

said using the story as a method to convey a point. Whether this is effective or not will depend on the reader. The patient reader who really does want to follow Thirring's invitation to dig deeper will find these pleasant exercises. The reader who wants to discover the traces of God in the laws of nature without becoming so personally involved in the journey may find this approach frustrating. And therein lies a possible difficulty with this book.

None of this is easy or simple. To cross intellectual divides and to reveal what can be seen from the one side to those on the other is a formidable task. Thirring's solution is to ask the reader to look from his vantage point, rather than to attempt to explain the view.

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Freedom and Neurobiology: Reflections on Free Will, Language, and Political Power. By John R. Searle. New York: Columbia Univ. Press, 2007. 113 pages. \$25.50.

In this very brief book John Searle continues his project of trying to naturalize the psychological and social without doing away with either or reducing them to the natural. Consisting of versions of two lectures he delivered at the Sorbonne in 2001, the text easily succeeds in drawing the nonspecialist into the fray.

The first essay, "Free Will as a Problem in Neurobiology," addresses the putative incompatibility between the doctrine of freedom of the will and contemporary neurobiology by suggesting an account of free will that allows for an empirical, scientific solution. The second, "Social Ontology and Political Power," argues the logical priority of language to the existence of social institutions and political power and claims *inter alia* that deontic powers are ultimately grounded in social ontology. The 35-page introduction, "Philosophy and the Basic Facts," situates the two apparently disparate lectures within Searle's larger philosophical enterprise, although he admits that at "the level of authorial intent, [the two original lectures] do not have any connection" (p. 3). Common to both freedom and institutional facts is the existence of consciousness, intentionality, rationality, and language.

Clearly, Searle gets the central question right: "How can we square this self-conception of ourselves as mindful, meaning-creating, free, rational, etc., agents with a universe that consists entirely of mindless, meaningless, unfree, nonrational, brute physical particles?" (p. 5) This very old question is especially acute today because dualism no longer has plausibility in educated quarters. We simply know too much about the natural machinery of the brain to be able to ignore naturalistic explanations of mind. In our time, explanations of ourselves must be naturalistic. Accordingly, we should ask how consciousness, intentionality, language, rationality, free will, social institutions, politics, and ethics are possible in a closed, physical universe. As Searle points out, these eight notions are logically related: intentionality presupposes consciousness, language presupposes intentionality, rationality is constitutive structurally of language and intentionality, free will is coextensive with rationality, social institutions presuppose language, and politics and ethics presuppose all the other categories.

Searle thinks one can work on some of the problems without solving all of them. Each issue must be treated naturalistically; each must be understood on the basis of the naturalistic facts without thereby reducing to those facts. Accordingly, Searle rejects materialism and eliminativism as well as Cartesian dualism and Popperian-Ecclesian/Fregian-Penrosian trialisms. For Searle, universals are rightfully understood as property exemplifications and numbers as properties of sets. Although there is but one world, first-person accounts of it cannot be reduced to third-person accounts. Consciousness, intentionality, and so forth are irreducible to the basic natural facts, but their existence does not entail the existence of a distinct ontological domain.

Why does Searle believe that the philosophical climate has changed and that one can now escape the “Scylla of materialism and the Charybdis of dualism and trialism” (p. 26)? He gives four reasons. First, we know too much now to take seriously the skeptical claims about the material world that grounded the development of modern epistemology. Second, just as epistemology has been eclipsed from the center of the contemporary philosophical enterprise, so has the philosophy of language. Language is derivative upon prelinguistic “biologically fundamental forms of intentionality” (p. 30). Third, with the displacement of philosophy of language from the center there is a growing openness to do philosophy once again systematically and on a larger scale. Fourth, contemporary philosophy can no longer sharply divide conceptual and empirical issues.

In “Free Will as a Problem in Neurobiology” Searle attempts to resolve the traditional free-will problem in such a way that one could in principle open it to empirical and scientific investigation. The problem is generated by claiming the following: (1) All natural events have deterministic explanations—that is, there are sufficient causal conditions for the occurrence of each and every natural event. (2) There is some set of human behavior that is free—that is, these behaviors do not have sufficient causal conditions. (3) This set is a subset of the set of natural events. Searle points to the experience of volitional consciousness where one can discern no deterministic causal chain; there is a gap between reasons and decisions, decisions and actions, and actions and their perpetuation. He distinguishes the event-event causality of nature (*A* causes *B*) from agent-event causality (*S* performs *A* due to reason *R*). He then offers an interesting transcendental argument (pp. 53–55) for the existence of the self on the basis of the necessity of specifying *R*.

Searle has now brought his readers to the point of considering a non-Humean self having consciousness and acting on the basis of reasons. The question then arises as to the nature of consciousness. For Searle, consciousness is a higher-level systemic property realized by the instantiation of lower-level neural properties. (He espouses naturalism, after all.) At the higher level there is intentionality, rationality, and freedom; at the lower level there are just neural firings and synapse formations. So how is higher-level freedom realized neurally? I greatly appreciate Searle’s clear statement of the problematic: “The thesis of determinism asserts that all actions are preceded by sufficient causal conditions that determine them. The thesis of free will asserts that some actions are not preceded by sufficient causal conditions” (p. 47). Because Searle rightly rejects accounts of downward causation that claim causal powers at the higher levels not attributable to lower-level actualizations, he is driven to this dilemma: Either the neural events are deterministic, and thus the seemingly free, nondeterministic, psychological events

realized by them are deterministic and there is no real freedom, or the higher-level events really are nondeterministic, and the neural events realizing them are nondeterministic as well. (Obviously, Searle has no time for compatibilism.) He rejects the first epiphenomenalist option because he believes it is incoherent and in violation of general evolutionary principles, so he is driven to the controversial conclusion once argued by Roger Penrose: Because the absence of causally sufficient conditions at the psychological level must be matched by the absence of such conditions at the neurophysiological level, indeterminism at the neuro-level is necessary for real first-person (psychological) freedom. The following syllogism thus holds (pp. 74–75):

1. All indeterminism in nature is quantum indeterminism.
2. Consciousness is a feature of nature that manifests indeterminism.
3. Thus, consciousness manifests quantum indeterminism.

As Searle points out, however, accepting (3) does not mean that the macro-psychological level is filled with randomness, for “randomness at the micro-level does not imply randomness at the systems level” (p. 76). Searle acknowledges that this option is scarcely more satisfying than embracing epiphenomenalism.

The second essay asks, “How can there be *political* reality in a world of physical particles?” Searle begins by distinguishing between observer-dependent and observer-independent features. After granting that chemical bonds and gravitational attraction are observer-independent (ontologically objective), he assigns institutional features such as property, marriage, and language to the category of the observer-dependent (ontologically subjective). He next distinguishes epistemic objectivity from epistemic subjectivity. A claim is epistemologically objective if and only if its truth or falsity is logically independent from the feelings, preferences, and attitudes of the one making the claim. Given these distinctions, Searle can talk meaningfully about epistemologically objective yet ontologically subjective features.

Searle argues that one gets from the social facts grounded in collective intentionality to institutional facts through the establishment of status functions and constitutive rules. What is needed for an institutional fact is that certain conditions are met that have this form: *X* counts as *Y* in context *C*. Certain features count as fact *X* not because of what they are intrinsically but because there is a collective acceptance of their being properties or actions that would be an instance of *X* were they instantiated. Furthermore, Searle believes that it is possible that certain status functions are primitive; they do not presuppose a constitutive rule until they are regularized. (Searle wants to escape the paradox of institutional facts presupposing constitutive rules that themselves presuppose institutional facts.) Moreover, for *X* to count as *Y* in context *C* presupposes that one can first *represent* *X* as being an instance of *Y*. But since representation presupposes language, there can be no institutional facts without language, for there can be no representation of such simple institutional facts as George Bush being President without language.

Searle finishes the essay with a number of claims about the logical and ontological status of political power and government. Although it is not surprising to find Searle arguing that political power is linguistically constituted, some might find his final point problematic: “A monopoly on armed violence is an essential presupposition of government” (p. 107).

Searle has succeeded in writing a very facile, succinct, and highly readable book. What I like about Searle's work is his dedication to thinking crucial questions through from a naturalistic perspective without simultaneously abandoning deep, widely shared ontological intuitions. Starting with the existence of psychological states and social objects, the philosophical task is to provide an account that does not simply reduce or eliminate that which quite obviously is.

That being said, this book does not really succeed in pushing the technical discussion forward. Searle does not engage any current neuroscience. It is a straightforward philosophical text, and philosophically there are only so many moves to make on the chess board. Unfortunately, they have been around for quite a long time. It is not news to learn that nondeterminism is a necessary condition for rationality and that, since the instantiation of neurophysiological states and events is sufficient for the instantiation of psychological states and events (and since determinism at the neuro-level entails determinism at the psychological level), nondeterminism at the psychological level entails nondeterminism at the neuro-level. The only way out is to claim that the psychological *qua* psychological is capable of possessing causal power not realized at the neuro-level. But this robust emergentism comes dangerously close to dualism. (Robust downward causality reminds me now of the old vitalist/mechanist debate. One might think of "mental power" as analogous to the *elan vital*.) The other alternative is simply to claim that we can use the word *free* meaningfully even though all of our deliberations and actions are composed of physical aggregates that themselves follow universal deterministic physical laws. But if the mental has no real causal powers, it could serve no adaptive purpose, so why did it evolve?

What is critically important for thinkers in the religion-and-science debate is to understand the very profound philosophical problems with downward causation and thus to think deeply about what options remain. Searle's proposal takes the possibility of quantum neural indeterminism as seriously as epiphenomenalism. This itself is of some note. (Of course, quantum indeterminacy does not a free choice make, but were *God* to be involved in such indeterminacy, the possibility of a coherent account is present.)

One could, of course, criticize Searle for not developing his arguments more or not providing full documentation on the issues, but this would be unfair. *Freedom and Neurobiology* is not an exhaustive tome but a delightful read that quickly and adroitly gets to the central issue. What it perhaps teaches most successfully is this: The problem with the problem of freedom is how intractable that problem really is.

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