Book Review | *Teleological Realism: Mind, Agency, and Explanation*

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This book is a wonderfully readable argument for the independence of teleological explanation. What is at issue is the place of mind in a physical universe: If there is no separate science of man, if the facts about human beings fall entirely within the purview of the natural sciences, then explanations of human behavior must be the sorts of explanations that the natural sciences can handle, namely causal explanations. Sehon’s aim is to show that teleological explanations — “Lincoln read in order to learn” — cannot be replaced, without more, by causal explanations — “Lincoln’s desire to learn caused him to read” — and that therefore the facts about human beings do not fall entirely within natural, or causal, science. This is not a new quest, of course, but Sehon brings to it some new tools and addresses some of the more recent attempts to reduce the teleological to the causal. The book is a compendium of arguments that circle around the question of reduction, and it should be accessible and useful to both the expert and the beginning scholar. The book is built upon a three-part division of the possible relationships between common sense psychology and the natural sciences, however, and it seems to me that the division is unhelpful and perhaps misleading. More about that later.

Sehon denies the possibility of reducing teleological explanations to causal explanations. He is also against the reduction of statements about mental states to statements about brain states, but you can be against reduction of that sort and still hold that statements of purpose are causal statements in disguise. Sehon denies the possibility of either sort of translation. He not only denies the possibility of reducing
statements about mental states to statements about brain states, he denies the identity of the mental states and brain states. He argues, nevertheless, that the mental supervenes upon the physical, and he argues against substance dualism. Mental states are not identical with brain states, but they are determined by and perhaps “constituted” by physical states – states that must include more of the physical world than just brains.

The book is divided into three parts. The chapters in Part One set up the problem and delimit the notion of reduction. The chapters in Part Two are devoted to arguing against the causal theory of explanation of human behavior. The chapters in Part Three set out and develop Sehon’s own position, which he calls “teleological realism.”

The first chapter lays out the trichotomy that sets the structure of the argument. According to Sehon, there are three logically possible relationships between the physical sciences and “common sense psychology (CSP).” The first possibility, Option 1, is that physical science and CSP (by and large) contradict one another, that CSP explanations of human behavior, which tend to be teleological, are reducible to but for the most part inconsistent with naturalistic explanations of human behavior. The second, Option 2, is that physical science (by and large) entails CSP; the claims of CSP are reducible to claims of physical science and follow from physical laws. Options 1 and 2 constitute what Sehon calls “strong naturalism.” Strong naturalism, in Sehon’s view, entertains only two possibilities, that psychology is a part of physical science or inconsistent with it. That, I think, presents a problem for Sehon’s way of structuring the problem, as I argue below.

The third possibility, Option 3, is that physical science and CSP are independent of one another. This is Sehon’s own choice among the three possibilities, and, if I understand him correctly, it means that both sorts of explanation, the causal and the teleological, might be true at one and the same time of a single physical movement: the teleological explanation of the movement as a human action, the causal explanation of the movement as the movement of a physical object. This trichotomy, as I say, guides the argumentation in the book; it is repeated at the beginning of nearly every chapter.

In Chapter Two Sehon argues against substance dualism, and in doing so he employs what he calls “the simplicity principle:” We must accept the theory that accounts for most of the facts while leaving the smallest number of them unexplained. Monism leaves some things explained, but dualism leaves more; not a knock-down argument, but sufficiently persuasive. In Chapter Three he adopts a version of Nagelian reduction, differing from Nagel’s only in denying that the bridge laws are to be derived from observation. Instead they are to rest on commitments we have about the nature of CSP, whether or not we are committed to the claims of CSP. Ultimately, of course, he rejects reduction, though it is important to keep in mind that for him reduction of CSP to natural science includes both the possibility that the claims of CSP are entailed by the claims of natural science (Option 2) and the possibility that the claims of CSP are
inconsistent with the claims of natural science (Option 1). In Chapter Four he argues that functionalism is a reductive theory: his own view is therefore not functionalist.

Part Two is about the possibility of CSP as a causal science. He argues in Chapter Five that CSP, being normative and context-sensitive, and not involving natural kinds, does not sufficiently resemble the natural sciences to be “a candidate for subsumption within or rejection by physical science.” Chapter Six argues that beliefs are not brain states and for that reason cannot causally explain behavior. Chapter Seven revisits the problem of deviant causal chains, and responds to some recent attempts to avoid it. The conclusion of Part Two is that strong naturalism, the position that “the claims of the natural sciences exhaust all truths,” is false. Having rejected substance dualism in Part One, he opts for a position he calls “weak naturalism:” That is, he does not assert the existence of any thing beyond those that constitute the natural world, but he insists that there are “facts about the world that go beyond the facts of the natural sciences.” (56)

But how can there be facts that go beyond the natural without things that go beyond the natural? Part Three answers that question, and develops his positive account of teleological realism. The answer involves supervenience. Chapter Eight explains how there might be supervenience without reduction. This is a crucial chapter: Supervenience of the mental means only that mental facts depend in some way upon physical facts. But how? Sehon has rejected the possibility of entities other than physical entities, but has accepted the existence of extra-physical facts. Those extra-physical facts must be about physical entities. But how is that possible if reduction of the mental to the physical is impossible? He offers a proof, therefore, to show that it is logically possible for one property to supervene on another without being reducible to it. I have questions about this proof, which I will discuss at length below.

Chapter Nine sets out what he calls “the epistemology of teleological explanation:” We attribute purpose to a being on the basis of certain rationality assumptions about agents. In Chapter Ten he defends this epistemology against a series of arguments. Most of the chapter is taken up with his response to a sorites: If the movement of a stone is causally explained, why not that of a human being? If some of the movements of a human being must be teleologically explained, why not those of a stone? The sorites involves intermediate steps, of course, moving gradually from the movements of the stone through the movements of more complicated mechanisms to the movements of elementary life forms and on to the movements of progressively more complex animals and finally to human actions. The challenge is to show where causal explanation ends and teleological explanation begins. If all explanation reduces to causal explanation, of course, there is no puzzle; no line need be drawn. But if teleological explanation is nonreducible, if it is independent of causal explanation, do we say that human behavior is explained that way but not the behavior of a cat? If the cat’s behavior can also be explained that way, why not the spider’s? And if the spider’s, why not the guided missile’s? Sehon admits some uncertainty about the line between human behavior and
the behavior of a cat, but argues that his way of identifying the teleological shows that we need not attribute purpose to insects. The other objections he responds to in this chapter are really objections to the independence claim, it seems to me, and not to the epistemology he sets out in Chapter Nine. Most of these other arguments are repeated elsewhere.

Chapters Eleven, Twelve, and Thirteen argue, respectively, that the Humean theory according to which only desire can motivate action is false; that it is false that one can accept the universality of causal explanation and reject reduction of the mental to the physical; and that the principle of simplicity, which he relied upon to argue against substance dualism, does not require us to reject common-sense psychology, with its teleological explanations.

There are two key features of Sehon’s extended argument that I want to comment on: the first is the argument for supervenience without reduction, which seems persuasive to me, and the second is the division of the possible relationships between CSP and natural science into the three Options, which seems wrong-headed and possibly misleading.

1. **Supervenience Without Reduction.** If substance dualism is false, mental facts must somehow or other be based upon the arrangement of physical entities in the universe. But if reduction is not possible, what could it mean to say that the one is based upon the other? In his Chapter Eight Sehon argues for a notion of supervenience that is neither mere reduction, on the one hand, nor a mere “restatement of the problem of mind and body,” on the other. If successful, the argument to show that a meaningful supervenience is possible without reduction would be a major contribution. The question is whether it is successful.

If Sehon is right, there can be supervenience without reduction; and since functionalism entails reduction, there can be supervenience without functionalism. The idea will not be to show that the mental supervenes on facts about the brain – local supervenience. That possibility is refuted by the fact that one and the same brain structure might be identical to two different mental states in two different possible worlds, a fact accounted for by the possibility that those brains states are determined by different but superficially similar things in the different worlds, so that while the resulting brain states might be the same, the contents of the mental states are different. (Since one and the same brain state together with different facts about the world can ground different mental states, both identity and functionalism are ruled out.) Rather Sehon is depending upon a kind of global supervenience: mental states are determined by facts about the world generally, so that the physical determinants of brain states play a role as well. To be precise, “[mental facts about human beings] supervene on [physical] facts if and only if any two worlds that differ in the [mental facts about human beings] also differ in their [physical] facts” (115-116).
Sehon’s logical argument for the possibility of such supervenience has, initially, nothing directly to do with the nature of explanation. The argument hinges on the fact that in certain cases there can be supervenience (in the general sense of covariance in one direction) but no possible bridge laws that could enable reduction. And the impossibility of bridge laws in these cases will depend upon (1) the requirement that a bridge law be a way to deduce the translation; and (2) the knowledge that “there are more facts than there are deducible facts” (128). The logical point is made with a series of arguments involving non-computable numbers, showing that where a thing has values as properties, and one of those values is a noncomputable number, the noncomputable number may depend upon – vary only with – the other values of the thing and yet of course not be reducible to the other values, since it cannot be generated by any bridge law.

But given the logical possibility of supervenience without reduction, what would explain why supervenience holds if not reduction? Sehon’s answer is that “mental properties are ultimately constituted by physical particles” (130). The logical point is illustrated with an example involving the positions of chess pieces on a chess board on a computer screen. Each position is constituted by certain arrangements of pixels, and the positions are supervenient on the arrangements of pixels. In the case of a chess board of normal size, the positions are also reducible by way of a bridge law to the arrangements of pixels. “We know that there could be such a bridge law, in principle, because there are only a finite number of possible chess positions” (132). But when we move to a computer screen of infinite width, with a chess board consisting of an infinite number of columns (with an infinite number of pawns on its second and seventh rows, and some arrangement of kings, queens, bishops, knights and rooks on its first and eighth rows) – what Sehon calls “chessplus” – things change. Here too every chess position is constituted by the arrangement of pixels, and the positions are supervenient, accordingly, on the arrangements of pixels. But the positions cannot be deduced from the arrangements of pixels, because since there are an uncountable number of chessplus positions and “there are only denumerably many logical proofs or deductions, that means that there are multitudes of chessplus facts that cannot be deduced at all, and thus the chessplus facts do not reduce to the pixel facts” (132). According to Sehon, the analogy is this: Everything relevant to the determination of mental states is in fact composed of physical particles, some of them outside the brain but somehow causally related to it.

I believe that Sehon has shown what he set out to show here, but I also believe that what he set out to show is relatively modest: that it is conceivable that the mental supervenes on the physical in a way that avoids both dualism and reduction. Of course, to show that it is conceivable is not to show that it is so. Still, to maintain a position that allows you to reject the identity theory (the Standard View), functionalism, reductionism, and dualism all at the same time is no small feat.
2. The Three Options. Let’s return to Sehon’s characterization of “strong realism.” Keep in mind the three options that structure the argument: Option 1 is that the claims of CSP (together with certain bridge laws) contradict the claims of the natural sciences. Option 2 is that the claims of CSP follow from the claims of the natural sciences (together with certain bridge laws). Option 3 is that the claims of CSP are logically independent of the claims of the natural sciences. According to Sehon, strong realism is the position that either Option 1 or Option 2 must be true.

Sehon tells us that his division into three of the possible relations between science and CSP is a reformulation of the mystery of mind and body that will illuminate the problem and aid in its solution. Yet it is not the only way to characterize the possible relationships between natural science and folk psychology and not even the most natural way. The more natural way to divide up the possibilities is like this: Either teleological explanations are reducible to causal explanations or they are not. If they are not, then either they constitute an additional body of knowledge, or they must be rejected as false or meaningless. Quine, remember, accepted the Chisholm/Brentano thesis of non-reducibility – of intentional statements generally, but what he had to say applies to explanation as well. But unlike Chisholm he took the truth of that thesis to show “the baselessness of intentional idioms and the emptiness of a science of intention.” (W&O 221) Applied to explanation this gives us three possibilities: teleological explanations are really causal explanations (reductionism); or teleological explanations are something different, and are an additional part of our knowledge of the world (Chisholm/Brentano); or teleological explanations are something different, and are not part of the true “limning” of the universe (Quine). This is different from Sehon’s way of dividing things up because on this way of doing things his third option – that CSP and natural science are independent of one another – is really two possibilities: they may be independent and both true of the world (Chisholm/Brentano), or independent and only one of them, natural science, true (Quine). A strong naturalism would seem to include both reductionism and one of the independence possibilities: the Quinean way out.

The place, in all this, of the claim that CSP and the natural sciences are inconsistent with one another (Option 1) is not clear. Sehon takes it to presuppose reduction of one to the other. What does it mean to say that CSP and natural science are not independent, that CSP is reducible to natural science, and at the same time to say that their claims contradict one another? It must mean this: For every statement of CSP there is a translation (given certain bridge laws) into the language of natural science. That means that there will be a translation into a language that knows only physical entities and causal and mathematical relationships. And given the laws of natural science and the causal facts, these translated sentences must turn out to be false: (nearly) every statement to the effect that someone did something to bring something else about must be false. Why we should divide the possibility that the claims of folk psychology are false into the possibility that they are inconsistent with science and the
possibility that they are independent of science but false (or meaningless) rather than treating it as one of the two possible alternatives to reduction is not clear.

Sehon tells us that strong naturalism is the position that “the claims of the natural sciences exhaust all truths.” If strong naturalism is understood in this very natural way, as the position that “the claims of the natural sciences exhaust all truths,” then it should include that version of Option 3 in which CSP is independent of natural science – nonreducible – but its claims false (the Quinean way out). And if weak naturalism is the position that “there are facts about the world that go beyond the facts of the natural sciences,” then it should exclude that version of Option 3. So weak naturalism is not the same as Option 3; and strong naturalism is not the same as the disjunction of Options 1 and 2. All of the rigamarole about the three options seems to play no necessary role in his argument and is at best misleading. Why the time and effort spent drawing it out? I confess I am at a loss to answer that. (And this is not mere inadvertence on Sehon’s part: He claims that the strong naturalist must believe that CSP has the same subject matter as natural science (57), and that (according to him) means that the strong naturalist must believe that CSP is reducible to the natural sciences, even if all its claims are false.)