

The Mind Doesn't Work That Way. Jerry Fodor. Cambridge, Massachusetts: The MIT Press, 2000, 126 pages, \$22.95 hard.

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This excellent book presents a timely critique of present trends in cognitive science and computational psychology. What makes this critique so remarkable is, in addition to its lucidity and the depths of its arguments, the fact that it comes from someone who has actively contributed much to the field of computational psychology for the past quarter of a century. This book, then, is a remarkable work in many ways. The title refers to Steven Pinker's *How the Mind Works*, a relentlessly optimistic evaluation of the explanatory power of present-day cognitive science. Although (or, because) Fodor himself shares many of the presuppositions of cognitive science and computational theories of how the mind works, and in fact, his writings have shaped the thinking and the work of an entire generation of cognitive scientists, he contends that a great deal of homework is still to be done before cognitive science can claim to have come even close to a thorough understanding of the mind and its workings. One trend which particularly disturbs Fodor, and at which he directs much of his criticism, is what is termed "New Synthesis" — a combination of computational and evolutionary psychology put forward in the last few years by authors like John Tooby and Leda Cosmides, Stephen Pinker, and Henry Plotkin. Though the approach taken by these authors certainly has some merit, it presupposes too much and it presupposes it much too early. For, before the evolution of cognition can be constrained in a convincing way, we first need much better theories of the cognitive processes whose evolutions are in question. And that is exactly, says Fodor, what cognitive science has not been able to produce so far.

Fodor acknowledges that cognitive science has been somewhat successful in modelling domain-specific cognitive processes. The consensus model of the origin and workings of these processes combines two theories: (1) nativism, which claims that the mind consists of a set of innate modules and (2) computationalism, which holds that thought processes are essentially syntactic operations. Put together, these two hypotheses define mental processes as modular logical functions or equations; given this, it should be possible to simulate them by computational modelling. But while this theory fares well as far as specialized modules are concerned, it does not and cannot account for the global properties of human cognition. However, exactly these properties primarily constitute what our cognition is all about: common

sense, practical reasoning, creative thinking, and the like (or, to introduce the terminus technicus: abduction or abductive reasoning). These processes do not fit well in the consensus model of the mind — indeed, they are, according to Fodor, resistant to any of the explanations the present-day computational paradigm has to offer. In short, the mind simply does not work that way.

Now, given this explanatory deficit of computational theories of the mind, it is hardly surprising that Fodor is not overly impressed by those authors who, before coming even close to an explanation of what it means to have a mind, attempt to tie their models to evolutionary psychology — as if one discipline could find credit by being lumped together with another. Fodor's critique does not stop here; in fact, he has much to say about evolutionary psychology as well. For the marriage between computational theories of mind and evolutionary psychology — cheerfully but a bit hastily celebrated by authors like Pinker and Plotkin — rests on a set of premises which most likely are, according to Fodor, false; and where they are not false, they are just too incomplete to come anywhere close to what can be regarded as a coherent theory of the mind.

However, throughout this book Fodor manages to keep the balance between criticism and a genuine interest in appreciating useful approaches where he can find them, though there are not many. Thus, he agrees that moderate adaptationist models may be applicable to certain restricted cognitive modules and thought processes; yet, as pointed out above (and in fact, throughout the entire book), the module hypothesis cannot explain most of what is happening in our minds. As far as the evolution of human cognition is concerned, Fodor favours a more non-linear evolutionary model. How the evolution of the mind happened, and what exactly happened, is still very much a mystery says Fodor; however, this does not mean that he has joined camps with those who dismiss evolutionary or computational psychology altogether. Rather, he calls for a realistic assessment of the explanatory advantages of present-day cognitive science and evolutionary psychology.

Fodor cannot be blamed for the fact that his assessment is quite sober, rather the fault is with the hubristic and hasty claims of the authors whose positions he shows to be seriously flawed. The outcome is a plea for humility, and at the same time a documentation of a passionate care for a discipline to which Fodor has contributed so much, the book at issue being among his important contributions to the field.

All in all, *The Mind Doesn't Work That Way* is a remarkable and timely book, and will remain as an outstanding historic document which should find its way to the bookshelves of many readers. One hopes Fodor's voice will be heard, because it will surely serve the advancement of a field much in need of it.