that culminates with a speculative flourish into panpsychism. It should be evident that the reader must take seriously the second conjunct in the title: this book is both much more and much less than an introduction. It is more in two respects, first in that it dedicates a very significant portion of its text to critical analysis, and second in that constraints of size force considerable condensation on the accounts of many theories and arguments. It is less in that while it makes a token gesture at being 'introductory' by inserting one or more framed summary passages into every chapter, this is not a work for the faint of heart, for it is challenging at every turn. This book is extremely ambitious in its scope. The number of positions, their intricacy, and the intricacy of the objections Seager draws to them create a tension between the book's declared intent as an introduction, on the one hand, and its size and content, on the other. The constraints of size seem to have forced in many places a level of condensation incompatible with a genuine introduction, while Seager's detailed excursions into physics (for example pp. 37, 38 and a substantial part of Chapter 9) may well allow the work to be introductory to physicists, but likely not to many others.

Seager begins the book with the almost compulsory discussion of Descartes. Nonetheless, unlike many such discussions, his is illuminating and well informed, and, in addition, has the virtue of actually playing a significant role in what is to come later. Seager plausibly attributes to Descartes a *representational* theory of consciousness, specifically the theory that all mental (in Descartes's case this is synonymous with 'conscious') objects, events, processes are inherently representational in the sense of 'being about' (which is what he intends in calling them 'Ideas'). In this respect, Descartes holds the doctrine much later associated with Brentano: all mental content is intentional. Since much current thought tends to

distinguish between cognitive' mental content which is inherently intentional and 'raw' sensational content, which is not, the Cartesian position is already radical, but what makes it even more interesting is the further Cartesian thesis that representation ('meaning', 'intentionality') is also present in the purely physical brain, a view in which he diverges from Brentano's further view that only mental content is intentional. The Cartesian view, according to Seager, holds that cognition, a process which necessarily involves the manipulation of intentional objects, can and does take place in some brains utterly devoid of consciousness (as in the case of animals) as well as in brains capable of consciousness without actually having conscious 'expressions' in the form of 'Ideas'. As far as the relationship of brain to consciousness is concerned, Descartes does not supply an explanation beyond positing it as a brute fact that certain surface conditions of the pineal gland have the causal power to implement conscious states, making Descartes a 'mysterian'. Ultimately, Seager argues that a doctrine of this representational kind has much to recommend it.

In the chapters which intervene between the Cartesian beginning and the two chapters on the representational theory, Seager carefully appraises a number of reductionist positions, notably those of Rosenthal (HOT), Churchland (Connectivist), and Dennett, allowing Dennett a full two chapters. His conclusion in all cases is that while the theories contribute very significantly to the ways in which we theorize about cognitive brain functioning, they fail to address the ultimately recalcitrant generation problem. That is, both mentalist and physicalist reductions fail.

Seager is partial to the representational theories, and for some good reasons. He concentrates on the highly developed version of such a theory offered by Fred Dretske. In an odd way, this could be called an 'Identity' theory since it holds that the qualia we perceive actually are the properties of an object as those are 'intended' or 'represented' in a mental sign or representation, and that for a mental particular to be conscious is simply for it to be a sign (to 'have' intentional content). Let me state what seems to be the strategy of this view. At the heart of this move lies the distinction between a sign and its 'intended' object (Seager reminds us with a fine philosophical eye of Descartes's distinction between formal and objective reality, which he takes - rightly, I think - to be the ancestor of the doctrine of intentionality). At its crudest, we find it present already in the 'use/mention' distinction. When I 'mention' the name 'Jean Chrétien' (as I just did), the referent is the typographical token within the single quotes that came earlier in this sentence, but when I use it, then I am talking about the name's intended object. According to Brentano and Dretske, all and only mental particulars are inherently signs, that is, when they 'occur' in certain ways in the mind, they are, as it were, 'in use' and thus, the mind is actually always dealing not with the signs qua signs, but rather with the mostly extra-mental realities those signs are representing. This has the advantage at least of removing qualia as peculiar mental contents from the mind, since the only things that are 'in the mind' on this view, strictly speaking, are the 'invisible' signs we are using. Using Descartes's distinction, we are always and only aware of the 'objective reality' of an Idea, never its 'formal reality'. Dretske further wants to identify consciousness with the inevitable intentionality of mental signs. This has the immediate advantage of collapsing the problem of consciousness into the problem of intentionality, where the latter is taken as a brute fact of nature. Of course, one does want immediately to ask, but where have all the qualia gone? If they're not 'in the mind' and not 'in the brain', then where? Dretske seems to want press the notion that they are qualitatively identical with the property 'in the world' which they represent; indeed, he holds that to know the property being represented is to know what it is like to experience the quality. This does not seem very plausible, and Seager attempts to provide a supplementary doctrine in the form of 'substantial concepts' to deal with this problem.

Constraints of size do not allow presenting the detail of Seager's discussions, but I would be remiss if I did not express my appreciation to Seager for introducing me to gymnarchus niloticus, indisputably, in my view, a philosopher's fish. While I am not certain that I have correctly grasped Seager's description of gymnarchus's sensory functioning, this fish immediately captures the philosophical imagination. The representational theory wishes to identify consciousness with acquaintance with an intentional object, which is necessarily an object apprehended as such-and-such, as having such-and-such a property. Gymnarchus makes the identification of such a property difficult, and while gymnarchus itself may very well not be conscious at all, there is no reason in principle why its perceptual machinery should not be tied to a more complex brain that is capable of consciousness. Gymnarchus senses its environment by means of a weak electro-magnetic field its generates around its body. Bodies around gymnarchus are sensed when they distort the field on the basis of their own conductivity, to the extent that that conductivity varies from the conductivity of the surrounding water. So far, so good. What complicates the scenario is that there are two properties in addition to conductivity which seem to determine whether gymnarchus' field suffers a distortion, those of location and form. This means, if I follow Seager's account, that one and the same distortion might result from multiple differing circumstances. For example, situations (1) through (3) involving objects with the following property configurations: (1) conductivity A, shape B, location C; (2) conductivity A, shape D, location C; (3) conductivity A, shape D, location E would have identical effects on gymnarchus' field. Since gymnarchus can't ever know which of the three properties have been kept constant, it would seem that the poor fish can never know whether it is sensing a change in conductivity, shape, or location. Its knowledge would seem to

be constrained by a kind of piscatorial Uncertainty Principle. One doesn't want to conceptualize this as the fish experiencing the world in terms of a kind of disjunctive property: either conductivity or form or location. We don't want to imagine it wondering whether the 'thing' outside it was 'there' or 'of such-and-such a shape' or 'had such and such conductivity', because this would be to anthropomorphize gymnarchus into 'understanding' discrete 'conductivity', 'shape', and 'location' notions. This fish does not have *our* notions of location and shape: it has some utterly unimaginable (by us) apprehension of its world, if it can be said to have any at all. To say that it is sensing a disjunctive property is to describe it from the point of view of a conscious creature which has a visual manifold allowing for conceptually distinct discriminations of location and shape, but that is simply not the case for this fish.

After the two chapters on the representational theory of consciousness, there are two concluding chapters (8 and 9) entitled respectively 'Conscious Intentionality and the Anti-Cartesian Catastrophe' and 'Consciousness, Information, and Pan-Psychism'. The former chapter deals with the Internalism/Externalism debate respecting the intentionality of consciousness. Seager concludes that any effort to give an exhaustively Externalist account of intentionality is very likely to fail. The last chapter deals with possible speculative implications of Chalmers' views, with special attention paid to issues of 'emergence'. If one grants the existence of the mental and one denies the possibility of emergence, it seems that one is led to the possibility of 'panpsychism', the doctrine that 'mentality' is actually a property of matter itself, even at its most fundamental, a doctrine already entertained by Diderot in the eighteenth century. Seager is here, as in the preceding chapters, eloquent, interesting, subtle, and informative.

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