Philosopher of the mind and cognitive psychologist: The possibility of a scientific psychology

The interdisciplinary field of cognitive science is in mourning. On 29 November last year, Jerry Fodor passed away at his home in Manhattan. He is universally regarded as one of the field’s leading figures thanks to his decisive contributions to the critical-constructive dialogue between disciplines such as philosophy, psychology, linguistics, computing and neuroscience, all of which make up what is known as cognitive science. Trained as a philosopher, he was awarded his doctorate by the University of Princeton (1960) under the supervision of Hilary Putnam and his interest in the nature of the human mind led him to make a post-doctoral visit to Charles Osgood’s laboratory of experimental psychology at the University of Illinois. He eventually settled at the MIT as from 1961, where he took part in the linguistic revolution led by Noam Chomsky. At the MIT, first as an associated professor and then as a full professor, he directed the psycholinguistics laboratory, founded the Center for Cognitive Science and worked with both the Department of Psychology and the Department of Linguistics and Philosophy, where he taught various courses on cognitive theories alongside Noam Chomsky himself. He remained there until 1986 when he moved to the City University of New York (CUNY) to take up a post as distinguished professor in the Graduate Center, and from there he went to Rutgers University (New Jersey) as Professor of Philosophy and joint founder, with Zenon Pylyshyn, of the Center for Cognitive Science there (1991). He was to stay at Rutgers until the end of his academic career as emeritus professor in 2016. Fodor was a member of the American Academy of Arts and Sciences, and vice-president and president of the American Philosophical Society, and he earned numerous distinctions such as the first Jean Nicod Prize (France) for philosophy of mind and cognitive philosophy (1993) and the honor of giving the John Locke lectures at the University of Oxford (1997). As well as his numerous publications in the specialized journals of various cognitive disciplines, he leaves a legacy to the scientific community of some 20 high-impact books, some of which are among the most cited works of the last half century of cognitive research (for example, Psychological Explanation, 1968; The Language of Thought, 1975; The Modularity of Mind, 1983; Concepts, 1998 and The Mind Doesn’t Work That Way, 2000, all of which have been translated into Spanish).

With this wealth of experience, it is hardly surprising that Jerry Fodor has been regarded as the prototype of the cognitive scientist par excellence (H. Gardner, 1985, The Mind’s New Science: History of the Cognitive Revolution) and also as the leading figure in the field of philosophy of contemporary psychology (The New York Times, 30/11/2017). His initial motivation and main focus of attention was to find a basis for the scientific study of the human mind, to make psychology a truly natural science with its own explanatory power and to go beyond the two types of reductionism that have threatened its autonomy as a science: behavioral-operational reductionism (from the mental to the purely behavioral) and physical reductionism (from the psychological to the neurobiological). In Fodor’s opinion, a mentalist (someone who believes in the explanatory reality of the mind) can share the unitary materialist vision of science and, therefore, have no need to accept the mind-body ontological dualism put forward by Descartes.

In his search for an appropriate characterization of the mind, Fodor resorts, on the one hand, to the idea of intentionality...
espoused by the German philosopher and psychologist Franz
Brentano (1838-1917), understood as the property by which
something has referential content, and, on the other, to the idea
of computation, or the formal processing of symbols according to
rules, developed by the British mathematician Alan Turing (1912-
1954), which was to give rise to the digital world that is now such a
part of our environment. Mental machinery, then, was regarded as
computational machinery at the service of intentionality. The key
part in this machinery was mental representation (MR) which, like
all symbolic representations, has three characteristic dimensions:
content or meaning, form or the format of the representation and
physical implementation. By virtue of their content, MRs are the
referents of the mental states (MSs) related to them, so these MSs
(beliefs, desires, motives, plans, etc.) are typically intentional; by
virtue of their form, MRs can interact and combine with others
according to certain rules, which means that the mental processes
(MPs) that operate on them are typically computational. Finally,
and thanks to the fact that all MRs have a physical implementation
( Лишь посредством слов находит он свое место в мире), it
can be said that both MSs and MPs have causal consequences and,
therefore, can intervene in genuinely scientific explanations of
behavior. This is the base of the Representational-Computational
Theory of Mind developed by Fodor and which is one of his great
contributions to cognitive science.

Using this general framework, Fodor dedicated much of his work
and made highly significant contributions to two main issues. On the
one hand, he asked himself what particular type of computational
system the human mind is, what cognitive architecture and basic
capacities it has, and he established a precise, empirically based
distinction between modular and central components, which was to
have a considerable impact on subsequent experimental research.
And on the other hand, he tackled the problem of intentionality –
the fundamental property of the mind – by proposing an atomistic
theory of meaning (or content of MRs) that was particularly
important for the psychological explanation. Along the way, Fodor
took every opportunity to participate in the main debates that have
marked the development of psychology over the last 60 years. He
took a stand against Osgood and Skinner’s behaviorism, Piaget’s
constructivism, Gibson’s ecological perception, connectionist
models and Churchland’s neuroscientific eliminativism, Block’s
semantic holism, Pinker’s massive modularity, and even the
explanatory excesses of natural selection in the theory of evolution
(Darwin). His critical and non-conformist attitude to the status
quo of cognitive science in conjunction with the force of his
critical arguments earned him a reputation as the enfant terrible
of contemporary philosophy and psychology. Even so, this did not
stop the scientific community from recognizing that his critical
work has been a fundamental incentive for the healthy development
of these disciplines.

Jerry Fodor’s death is a great loss for cognitive science. It is
also a great loss for the author of this text because we have been in
constant touch ever since I had the chance to work under him as a
postdoctoral student at MIT 40 years ago. Meeting Jerry Fodor and
trying to get to the bottom of his work is one of those experiences
that has shaped my own scientific career and my understanding of
psychology as a special natural science: a natural science insofar
as it looks on mental phenomena as genuine manifestations of
particular physical/biological systems; and a special science in that
its level of explanation is not reducible to that of the more basic
disciplines (neuroscience, biology, chemistry, physics) even though
it is compatible with them. What is more, Jerry Fodor has left an
indelible impression because of his passionately (emotionally)
intellectual nature and his atypical approach to the teaching of
science. As few others have been able to do, he managed to
combine rigorous arguments with a direct and colloquial style
peppered with humor, irony and a good supply of literary resources.
Once he had accepted and duly justified certain premises, he would
try to carry them through to their logical conclusion, however
provocative or eccentric this might seem. This was not only how
he defended new theoretical positions but also how he questioned
and shot down theories widely accepted by the establishment in
psychology and/or philosophy. Despite being a non-conformist
at heart and having a forceful approach to discussing issues, he
preferred a thousand times over to say that he did not know (that
is to say, to accept that there were some things that he could not
explain) than to obligingly give a relativist or pragmatic response
(two of the allegedly intellectual features that he most detested).
He was a master of thought (or good reasoning), self-criticism
and controversy, always prepared to try to understand the logic
of the opposite standpoint, always open to examining counter-
examples and seriously considering the arguments against the
position he was defending at any particular time. A skilled sailing
enthusiast, he enjoyed the challenge of going against the flow, a
way of doing things that naturally spread and was picked up by
his students. All this aside, Jerry Fodor was, most importantly,
a very good man, polite and well mannered, loyal to his friends,
quite shy and reserved, which was in stark contrast to his forceful
way of speaking and his ability to intimidate those interlocutors
he caught unawares. He was a great teacher, a major scientist and
a magnificent person without ever claiming to be one. It is such
a shame that he has left us. I imagine he will go down in the history
of cognitive science as the person who most decidedly attempted
to clear up the doubts raised by Immanuel Kant (1724-1804) about
the possibility that psychology (as the study of mental life) could
acquire the status of a scientific discipline.

Thank you, Jerry, for your leadership. Rest in peace.

José Eugenio García-Albea
Emeritus professor of Psychology
Universitat Rovira i Virgili (Tarragona)

Mailing address: Departament de Psicologia, URV
Campus de Sescelades
43007 Tarragona
E-mail: jegarcia.albea@gmail.com

Note: This is a photograph of Jerry Fodor from Google: https://
www.google.es/