‘ought implies can’ principle if we wish to maintain that a thoroughly indoctrinated
witch-hunter who tortures and burns supposed witches can be held morally respon-
sible, described as ‘wicked’, and so on. On my reading, Kekes, rejecting ‘ought
implies can’ as a necessary criterion in ascribing moral responsibility, is shown, at
most, to have been incautious in using arguments which Haji, defending the truth
of ‘ought implies can’, can paraphrase in terms which render them vulnerable to
‘Frankfurt-type’ counter-examples and other technical objections. It is difficult to
feel that much of importance is at stake in this debate as Haji conducts it, since the
real difference of opinion is over what ‘ought’ assertions are taken to mean. Kekes’s
underlying claim, which Haji cites but scarcely discusses, is that our discourse of
praise and blame of agents for their actions, including our ‘ought’ assertions, is
mainly motivated by weighing the consequences of actions, and so allows us to say
without irrationality that someone ought not to have performed an action with evil
consequences, even if it is evident that he was certain to do so. Haji may of course
stipulate that ‘ought’ is to be understood sub specie aeternitatis, but with that condi-
tion granted, many readers will be less unsettled by his conclusions.

Haji’s book contains rather too many sentences like this:

Alternatively, if (as Fischer concedes), a Frankfurt-type example under-
minces PAP2, FAP and BR entail PAP2, and BR is true, such an example
thereby undermines FAP (p. 45)...

But his close argumentation repays the patient attention it requires. Readers inter-
ested in recent debates not only in its main field but in virtue ethics, or on the rela-
tion of morality to practical reason, will find the work impressively up to date and
incisively engaged.

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*What Makes Us Think?* is a fascinating yet ultimately frustrating dialogue between
Jean-Pierre Changeux, a highly regarded French molecular biologist and author of
*Neuronal Man* (Princeton: Princeton University Press, 1997), and Paul Ricoeur, one
of the most important French philosophers of the twentieth century. Their exchange
is fascinating because it is rare that a philosopher and a scientist of such stature
engage one another at such length and depth, addressing such a wide range of topics
as these two do. Among the weighty matters they discuss are the relationship of
mind and body, the nature of consciousness, the problem of other minds, Darwinian
evolution and moral norms, and religion and tolerance. Changeux’s knowledge of
philosophy is especially impressive. When the two thinkers find common ground it
is usually because Changeux has explained himself using philosophical language,
with reference to well-known figures from the history of philosophy. Readers will be
surprised to find a neuroscientist explaining brain function in terms of Descartes’ Sixth Meditation and Spinoza’s conception of ‘conatus’; later in the book Changeux explains the neuroscientific foundations of moral conduct in terms of Rawls, Habermas, and contemporary moral theory. Yet despite their common grounding in the humanities, the conversation between these two thinkers fails to be productive. Their exchange is frustrating because there is no real dialogue: each takes his turn speaking without ever appearing to listen and learn from the other. There is no compromise, no movement, no development, and no indication that either Changeux or Ricoeur thinks any differently about the relationship between the brain and the mind than they did before their conversation. That said, there is a lot to be learned from their stubbornness and disagreement about neuroscience and its limits.

The first chapter sets the terms of the debate. Changeux explains his optimism that neuroscience will one day provide biological explanations for all aspects of human experience. His work on neurotransmitters found that the brain cannot be understood exclusively in terms of genetically determined physico-chemical responses. Rather brain chemistry evolves and changes with changes in our physical, social, and cultural environments. This suggests that we can achieve a ‘neurorealist’ understanding of human behavior and cognition if we understand the precise organization of networks of neurons and neurotransmitters involved in specific human activities. This research program, known as ‘connectionism’, seeks to give an account of experience in terms of brain function—from molecule to mental activity—the main virtue of which is to explain what has traditionally come within the domain of philosophy with the precision and rigor of the physical sciences. Changeux finds inspiration in Spinoza’s *Ethics*, which offers him hope that a ‘third discourse’ can be found that would reconcile mind and body and eventually lead to a ‘neuronal’ link between scientific knowledge and the normative prescriptions.

Ricoeur believes such an endeavor is doomed to fail because the very premise of connectionism is confused. His argument is vintage phenomenology; it is exactly the same one he made fifty years ago against behaviorist psychology. The argument is based on an appeal to description: third-person explanations of causal events in the brain are different from first-person reports about one’s experience. What occurs in the brain may indeed correspond to my experience, but my experience cannot be reduced to what happens in the brain. Ricoeur proposes a ‘semantic dualism that expresses a duality of perspectives’ (p. 14), which he likens to P.F. Strawson’s position in *Individuals* (London: Methuen, 1959), where different predicates can be applied to the same person, considered from different perspectives. The proper referent of neurobiology is an observed or explained event in the brain or the body; the proper referent of phenomenology is to lived experience. Ricoeur’s hypothesis is that each discourse represents a heterogeneous perspective. We must either speak of neurons and brain functions or of one’s thoughts, feelings, actions. There is simply no way of passing from one order of discourse to the other.

Changeux agrees with Ricoeur that there are two types of discourse and two methods of investigation that correspond to two different aspects of the mind. But he is optimistic that a third, unifying discourse will be found that will ‘link the neuronal description with that which is perceived or experienced’ (p. 17). He is confident that continued research in connectionism will create such a discourse because it is based on a model that attempts to overcome any epistemological or referential dualism. Neural networks include both physical processes in the brain and a subject’s