

WHERE DARWINISM AND ANALYTIC PHILOSOPHY WENT WRONG

AN INTERVIEW WITH JERRY FODOR

By Hedda Hassel Mørch¹

Jerry Fodor is Professor of Philosophy at Rutgers University, New Jersey. He has been highly influential in the fields of philosophy of mind, philosophy of language and cognitive science – the latter is a field of which he is considered a founding father. Among the hypotheses he has advanced and developed are *the modularity of mind* – that the brain partly is composed of informationally encapsulated structures called modules – and the *language of thought* – the hypothesis that thought takes place in an innate mental language which is actually coded in the brain. Lately he has stirred up controversy by attacking the Darwinian theory of natural selection – arguing that it’s essentially vacuous. He recently gave a talk in Oslo² where the arguments for this view were presented, and it was followed by a fiery debate with both biologists and philosophers present in the audience. During this visit, Professor Fodor kindly agreed to an interview with *Filosofisk supplement*.

In your recent writings, you have expressed some apparently anti-reductionist views. You have suggested that rationality is not reducible to computation, that intentionality is not reducible to laws of selection, and you hold that special sciences will remain autonomous. At the same time, you’re famous for having stated, back in 1987, that “If aboutness is real, it must be really something else”. Have your views on reduction changed over the years?

No, I don’t think so. The point about aboutness is

that nobody thinks it’s a basic property. That’s why it really has to be something else. Not because of any general reductionist bias. I just think it’s unlikely that intentionality is a fundamental property, a property without physical support as it were. It’s as if having fingers should be fundamental. It’s gotta be explainable. Not because of any general view about reduction, but because this particular case looks like not being a particularly good candidate for a basic irreducible property.

But if some reductions are currently impossible, to what extent is this a situation that might change as science develops further, and to what extent are there principled limits to reduction?

Remember that irreducibility is a matter of explanations. So regarding explanations in for example macro-economics – you’re never gonna be able to say what bankers do in the language of particle physics. But that’s a point about explanation, not about ontology. There’s no problem about the possibility of ontological reduction. The question is: If explanations in the vocabulary of economics could eventually be given in the vocabulary of physics, and I don’t think it could, then that’s quite compatible with saying that bankers are physical objects. What’s confused is not keeping clear on whether the discussion is ontological or epistemological – whether reduction involves the claim that everything is physical – which seems to be probably

true – and the claim that all explanations are physical explanations. *Prima facie* there are generalizations about bankers as such, and about economics as such, and there's no reason to think that these generalizations could be stated in a physical vocabulary. That is, as I said, entirely compatible with supposing they are physical objects.

You started out as a philosopher/psychologist of language, but you seem to have moved away from that field somewhat. Why is this?

Well, to what? Moved from that to what?

To cognitive science and philosophy of mind.

Oh, it's all the same stuff. I mean, psychology of language is continuous with other aspects of cognitive science, and philosophy of mind is always what I've been interested in. Well, except that I don't care much about philosophy; what I'd like to know is how the mind works. And I think all sorts of considerations, some of which are philosophical, some of which are conceptual, and many of which are just straightforwardly empirical, converge on that. So it's sort of impossible to avoid having an interdisciplinary approach to that problem. But I think of the distinction between philosophy and other areas of inquiry as vastly overplayed. It was possible to believe once that philosophy does conceptual analysis and that's its characteristic thing, but it's not possible to believe that anymore. For one thing, no conceptual analysis has actually been constructed, so one begins to wonder whether the pursuit is misconceived. I take the traditional view of philosophy as continuous with other sciences and that's where I think most people are.

In your view, what are the most exciting new ideas and developments that have emerged in the philosophy of mind in the last ten years?

In the last ten years ... Probably none. I mean, what's happened in the philosophy of mind is that people have drifted into worrying about consciousness. I don't worry about consciousness because I don't think anybody has the slightest idea of what it would be like to have a theory. In that respect the study of intentionality and rationality over the last century has, it seems to me, advanced very consi-

derably in a number of ways: It has become united with a reasonably plausible theory of how thinking works; there's been real progress in that area. There's a whole lot going on now about how to understand consciousness and how to understand what the limits of the mind are, what the distinction between the mind and the environment should be, but I don't think it leads to very much. I don't think anything has been discovered recently. But partly because it's turning into science, there is this big cognitive science project. There's a certain amount of agreement on how the outlines of a theory of cognition should go, and that has been pressing forward without particularly much purely philosophical discussion. Simply because one sort of sees how to do it, one does the laboratory stuff.

So the part of philosophy of mind that hasn't turned into science is in trouble?

Well, it's not in trouble; it's just not going anywhere. I think most people these days are either interested in intentionality or they're interested in consciousness. But nobody knows how to be interested in consciousness. So they buy expensive machines and try to find it somewhere in the brain – which is mildly interesting. The trouble is that once we've found it, we still don't know what it is or how it works. I think remarkably little has been revealed by this line of inquiry – at least so far. Maybe someone will have some luck; who knows? By contrast, real progress is being made in the direction of turning insights from people like Turing and Chomsky into respectable science or several respectable sciences. One of these sciences is cognitive psychology, and there's linguistics and so on. So there's a lot of progress at the level of actual theory construction. But that's not what philosophers primarily worry about, and it seems to me that what's been going on in philosophy of mind in the last 10-15 years has been remarkably unfruitful. Remarkably, but predictably.

What do you regard as the most important of your own contributions to the field?

I think of what I've been doing as essentially taking over some Turing-like theory of what mental processes are like, and trying to meet – and I think to some extent succeeding in meeting – the *prima*

facie objections to this that philosophers have raised. But I think the main figure in all of this is Turing, and next most important is Chomsky, and everybody else is a distant third, roughly speaking. There's been a lot of work done, for example the modularity stuff that I had a hand in. That's a kind of theory which hadn't been taken seriously for a long while, not since the death of faculty psychology.³ And I think there's been an amount of empirical success in the pursuit of a *partial* decomposition of the mind into, on the one hand, modular mechanisms and, on the other, mechanisms that aren't domain specific. That's real progress. It's something we didn't have a hundred years ago. But it's all been within the framework of a kind of theory of mind which after all Descartes knew about: a representational theory. The current project is to combine a representational theory of mind with a computational theory of mental processes. But I didn't invent any of that; I just sort of came along for the ride.

The perception of you as a philosophical figure includes some seemingly contradictory elements ...

I wouldn't be surprised!

One the one hand, you are widely seen as one of the most influential philosophers of mind of the past three to four decades. One the other hand, you often place yourself firmly in opposition to mainstream ideas ...

God, I hope so!

For example, your book Concepts (1998) was subtitled Where cognitive science went wrong, and in your latest book, LOT 2: The Language of Thought Revisited (2008), you claim that widely believed pragmatism about concepts is "probably the worst idea philosophy ever had". Why do you think you have this kind of position within the field?

Oh well, I'm reverting to a tradition in which we didn't run our psychology in order to solve epistemological problems. Much of what went on in philosophy of mind – one thinks of Ryle and Wittgenstein – was motivated by an attempt to solve epistemological problems, in particular, issues about skepticism. That's one of the main motivations that drove people to claiming that you can give some sort of theory of concepts in terms of behavior or behavioral dispositions, discriminative

behavior, sorting behavior or whatever. I think that was largely a waste of time ... No, not that it's been a waste of time, but that it implied and accepted a sort of methodology for philosophy which is mainly hopeless: that you should think of philosophy as mostly in the business of analysis of concepts. I don't think concepts, generally speaking, have analyses, just as words don't, generally speaking, have definitions. So there's a whole ghastly liaison between a theory of concepts that's driven by notions like analyticity, and a theory of mind that basically thinks that psychological processes, like for example concept acquisition, have to be explained in terms of some behavioral dispositions and responses. I think that project has been a total failure, especially in the case of psychological concepts which function in causal explanations of behavior and, for that very reason, can't be analytically connected to behavior. So that whole tradition, the tradition of behaviorism and pragmatism, strikes me as something that's just got to be allowed to quietly die. And one or another version of it has been the standard view in philosophy of mind since at least 1900. Not just Wittgenstein and Ryle, but the whole American pragmatist movement, Dewey and James and Peirce, worked for years on these assumptions, and I think they're just false. So if that's the part of philosophy that I *seem* to be alienated from, that's because I *am* alienated from it. I think it's been very useful in a negative way: all sorts of things that you would have sworn was possible to do, that you're taught in grade school or something: start out by defining your terms. Well, there aren't any definitions. Or you're taught in the philosophy of science that there must be analytical connections of some sort between theoretical vocabulary and observational vocabulary. Well, as it turns out, science just doesn't work that way.

Now some questions about your recent polemic against Darwinism. This is a good example of your being in opposition to the mainstream.

Oh well, what can you do?

In summary, you argue that intentionality and teleology in no way can be reduced by way of Darwinian laws of selection (in fact there aren't any), and that evolutionary explanations are not nomological, of a covering law-sort, but should rather be viewed as post hoc historical narratives of causal relations between particular events.³

Yes, that's what I think. That is, I think you can have evolutionary explanations, but I don't think you can have a theory of evolution.

Why do you think this is important to stress? Or, put another way: what harm can result from people being too optimistic about the explanatory power of evolution?

For one thing, quite a lot of macrobiology, biology of relatively large objects like elephants as opposed to cell membranes, has been predicated on Darwinian principles. And those principles are, I think, radically suspect. So it might well be that biology has to become a more modest discipline than it has been. Microbiology is essentially untouched, but a lot of macrobiology goes into giving *post hoc* explanations of one or another phenotypic trait; what Gould and Lewontin called *just-so-stories*. That is, you find that an animal has a certain trait and you try to tell some story about how it might have arisen. And the motivation is that it looks like Darwin's view implies that there *must be* such a story. If some creature has a phenotypic trait, an inheritable trait, then there must be something about the history of that type of creature which explains the existence of that kind of trait in terms of contingencies of selection. If the theory of selection isn't true, or is in some sense empty, then one should just give up that enterprise, just stop worrying about it.

This has played out interestingly in fields like for example linguistics. It's held by lots of linguists that all sort of detailed properties of languages are innately determined. Whether or not they're right, the point is that this kind of claim has been challenged on the grounds that it's not obvious how having those properties rather than some others would be conducing to fitness. What's so good about having a passive transformation?⁵ It's hard to see how you get to kill more tigers or whatever with one than without one. So people have been led to say: look, it can't be that there's an innate bias towards speaking a language that has a passive. Or people say: you couldn't have a very rich innate vocabulary of concepts, because most of the concepts you need now and employ routinely couldn't have been of any use in the environment of selection. So these evolutionary considerations have acted as constraints, for better and for worse, on theory constructions in a whole variety of areas, literally from psychology to aesthetics. And of course, if the

theory of selection is false, then all that stuff gets wiped away and you just have to start over again. I think you have to take seriously the possibility that you're gonna have traits, maybe even complex traits, significant traits, which are species-specific and phenotypic, but simply have no selective advantage. So whether or not this theory is true determines whether we ought to accept constraints on other kinds of theories that are implied by the Darwinian story. So I think it's worth fighting about.

Your criticism of Darwinism has caused a lot of controversy ...

So I've noticed!

But why is this, when you don't really deny that evolution happens?

I certainly don't deny the historical interpretation of genealogy. That is, what Darwin said – which is absolutely right, and I think a great insight – is that if you look at a genealogical tree – a tree of phenotypes, and see what animals resemble one another a lot, and what animals don't – you can interpret such a genealogical tree historically with nodes corresponding to species and lines to evolutionary connections between species. The evidence for some such tree is just overwhelming, and not susceptible to serious challenge. And that's in its way highly ironical, because all the theological stuff, all that controversy, is about that part of Darwin's theory that says somewhere in your family tree there's a baboon. That part of the theory seems to be certainly true; not possible to rationally dispute given the state of the evidence.

What I think is very dubious is the *theory of selection*, which is supposed to give you the mechanism which generates this tree: random variation, selective advantages and competition. I think that's very unlikely to be true. In fact, I think it's very likely not to be *substantive* in any sense which is compatible with its being true. And a lot of people are very invested in that, for all sorts of reasons: One, because they mistakenly think that the theological issues are about natural selection whereas they're really about history and genealogy. But moreover, an awful lot of perfectly respectable biologists have their life's work, or at least *see* their lives' work, as embedded in this context ... Now I think in fact that's false. I think the impact of Darwinism on ac-

tual biological practice, on how you do the science, has been vastly overrated in the propaganda wars. But if you think someone's coming along and telling you that the foundations of your life's work are sand, you're likely to be upset, you're likely not to take an affirmative view of this remark!

Also, I think, and this is very sad, that a lot of the argument I present – look, it's a short argument, it's about three lines, it's not a complicated argument – but it does turn on notions that have had a long tradition in philosophy, where people know them, and are talking about them – notions like *intentionality*, which have had a long tradition in the philosophy of mind. Biologists just don't know about this stuff. It's the usual case of disciplinary boundaries. One way of summarizing my objection is to say: "Look, your problem, or rather the Darwinian problem, is that *selection for* is an intentional notion, and *selection*

isn't. How on earth are you gonna get this intentional notion reduced to respectable notions like causation?". That's a question which philosophers will recognize, if only from the philosophy of mind – we've run into this sort of problem before. But the biologists, they really don't know what you're talking about. And understandably enough, they're not willing to spend a lot of time finding out, because they think the conclusion is preposterous. So there are plenty of uninteresting historical grounds for my sort of view being considered controversial. And actually I don't care much whether it is controversial. I'm quite happy that it should be! Sooner or later I think the point will sink in. I mean, I have never actually heard a serious reply to this line of argument. Literally never! And maybe that's because the argument is okay, which is what I believe. Maybe the people who are most concerned aren't really properly trained to consider these kinds of arguments – so even if I'm right it's gonna take a while for it to sink in. And that's fine with me, I'm in no hurry.

You work both in philosophy and cognitive science. As a philosopher you emphasize the importance for philosophers of being up to date on the scientific developments in the fields related to their philosophical research, e.g. the philosophers of mind should be up to date on cognitive science. At the same time you also correct your scientist colleagues, so they don't ignore important philosophical issues. It's perhaps not uncommonly

heard that philosophers should know more about science, but the converse claim, that scientists should know more philosophy, is less common. More often it's said, for example, that philosophy of science should never dictate how actual science should be done. Do you think scientists generally should know more philosophy?

I don't think Darwin would have been anything like as influential as he was if only biologists had heard about the distinction between *extension* and *intension*.

Look, I think some scientists should. It depends on what you work on. In a field like the philosophy of mind, or psychology, all sorts of loosely speaking conceptual problems arise all the time. And the biology stuff was a perfectly clear example. I don't think Darwin would have been anything like as influential as he was if only biologists had heard about the distinction between *extension* and *intension*. I think that bears directly on the issue. If you don't know about that distinction you're likely to go on and on for 150 years,

pursuing what seems to me to be fundamentally a mistaken line of research. Is that about the relation between philosophy and science? Not particularly, it's about the demands of this particular problem. I don't really believe much in disciplines. They're inventions of university administrations and deans. I believe in problems and solutions, and there are some problems in which the kinds of issues that have traditionally been relegated to philosophy are extremely germane. If you're working on a problem you really ought to know the aspects of philosophy or geology or anything else that is germane.

The historical problem with philosophy, what we were talking about in the beginning, is that philosophers have developed an ideology which divides conceptual and empirical knowledge in some very radical kind of way. And so have many scientists. That's to say, they take the view that there are really two quite different kinds of problems: empirical problems, which are solved by running controlled experiments or something, and mathematical problems, which are solved by doing whatever it is that mathematicians do. And that's it, so there's no place for the study of the kinds of issues that arise in philosophy. Well, that's not a plausible view. It's not a plausible view that, as it were, the world, when struck in appropriate places, will decompose into empirical problems and philosophical problems. In fact that's crazy; it's an invention of the 20th century and late 19th century. Descartes would have thought it ludicrous, Kant would have

thought it ludicrous, Plato would ... When you think of all the serious philosophers, none of them viewed themselves as doing something which is discontinuous with empirical investigation.

It's just, unfortunately, that we live in a period in which the notion of an analytic philosophy has been supposed to make some sense. And also, a complementary notion of an empirical inquiry as distinct from a conceptual inquiry or even from a theoretical inquiry has become popular as a result of a certain philosophy of science, which the scientists unfortunately took seriously, even though the philosophers outgrew it: positivism about how science works. But I take all this to be just a historical curiosity, something that will pass in time. What will remain are problems and solutions. They're not disciplinary; they're problems about the world. The world is not a disciplinary object! You know, things are connected, but you can't know in advance how they're gonna turn out to be connected. The fact that your dean is interested in sorting things out at the departments is neither here nor there.

So do you think it's partly the fault of philosophers themselves that people don't listen to them, because they withdraw into their own discipline?

Oh yeah, I think so. I think that's a natural reading of the kind of philosophy that was predominant, say up to the Second World War, some sort of positivist nonsense. But it's to be said for the philosophers that most of them gave that up. It was fashionable for ten or twenty years. The trouble is that that was when the scientists were intrigued about what philosophy tells you about science. And what it was alleged to tell you is that in science you count things, that's what science is. That's unfortunate, but it's mostly just a historical fad and it will fade as that generation fades.

You yourself have pointed out that analytic philosophy is seldom read outside the profession, in contrast to continental philosophy. I would add that many books in popular science, which often touch on philosophical themes, also seem to have much more of an impact than work coming from analytic philosophy. Do you think these kinds of works are occupying a place analytic philosophy might have had?

Oh no, I actually don't. As I say, I don't think there is any place that comes, as it were, labeled as a

domain for analytic philosophy. I think that the picture of how philosophy works, where its place in the overall pattern of inquiry rests, has been radically false and has led to a very boring kind of philosophy. It's led to questions about whether it's possible that *this* table could have been identical to *this* chair – that's not the kind of question that has a serious answer as far as I can see. And nobody cares! I think if somebody raised the question: look, could this table under some circumstances *be* that chair, I think the natural answer is "who cares?". And that's a very sensible answer. I mean, what turns on it? Analyticity has led to a preoccupation with modality, and modality has led to a preoccupation with this kind of question, where what I suppose to be conceptually based intuitions come into play. In the first place, nobody has these intuitions! I mean, do you *really* have intuitions about whether something could be water and not be H₂O? I mean really deep down? I don't. It seems to me highly context sensitive. But that's the kind of question we've been driven to by the assumption that, on the one hand, philosophy is about the necessary and a priori truths, and, on the other hand, these a priori truths are grounded in our intuitions about our concepts. I think that's not only very implausible, I think it's all very boring. So people have drifted away from it, understandably. Whereas I think "how does the mind work?", say, is a pretty interesting question, whatever your disciplinary background is. And I don't think you can solve it by appealing to your intuitions. People have gotten bored with philosophy because the way philosophy is practiced is pretty boring.

Do you think philosophy should team up with science in order to be more interesting?

Not really. I mean, I don't care what philosophers do. But I think that the natural way is to emphasize problems, not to emphasize disciplines and methodologies. I think the obsession with apriority and 14 different kinds of necessity that modern philosophy has stumbled into, has been very destructive. You can see why it should have happened, that is, the problem for philosophy since Descartes, on one way of reading philosophy, has been the refutation of skepticism. And a refutation of skepticism has to be by appeal to something certain because skepticism says that nothing is certain; it's always possible that so-and-so. So if you want to refute it you have to appeal to some kind of necessary

truth. If you're a philosopher in a tradition from positivism, necessary truths are the truths that are consequences of conceptual relationships, purely conceptual, or, as Wittgenstein would say, purely linguistic relations. So eventually, if you start out with skepticism as the problem *par excellence* of philosophy, you end up doing analytic philosophy. This all seems to me a very sad trajectory. And it's made philosophy, it seems to me, objectively quite dull. So, no wonder nobody cares about it.

So, in conclusion, philosophers are too obsessed with skepticism and too obsessed with consciousness?

No, I think the question "what, if anything, is consciousness, and what, if anything is it for?" is an extremely interesting question. How does consciousness fit into a roughly materialistic framework, and if it doesn't then why doesn't it ... I think that's an extremely interesting bundle of highly substantive questions. A lot of things that have been developed in the laboratory, for example stuff on blindsight,⁶ have had an impact on philosophical discussion, and rightly so. It's just that it's not a question about which anybody has any good ideas. The business about apriority, and so on, derives from a certain methodology which is in turn motivated by the worries about skepticism, and I think that's just a bad idea. The question whether *that* chair could have been *that* tree is a joke! It's the kind of thing people giggle over with their kids! So it's not surprising that it's hard for anybody who's not trained in this tradition to take it very seriously. But I think consciousness is a *real* problem which unfortunately nobody can think of a solution for.

Thank you! That was the philosophy bit. Now I have a few questions about opera.

Oh, you shouldn't ask me. I'm just a fan!

You are known as an enthusiastic follower of opera. Has your interest in opera influenced your philosophical work in any way?

No. Except occasionally. You know, I've written reviews and so on. But to be serious about that stuff you have to know some music theory and I don't. I've written about opera, but it's been in an entirely untheoretical way, from the point of view of just somebody in the audience. So it's not like Plato who thought the theory of music would solve the problems of physics.

Many philosophers have a keen interest in Wagner. For example Philip Kitcher has written a book about Wagner's The Ring. Is Wagner especially interesting philosophically?

Well, no. I think some of Wagner, especially in *The Ring*, connects with traditional, very deep issues that are not particularly philosophical: like what is the nature of justice, what is required to have a civilized society and so on. I think preoccupation with attempts to make those kinds of questions dramatic and concrete go back at least to Aeschylus. There's a continuity with what Wagner was up to in *The Ring*, and what, say, the ancient Greeks worried about when they worried about how to replace a society based on vengeance with some other kind of society. I think it's quite interesting and that one should be concerned with it. But that's just because I'm interested in *The Ring*. I'm very dubious of the notion of having philosophical import anyway, because the question of philosophical import depends on what kind of problems you happen to be working on. But no, there's a disconnection, like an interest in baseball for example, which I don't particularly have. I might have.

NOTER

¹ Many thanks to Anders Nes and Georg Kj ll for collaboration on the questions and for lots of help in making this interview happen.

² Podcast of the lecture can be found here: <http://www.csmn.uio.no/podcast/Fodor2.html>

³ Faculty psychology views the mind as a collection of separate modules or faculties assigned to various mental tasks. The view is explicit in the psychological writings of the medieval scholastic theologians such as Thomas Aquinas. Faculty psychology has been revived in Fodor's concept of modularity of mind. (http://en.wikipedia.org/wiki/Faculty_psychology)

⁴ The argument against Darwinism can be found here: http://ruccs.rutgers.edu/faculty/Fodor/Fodor_Against_Darwinism.pdf.

⁵ In a transformation from an active-voice clause to an equivalent passive-voice construction, the subject and the direct object switch grammatical roles, e.g. "he stole the car" becomes "the car was stolen".

⁶ Blindsight is when people who are perceptually blind still show reactions to visual information. For example, some people who have a damaged visual system, and report of no conscious awareness of a green patch in front of them, still answer correctly when asked to guess which color is present. There is also a report about a blind man who could successfully navigate through an obstacle course, without himself knowing how.