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Emergence, Meaning and Rationality

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EMERGENCE, MEANING AND RATIONALITY

Using Nagel's characterisation of the distinction between reduction and emergence, I argue that Davidson's account of meaning and mental content based on the thought experiment of radical interpretation is doubly emergent. Uncontentiously, Davidson presents a picture of meaning which emerges from, rather than reduces to, physical properties. But his own presentation of radical interpretation suggests a reductive view which relates meaning to a prior grasp of rationality. I outline an alternative 'no priority' view in which meaning introduces new specifically semantic 'oughts' whose grasp may require a non-universal special design of mind. This suggests that meaning and intentionality emerge, also, from the rational realm.

On 'Emergence' in Philosophy

In philosophy, 'emergence' is a semi-technical term whose meaning calls for stipulation as much as description since, unlike everyday words subject to philosophical investigation, such as 'knowledge', it lacks a settled use. I take it, however, to be related, but to stand in contrast, to 'reduction'.

Consider the length of a standard 4 x 2 stud Lego brick (that is four studs in length and two wide). These are 31.8mm and they are constructed so that when slotted onto a studded base they leave a 0.2mm gap between bricks (to stop them sticking). Thus the effective length of a brick is 32mm. And thus a Lego building built using a line of 10 such bricks will have a length of 32mm x 10 – 2 x 0.1mm = 319.8mm or approximately 320mm. That overall length results from the combination of the basic length of the bricks, the 'logic' of the combination (in this case the small engineered gap between each) and some basic mathematics. The overall length can thus be reduced to a combination of the basic properties of the components. But the overall length would not, within philosophy, generally be said to *emerge* from those basic properties.

The mind, by contrast, is often said to be an emergent property. Tom Nagel proposes a distinction between reductive and emergent in the following way:

> A reductive account will explain the mental character of complex organisms entirely in terms of the properties of their elementary constituents [...]. An emergent account, by contrast, will explain the mental character of complex organisms by principles specifically linking mental states and processes to the complex physical functioning of those organisms—to their central nervous systems in particular, in the case of humans and creatures somewhat like them. The difference from a reductive account is that, while the principles do not reduce the mental to the physical, the connections they specify between the mental and the physical are all higher-order (Nagel, 2012, pp. 54–5).

(Nagel uses the term 'reductive' for analyses or explanations of complex wholes using whatever properties of their most basic elements and 'reductionist' for a subset of those using exclusively physical properties.)

This use of 'emerge' attempts to reconcile two opposing intuitions. On the one hand, the mind is something *to do with* the brain or brain and body or brain, body and world. Perhaps it is a causal effect or perhaps a redescription highlighting different properties. Certainly, possession of a brain seems to play a central role in also having a mind. And yet, on the other hand, it

seems mysterious how the combination of the merely physical properties of physical material can result in the mind or mental properties.

Two particular features of the mind seem to drive this latter intuition. First, the qualitative aspects, the phenomenology (small 'p') or qualia, of experiential states seem quite unrelated to physical properties. But second, the 'aboutness' or intentionality (another semi-technical term for the world-directedness of content-laden mental states or propositional attitudes) of mental states, the ability to have thoughts *about* things whether real or unreal, appears unlike any basic physical property. And hence some philosophers (and others outside philosophy) say that the mind is an 'emergent' property of the brain or brain and body or brain, body and world.

Not all philosophers share this view of the intractability of the second intuition. In a book on intentionality, Jerry Fodor offers the following rationale for reductionism about the mind:

> I suppose that sooner or later the physicists will complete the catalogue they've been compiling of the ultimate and irreducible properties of things. When they do, the likes of *spin*, *charm* and *charge* will perhaps appear upon their list. But *aboutness* surely won't; intentionality simply doesn't go that deep. It's hard to see, in face of this consideration, how one can be a Realist about intentionality without also being, to some extent or other, a Reductionist. If the semantic and intentional are real properties of things, it must be in virtue of their identity with (or maybe of their supervenience on?) properties that are *neither* intentional *nor* semantic. If aboutness is real, it must be really something else (Fodor, 1987, p. 97).

The argument turns on the idea that a future completed physics serves as the benchmark of what is real. For any property there then seem to be only three possibilities.

- They appear on the basic list.
- They are reducible to something on the basic list.
- Or they are not a real property after all.

Since the aboutness or intentionality of mental states is both real and 'doesn't go (as) deep' as fundamental physics, it seems that it must be reducible to something on that list.

In fact the passage hedges its bets by introducing, in parenthesis, the possibility of something weaker. Perhaps intentional properties are real in virtue of merely their *supervenience* on fundamental physics. Supervenience is a brute metaphysical dependency: fixing the physical fixes the mental but not vice versa. Thus this remark looks to acknowledge the possibility of the intractability of the second intuition above: that mental properties cannot be reduced. In fact, however, Fodor does aim to *reduce* intentional properties, by combining an explanation of the systematicity and compositionality of thought via structured mental representations or symbols in a language of thought with a variant of a causal theory of how the symbols come to have worldly content or reference (Fodor, 1987, 2008).

Nevertheless, Fodor's argument highlights a key question in thinking about the motivation for emergence understood in this broad way. What is the nature of the mystery of the dependence of, in this case, mind on brain, body and external world? It could be that it marks a contingent de facto epistemic lack. Perhaps, for example, we cannot explain the connection at present. If so, some further work would be needed to articulate the standard of explanation in play. If, for example, it is the provision of merely some causal information as David Lewis suggests, then some explanation of the connection of mind and body does seem to be available (minimally: the occurrence of the Big Bang) (Lewis, 1986). If, on the other hand, it requires a logically sufficient condition, then almost nothing in the universe can be explained (Hempel, 1965).

A more promising approach is to look for a reason for the lack of explanation. We may lack an explanation of the general relation between mind and body because no such general explanation is possible because the kind of relation on which it would rely does not, and perhaps could not, exist. That would provide a principled distinction between reduction and emergence. In what follows in this brief note I will take as a clue to emergence and examine the question of whether meaning or intentionality is an emergent property either with respect to the physical world or with respect to rationality. In the next section, I will highlight an influential philosophical approach to meaning and then assess its status as emergent in the following two sections.

Davidson and Radical Interpretation

Fodor aims to shed light on the nature of intentionality by reducing it. On his account, mental content is supposed to reduce to, rather than emerge from, neural states. But my focus here is with a contrasting approach to intentionality: the anti-reductionist approach of the American philosopher Donald Davidson. Davidson examines the nature of both linguistic meaning and mental content through the thought experiment of radical interpretation. His aim is to clarify the nature of both meaning and mental content more generally by examining how it is determined in radical interpretation with the assumption that '[w]hat a fully informed interpreter could learn about what a speaker means is all there is to learn; the same goes for what the speaker believes' (Davidson, 2001, p. 148).

Radical interpretation is interpretation from scratch (Davidson, 1993, p. 77). It is a philosophical abstraction from the kind of interpretation undertaken by a field linguist having first contact with an alien tribe. Such interpretation cannot appeal to bilingual speakers or dictionaries because it precedes those resources. Furthermore, it cannot presuppose access to the content of the mental states of speakers. Whatever the connection between mental content and linguistic meaning, radical interpretation must earn access to, and cannot simply assume, facts about both. The intentional contents to which Grice appeals in the analysis of linguistic interchange, for example, cannot be identified prior to the interpretation of the agent's language (Grice, 1957). Thus radical interpretation cannot appeal to them. Interpretation must, instead, rely only on the evidence of correlations between utterances and the circumstances which prompt them:

> (The radical interpreter) interprets sentences held true (which is not to be distinguished from attributing beliefs) according to the events and objects in the outside world that cause the sentence to be held true (Davidson, 2001, p. 150).

Davidson thinks that the facts about mental content have to be determined in the same way. Meanings and contents are interdependent. This presents a principled difficulty for radical interpretation:

> A speaker who holds a sentence to be true on an occasion does so in part because of what he means, or would mean, by an utterance of that sentence, and in part because of what he believes. If all we have to go on is the fact of honest utterance, we cannot infer the belief without knowing the meaning, and have no chance of inferring the meaning without the belief (Davidson, 1984, p. 142).

Thus the interpreter faces the task of unravelling two sets of unknowns – facts about meaning and facts about beliefs – with only one sort of evidence: linguistic actions which depend on both meaning and belief. Normally, we can find out what someone believes by asking them. But that presupposes we know what they mean. Equally, if we know what they believe then we can use this to establish what they mean in expressions of their beliefs. But if both factors are simultaneously unknown, how can one break into the circle?

Davidson's solution has two ingredients. Firstly, he takes the evidential basis of radical interpretation to be the prompted assent of a speaker, which he characterises as 'the causal relation between assenting to a sentence and the cause of such assent' (Davidson, 2001, p. 147). It is possible to know that a speaker assents to a sentence without knowing what the sentence means and thus what belief is expressed by it (or vice versa). Characterising a speaker as holding a particular sentence true is an intentional interpretation of what is going on but it does not *presuppose* a semantic analysis of the sentence. That will be derived later.

The second step is to restrain the degrees of freedom of possible beliefs in order to interpret linguistic meaning. The interpreter must impose his or her own standards of truth and coherence on ascriptions of beliefs and meanings. There must be a presumption that any utterance or belief held true is true and that beliefs are structured in accordance with basic logic, probability theory and decision theory. This underpins the interpretation of familiar logical connectives such as 'and', 'or', 'not', etc. (Davidson, 1990, pp. 326–8).

This complex of related assumptions governing the rationality imputed – generally briskly labelled the 'principle of charity' – enables interpretation to get off the ground. If utterances and underlying beliefs are assumed by the interpreter to be generally true, rationally structured and to concern the worldly states of affairs which prompt them, then they can be correlated with those observed states of affairs and their meaning determined.

But Davidson goes further. He argues that the facts available to radical interpretation are the only facts about meaning there are. After all, the only *justification* that can be offered for knowledge of a *first* language – the only potentially contrasting case – depends on facts available from the radical interpretation of the contextually located utterances of kith and kin. Since access to the only facts there are about meaning has to be mediated by the principle of charity, this is not merely an *epistemological* shortcut. It reflects an *ontological* feature of belief content and linguistic meaning itself. Both are governed by a constitutive principle: the 'constitutive ideal of rationality' (Davidson, 1980, p. 223). Belief and meaning (both facets of human intentionality) are essentially governed by rationality. Does this approach to both merit the label 'emergent'?

Reduction to, or Emergence from, the Physical?

Davidson's account of radical *interpretation* is a development from his teacher W. V. O. Quine's account of a similar thought experiment: radical *translation* (Quine, 1960, pp. 26–79). But one key difference is its characterisation of the evidence available to the interpreter or translator:

> The crucial point on which I am with Quine might be put: all the evidence for or against a theory of truth (interpretation, translation) comes in the form of facts about what events or situations in the world cause, or would cause, speakers to assent to, or dissent from, each sentence in the speaker's repertoire. We probably differ on some details. Quine describes the events or situations in terms of patterns of stimulation, while I prefer a description in terms more like those of the sentence being studied; Quine would give more weight to a grading of sentences in terms of observationality than I would; and where he likes assent and dissent because they suggest a behaviouristic test, I despair of behaviourism and accept frankly intensional attitudes toward sentences, such as holding true (Davidson, 1984, p. 230).

Davidson realises that his project cannot escape all meaning-related notions and especially in later accounts drops the requirements about its non-semantic nature:

> My way of trying to give an account of language and meaning makes essential use of such concepts as those of beliefs and intention, and I do not believe it is possible to reduce these notions to anything more scientific or behaviouristic. What I have tried to do is give an account of meaning (interpretation) that makes no essential use of unexplained *linguistic* concepts. (Even this is a little stronger than what I think is possible.) It will ruin no plan of mine if in saying what an interpreter knows it is necessary to use a so-called intensional notion – one that consorts with belief and intention and the like (Davidson, 1984, pp. 175–6).

This is significant because it marks a distinction between Quine's scientistic project of *reducing* meaning-related notions to behaviouristic notions and hence, in principle at least, initiating a first reductionist step. Davidson has no such aims.

Further, a key aspect of Davidson's broader philosophy of mind is to argue that the constitutive ideal of rationality has 'no echo in physical theory' (Davidson, 1980, p. 231). Hence there cannot be lawlike relations between the rational domain of mental states and the nomological domain of underpinning neurological or physical states. Such lawlike connections would violate the constitutive principles of the mental. So mental content cannot be reduced to neural properties. The most there can be is something like *emergence* of the mental from the physical domain. Further, it fits Nagel's characterisation of an emergent property in which 'the connections [...] specif[ied] between the mental and the physical are all higher-order (Nagel, 2012, p. 55). Thus there is reason to think of Davidson's account of meaning and intentionality as emergent in this respect. But there may be a further motive for thinking of it as such which sheds further light on the nature of the account.

Reduction to, or Emergence from, the Rational?

Although Davidson denies the possibility of a reductionist project, using that word in Nagel's sense to mean reducing mental properties to physical properties, suggesting a corresponding emergentist view (as above), the argument from radical interpretation nevertheless suggests a reductive project. Facts about meaning and mental content are reduced to a prior understanding of the demands of *rationality* in accord with the principle of charity. But the connection between meaning and mental content, on the one hand, and rationality, on the other, might place explanatory priority differently akin to the Euthyphro dilemma. Given a suitable theology, the following biconditional would be true:

- For any act x: x is pious if and only if x is loved by the gods.

The dilemma stems from considering the 'order of determination', in Crispin Wright's phrase, of this biconditional (Wright, 1992). Is the pious loved by the gods because it is pious, or is it pious because it is loved by the gods? In the epistemic approach to it outlined above, it looks as though radical interpretation explains meaning and mental content in terms of rationality. But it may be the case that the connection highlights an ontological dependence the other way. Or, it may be that there is equal priority.

One reason for denying that it is the first priority in favour of equal priority is the idea that grasping the meaning of words introduces new rational norms or 'oughts'. Davidson himself argues that the output of radical interpretation can be codified using the logical machinery of Tarski's semantic conception of truth (Tarski, 1944). Tarski uses this to shed light on the nature of truth (or, more accurately, the set of truths expressible in a language) at the cost of presupposing facts about meaning. Davidson inverts that use to shed light on meaning by

presupposing truth, in accord with the principle of charity. A central feature of both Tarskian and Davidsonian approaches is the derivation of instances of what is called the 'T-schema':

- 'Snow is white' is true if and only if snow is white.

It has been argued that meaning relations as exemplified in instances of the T-schema are merely descriptive rather than normative (Hattiangadi, 2006). One argument for that is that it is hard to see how the norm in question could be, for example, a moral ought since there is no general moral obligation to use 'snow' to speak of snow. So what kind of 'ought' could it be?

But in accord with the general thought experiment of radical interpretation – that is, if the ground rules for that thought experiment are accepted – such an equivalence is surely not normatively inert:

> [W]hat makes it *correct* among speakers of English to make a claim with, say, the words 'Snow is white' [...] is that snow is indeed white. I stress 'correct': truth in the sense of disquotability [...] is unproblematically normative for the practice of using the sentence mentioned on the left-hand side of T-sentences (McDowell, 2009, p. 214).

The equivalence expresses the kind of normative standard on which radical interpretation is built. In order to break into the circle of interdependence of belief and meaning, the principle of charity imposes rational constraints that speakers believe and say what they ought to in this sense. In this case, in order to say that snow is white in English, one *ought* to say 'Snow is white'. Such a principle is part of the armoury of the radical interpreter in his or her broader holistic project of interpretation. The normativity, however, is not moral or prudential or any other species but specifically semantic.

> On the Tarskian-Davidsonian conception the 'oughts' in question – the 'oughts' that are built into the idea of, say, denotation – are not separable from the idea of correctness in assertion. [...] I think once we see that the intuition that meaning and aboutness are 'ought'-laden does not require the relevant 'oughts' to be pre-semantical [...] we can see that there is no ground for the idea that linguistic behaviour must be governed by [...] proprieties that can be formulated in non-semantical terms [...] (McDowell, 2009, pp. 215–6).

The distinction between semantic and other kinds of normativity does not undermine the normativity of the former. It is *sui generis*. But its location within the broader framework of radical interpretation suggests that it is nevertheless bound by the constitutive ideal of rationality. This view suggests an equal priority for meaning and rationality: semantics constitute new 'oughts'.

Davidson's own presentation of radical interpretation seems to suggest that the facts about meaning are accessible to any rational subject since the standards of rationality mentioned are as general as logic, probability theory and decision theory. Indeed, this thought underpins his argument against the very idea of many untranslatable conceptual schemes and also of a single substantial conceptual scheme (Davidson, 1984, pp. 183–98). If meaning is grounded in rationality – in accord with the first priority – and rationality is understood in this very general way then it seems that any subject capable of grasping the very general truths of logic is in a position to understand the facts about meaning.

That view depends on a particular assumption of the priority of the relation of meaning and rationality. The equal priority view, by contrast, suggests another understanding of meaning. If rationality and meaning have equal priority, the rationality relevant for a particular tract of meaning may require possession of a particular kind of mind. It may take a particular special design of mind to respond to and grasp certain kinds of meaning. Rationality may not be a

universal 'cognitive prosthetic' in Charles Travis's phrase. Travis contrasts the idea of what is available to any rational subject, via suitable intellectual props or tools, with what is only available to those with 'special designs'. He credits McDowell with arguments to suggest that there is no contradiction between the idea that a feature of reality requires that the subjects who can grasp it have a special design with the idea that it is a genuinely objective feature of the world.

> Our special design opens our eyes, as (John McDowell) puts it, to particular tracts of reality. That our eyes may be thus opened shows where, and how, there may be facts that it takes special capacities, not enjoyed by just any thinker, to see (Travis, 2002, p. 305).
>
> Special knowledge-yielding capacities may be insusceptible to cognitive prosthetics. That is, what, with them, one is equipped to see need not be what would be derivable from some statable set of principles by a thinker lacking those capacities (p. 325).

McDowell's invocation of special design is usually associated with sensitivity to moral demands. The idea is this. On the assumption that, notwithstanding the influential contrary tradition in the moral philosophy, moral judgement cannot be codified in a set of principles (a cognitive prosthetic enabling moral judgement), it must instead answer to the values inhering in worldly situations: moral particulars (or the evaluative equivalent of the facts to which empirical judgements answer). But in order to address a potential disanalogy with at least some empirical facts concerning primary qualities such as length and mass, McDowell suggests that moral values may be akin to secondary qualities such as colour, taste and smell. Grasp of secondary qualities and moral properties requires having a particular kind of perceptual system, or mind, or underpinning way of life: our special design. This in turn suggests that to understand those concepts, the meaning of the relevant words, and the norms that govern them also requires having a special design.

The possibility of an equal priority in the relation between the ideal of rationality and the facts about meaning and mental content it structures and the additional plausibility of the idea that some concepts are not accessible to just any rational subject suggests a more complex picture of the emergence of mind or, rather, minds. Whilst Davidson's presentation of radical interpretation suggests a method to break into the holism of belief and meaning from a prior and independent grasp of the ideal of rationality, the equal priority view suggests no such route and instead a more encompassing holism. Although Davidson denies the possibility of a reductionist account, he does suggest the possibility of a reductive one reducing meaning not to the physical but to rational relations. By contrast, the alternative I have sketched is doubly emergent. Although meaning is related to rationality, the connections holding between meaning and rationality – the demands of rationality itself – can only be specified in meaning-related terms.

This does, however, raise a question about the kind of insight such an account presents. If an emergentist account articulates the connections between higher and lower level phenomena through concepts, grasp of which presupposes an understanding of the higher level, to whom is this helpful? It seems that the account can only be understood by those for whom it is unnecessary. Only a reductive account promises to explain higher level concepts in lower level terms. But that is just what emergentism denies.

Conclusions

Davidson's account of belief and meaning based on the thought experiment of radical interpretation presents a principled account of intentionality in this sense. It offers an answer to the question of what justifies the description of a state as meaning-laden. The answer is that it plays a role within radical interpretation: the project of making sense of speech and action against the constitutive ideal of rationality. Davidson uses this to argue against the reduction of the mental to the physical and hence against reductionism, according to Nagel's use of that term. But the simplest way to think of the thought experiment, encouraged by Davidson's own presentation, is, nevertheless, reductive in another sense: reducing the mental to the rational.

The equal priority view of meaning and rational norms sketched above suggests a more complex picture. Interpretation is still structured by respect of rational norms or 'oughts' but these are augmented by grasp of meanings. Further, some aspects of rationality may not be universal. They may require a special design of mind for their conception and detection. Hence an articulation of what it is like to have our kind of mind is an articulation from within a particular view of the world. And hence it is couched in terms which are both higher order but also local.

This view, however, raises a question about the nature of philosophical inquiry. Reductive, and sometimes reductionist, approaches to complex concepts provide a model for philosophical clarification. Fodor's argument for reductionism, quoted earlier, can serve as a manifesto for philosophical naturalism. Complex concepts can be fitted into a broader conception of nature and thus rendered unmysterious by reducing them to more basic constituents. But the equal priority view just sketched suggests no such method. Reduction to the physical world at best plays no role in the account of meaning or, at worst, is ruled out by a Davidsonian *a priori* argument. Even the connection to rationality provides no theory-neutral entry for thinking about meaning. Instead, the account is pitched at the same level as the phenomena it aims to clarify, highlighting internal constraints in our prior understanding of them. In accord with Nagel's suggestion for emergence, the connections are all higher order. But unlike Nagel's account, no attempt is made to connect this to the world outside meaning except for its role in radical interpretation.

This prompts the question of the kind of philosophical insight such an account can give. It can only address an audience of those with appropriate eyes to see and ears to hear. I suggest that this a puzzle for an emergentist account and suggests a paradox. The account can only be grasped by those who seem to have no need of it.

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Insights

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