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ABSTRACT

In this paper, I critically assess Mark Richard's interesting and important development of the claim that linguistic meanings can be fruitfully analogized with biological species. I argue that linguistic meanings qua cluster of interpretative presuppositions need not and often do not display the population-level independence and reproductive isolation that is characteristic of the biological species concept. After developing these problems in some detail, I close with a discussion of their implications for the picture that Richard paints concerning the dangers of conceptual engineering and the prospects for dynamic notions of semantic stability.

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1. Introduction

Neurath has likened science to a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it. The philosopher and the scientist are in the same boat ... Our boat stays afloat because at each alteration we keep the bulk of it intact as a going concern. Our words continue to make passible sense because of continuity of change of theory: we warp usage gradually enough to avoid rupture. (Quine 1960, 3–4)

Meanings are not static: they change over time and they vary across populations.¹ This is most visible over the course of many generations and across vast geographical distances. Yet meaning change can also take place rapidly among a local group of speakers; as, for instance, when a group of friends comes to use 'livid' to mean begrudgingly amused or when an enlightening conversation leads a speaker to accept that 'woman' isn't synonymous with 'adult human female.' And

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¹Some may balk at the claim that meanings themselves change over time, preferring instead to say that it is our *relationship* to meanings that undergo change over time. For my purposes in what follows, nothing essential will depend on deciding between these two ways of characterizing the core phenomenon at issue.

meaning variation is widespread even among those of the same population—indeed, no two speakers of any natural language share exactly the same vocabularies or use their words in exactly the same ways.

Meaning change and meaning variation give rise to a number of philosophical challenges. One such challenge centers on issues of *stability*. If meanings are to play a systematic role in explaining practices of interpersonal communication—or of interacting with the world more generally—they should exhibit some degree of stability across agents and within agents over time.² At least in principle, it should be possible for an agent to undergo a change in expectation, knowledge, or preference without thereby undergoing a change in the meaning of their words. Likewise, it should be possible for distinct agents to coordinate on the meanings of one another's words in the processes of interpersonal dialogue, debate, and communication more generally. In short, differences in perspective should not invariably entail differences in meaning.

How should we make sense of meaning stability in light of the ubiquitous presence of meaning variation and meaning change? How, if at all, are we to draw principled lines from those changes to the psychological states of the members of a population that result in either a revision or an outright replacement in meanings and those that do not?

Attempting to answer questions like these has led many philosophers to adopt fairly drastic claims about the underlying nature of meaning. Quine (1960) and (1975)—whose influential discussions of analyticity and semantic holism threw issues of semantic stability into stark relief—suggested an *eliminativist* answer according to which theoretical appeals to meaning should be eliminated or otherwise paraphrased away. Others have suggested a *strongly referentialist* answer according to which facts about meaning are exhausted by facts about reference, and, further, that reference is fixed in a way that is completely independent of agents' dispositions to infer and their broader conceptions of the world.³ Others have proceeded by working under an idealizing assumption that meaning variation and meaning change are marginal phenomena, having few substantive consequences for foundational questions concerning semantics.

In his important recent book, *Meanings as Species*, Mark Richard develops a welcome alternative to these implausible suggestions concerning the nature of meaning. Richard maintains that meanings are real and

²See Putnam (1986) and Fodor and Lepore (1992), ch. 1 for standard statements of this constraint.

³For particularly explicit statements of this position see the work of Jerry Fodor and collaborators; Fodor (2008), Fodor and Lepore (1992), Fodor and Pylyshyn (2014).

theoretically useful even though they are inherently dynamic and outstrip reference. According to Richard, the meaning of a basic expression—for example, an open-class lexical item such as ‘Fido,’ ‘tree,’ or ‘licks’—consists in a cluster of presuppositions that comprise an *interpretative common ground* adopted by the agents in a population. This cluster of presuppositions is held to exhibit stability in the course of interpersonal communication or inquiry not by failing to undergo change altogether but rather by changing in gradual and continuous ways. Although he does not himself put things in exactly these terms, Richard’s thesis can be stated as the claim that meanings display a *dynamic* (or *Heraclitean*) *stability*: an ability to remain the same precisely by undergoing specific types of change.⁴

In developing this dynamic account of meaning stability, Richard draws on an analogy with biological species. That is, he claims that meanings are species-like: the cluster of interpretative presuppositions that constitutes the meaning of some agent’s use of the lexical item ‘dog’ is relevantly like the cluster of individual organisms that constitute the species *canis familiaris*. The species-like character of meaning is proposed to have a number of wide-ranging and quite controversial consequences for the philosophy of language; not just for making sense of semantic stability, but also for understanding the function of conceptual analysis, the independence of facts about meaning from facts about reference, the implausibility of some forms of conceptual engineering, and much else besides.

My focus in what follows will be on Richard’s core analogy between linguistic meanings and biological species. I’m going to argue that Richard’s analogy misleads as much as it informs: that meanings are not all that much like biological species. This is not because I think that dynamic notions of semantic stability are ill-conceived or that the application of evolutionary concepts and models to issues in the philosophy of language are unlikely to yield fruit. Quite the contrary. Instead, my objections center on the fact that meanings qua cluster of interpretative presuppositions need not and often do not display the population-level independence and reproductive isolation that is characteristic of the biological species concept. After developing these points in some detail, I will close by briefly discussing some of their implications for the picture that

⁴The parenthetical is in reference to Heraclitus’s remarks in the B12 portion of his fragments. Contrary to common lore, Heraclitus does not appear to be suggesting in that passage that one could never step into the same river twice. Instead, Heraclitus seems to be suggesting that one could only step into the same river twice provided that different waters were flowing through it at the separate times of entry. In short, that change is a condition on the very possibility of stability.

Richard paints concerning the dangers of conceptual engineering and the prospects for dynamic notions of semantic stability.

2. Meanings and species

Richard is interested in understanding a notion of meaning anchored in what agents in a population need to be in cognitive contact with in order to qualify as *competent* speakers and interpreters. For Richard, competence in this sense involves the ability to identify and keep track of an evolving interpretative common ground: a set of presuppositions that a group of agents adopt and/or expect others to adopt about the world and, specifically, about how to properly interpret one another's use of lexical items (i.e. words) in acts of communication and inference.⁵

The analogy with biological species is supposed to illuminate meanings in this particular sense of the term. In order to do so, there need not be perfectly isomorphic mappings from the features of biological species onto the features of meanings qua interpretive presuppositions—linguistic meanings may well have many features that biological species lack and *vice versa*. What matters for the utility of the analogy is that there be some relevant and important respects in which core features of biological species can be leveraged into an understanding of core features of linguistic meanings.

One immediate problem for the use of any such analogies is the so-called 'species-problem.' The problem is that there have long been and remain profound theoretical disagreements concerning which particular way of grouping organisms should be seen as corresponding to biological species, or even whether there is a single unit of species classification that should be regarded as fundamental for the purposes of biological taxonomy. If there is no widely agreed upon conception of biological species—or even agreement over whether the species concept has any particular pride of place from the point of view of biological explanation—one may well wonder how appeals to biological species could do much work in helping to illuminate core features of linguistic meanings.

Richard addresses this problem head on. His response, as I understand it, consists in abstracting away from various differences that divide rival accounts and by working with a common core that is supposed to unify the species concept. This common core has both diachronic and

⁵The presence of 'and/or' here is by design. As Richard points out, you can be competent with a lexical item by knowing how that item is put to use by others even if you are not disposed to produce or endorse that use yourself—for instance, in the case of slurs or epithets.

synchronic dimensions. Firstly, biological species are said to be populations of organisms that form *lineages of descent* over time: lineages that have members which stand in parent-offspring relations to one another, or who are related to one another through biological ancestry. Secondly, biological species are said to be populations of organisms that display a *biological cohesion with one another* at a time that is independent from the biological cohesion displayed by other populations of organisms. Although this biological cohesion can take many forms—genetic, morphological, ecological—Richard primarily follows Mayr (1942) in focusing on the reproductive cohesion present in populations of organisms capable of interbreeding with one another and that are reproductively isolated from other such populations of organisms. A biological species is, for Richard's purposes, any population of organisms that satisfies at least these two conditions.⁶

When Richard claims that meanings are species-like, he is claiming that meanings display analogues of both these diachronic and synchronic conditions. Richard's thought is that agents' interpretive presuppositions and dispositions—indeed, their idiolects or I-languages quite generally—form populations that are related by lineages of descent over time.⁷ For example, I acquired my lexical item 'fallow' from observing the pattern of use of someone else. This other agent serves as a *lexical parent* to my use of the term. I could likewise come to be the lexical parent to other agents who have observed my use of the term, and those agents could in turn become the lexical parents to others who have observed their uses and so on. Moreover, these lineages of descent can give rise to conversational cohesion within a group of agents at a time that allows those agents to fluidly engage in interpersonal communication with one another. In particular, the shared history of a group of agents can make it the case that those group members have *coordinated lexicons*: roughly, for it to be the case that for each word in each agent's lexicon,

⁶This isn't supposed to provide anything like a 'solution' to the species problem because nothing Richard says requires or even suggests that population of organisms that satisfy these two conditions will play all the relevant roles that the species concept has been called upon to play within biological theory.

⁷One could also take the analogy to govern meanings themselves or the pairing of meanings with basic sounds or gestures (i.e. lexical items or words), rather than agents' interpretative presuppositions. However, an analogy of this sort would require that meanings be discrete entities which can be copied or reproduced across agents with highly rates of fidelity over long stretches of time; i.e. that meanings correspond to what Dawkins (1976) calls 'memes.' However, Richard does not wish to commit himself to the thesis that meanings are like memes. I believe that Richard is quite right to avoid such a commitment—for even if some meanings are meme-like, it is highly implausible to suggest that this status is a condition on meanings as such.

there is a word in the other agents' lexicons that could be used for the purposes of interpreting one another's communicative acts (103).

Crucially, the processes of lexical reproduction do not require agents to associate the very same presuppositions with the expressions used by their lexical parents; all that is required is that the presupposition of the offspring resemble the presuppositions of their parents more than they resemble the presuppositions of a randomly chosen member of the population. The process of lexical reproduction is, in this sense, a kind of *descent with modification*. Similarly, conversational cohesion within a group at a time does not require the group members to have identical lexicons or to presuppose the very same things about their various use of words. Meaning change over time and meaning variation across agents are thus expected to be commonplace. And just as widespread variation and change among organisms does not lead comparative biologists to abandon theoretical appeals to species, so too, Richard suggests, widespread variation and change in agents' interpretative presuppositions should not lead linguists or philosophers to abandon theoretical appeals to meanings.

3. Presuppositions don't (always) grow on trees

It is one thing to claim that meanings qua interpretative presuppositions can display some of the core features of biological species. It is quite another thing to suggest that meanings are necessarily species-like, or that all meanings display the features of biological species all the time. It is this latter, far stronger, claim that animates Richard's discussion. I'm skeptical. My skepticism is largely based on the importance of what I'll call *horizontal or lateral meaning transfer* for understanding core features of human linguistic communication.⁸ I'll raise two distinct versions of this problem. The first concerns the exchange of meanings *within* linguistic communities; the second concerns the exchange of meanings *across* the boundaries of linguistic communities.

3.1. The problem with parents

For the purposes of building simple models of complex phenomena, there is nothing particularly wrong with focusing on cases in which 'the

⁸These problems are structurally similar to the problems that horizontal or lateral gene transfer among microorganisms and among living things generally raise for traditional conceptions of biological species and a universal tree of life; see Doolittle and Papke (2006) for a statement of the problem. See Franklin (2007), Ereshefsky (2012) and Velasco (2012) for further discussion.

communicative strategies of the members of a population at *t* are in the main what determine those of the next generation' (169) or cases in which each language user acquires their lexical presuppositions from observing the patterns of linguistic behavior displayed by some other agent in the population. The trouble comes from taking such models to illuminate language change in general, or to be applicable across the board in the study of language.

As many parents are quick to bemoan, children often acquire their words and concepts from their peers rather than from those of an earlier generation. Indeed, part of what makes cultural transmission such a powerful driver of change is the fact that it can operate just as effectively within-generation as it can operate from generation-to-generation. The cultural processes that enable the transmission of meanings across language users are no exception, particularly after the earliest stages of lexical acquisition. There is no doubt that generation-to-generation meaning transmission is important, but we should not overstate its influence on language change over time.

The existence of within-generation meaning change does not itself generate a problem for Richard's core analogy with biological species. What does generate a problem for Richard's analogy are cases in which agents' lexical presuppositions are the cumulative result of interactions with a wide range of different individuals over the course of many distinct occasions of use. In such cases, the applicability of parent-offspring meaning relations seems to break down.

For example, who should we regard as the lexical parent to my uses of 'citizen' and 'consent,' or 'justice' and 'knowledge'? Not simply the individual who first caused me to store those forms to memory, since I may not have acquired any semantic material from those encounters that would serve to distinguish the meanings of these expressions from the meanings of any other expression I possess of the same lexical category. Nor will it do to appeal to the last individual whose linguistic behavior influenced the interpretative presupposition I now associate with those expressions, since that seems both arbitrary and capricious. Neither does it seem right to appeal to the individual whose presuppositions have predominately shaped the presuppositions I associate with those expressions, for there may well be no individual to privilege in this way. We seemed forced to say either that no individuals constitute my lexical parents or, alternatively, that all the individuals who have influenced my interpretative presuppositions constitute my lexical parents. Either way, we need to acknowledge that the reproduction of

meanings is quite different from the reproduction of living organisms of the sort at issue in the species concept utilized by Richard.⁹

The basic problem here is not specific to weighty socio-political terms or to the traditional objects of philosophical analysis. As Chomsky (1959) and, more recently, Sperber (2000) have emphasized, it is a quite general fact that language users intelligently construct their lexical items on the basis of the impoverished linguistic data to which they are exposed. This process of intelligent construction will often involve a wide range of past encounters with others as well as individuals' own creative impulses. Even in simple cases of single-trial word learning—or fast-mapping, in the sense of Carey and Bartlett (1978)—the intervening role of human intelligence and creativity raises real questions about the extent to which any one member of a population should be regarded as the determinate lexical parent to another agent's use of words.¹⁰

We should not conflate the claim that some collection of entities exhibits parent-offspring relations with the more general claim that a collection of entities exhibits *path-dependence* or some form of descent with modification. Many collections of entities—economies, housing tracts, and solar systems—display path-dependence but do not directly exhibit parent-offspring relations. A system of meanings can be said to be path-dependent insofar as past patterns of use influence present patterns of use: a bit more carefully, to the extent that had the linguistic behavior of an earlier population of language users been different in various respects, then the linguistic behavior of later population of language users would have likewise been different in related respects. Even highly innovative uses of language and those that are influenced by a wide range of linguistic interactions with others will be path-dependent in this sense.¹¹

The truism that we acquire our lexical presupposition from social interactions with other members of a population does not entail that our lexical presuppositions are governed by parent-offspring relations, though it does strongly suggest that our lexical presuppositions are path-dependent. The claim that meanings are inherited over time

⁹As Sam Cumming has pointed out to me, two agents can reciprocally influence each other's interpretative presuppositions—e.g. you can profoundly influence the presuppositions I associate with uses of 'justice' and I can profoundly influence the presuppositions you associated with uses of 'justice'. This would lead to a biologically paradoxical situation in which we are each the parents and the offspring of one another's patterns of language use.

¹⁰See Godfrey-Smith (2012) for a useful discussion of these issues as they arise in the cultural domain generally.

¹¹I develop this point in greater detail in Armstrong (2016a) and (2016b)

within a lineage of agents in a way that is fruitfully analogized with the manner in which biological offspring inherit their features from a lineage of biological parents stands in need of further motivation.

3.2. *Against barriers*

More serious problems surround Richard's analogy between the biological cohesion present among members of a biological species and the lexical coordination present among members of a speech community.

One of the central facts about biological species—particularly within vertebrate lineages—is that biological species are supposed to be *reproductively isolated*. This reproductive isolation can be due to the fact that members of one species *cannot* interbreed with members of another or, more minimally, because members of one species *have not* interbred with those of another. Richard is quite explicit that he takes linguistic communities to be conversationally isolated in analogous respects (99, p. 202). I submit that this is a rather significant mistake. There are no two groups of human agents whose members are intrinsically incapable of coordinating their states of mind with one another in acts of interpersonal communication, and, further, communication across the boundaries of linguistic communities has long been a central source of language change.

If a member of *canis familiaris* finds itself without others of its kind on an island populated with California sea lions (*zalophus californianus*), it is not going to be able to interbreed in a way that produces fertile offspring. In contrast, if a group of monolingual speakers of distinct and distantly related natural languages were collected on an island together, there is no barrier preventing those agents from successfully communicating with one another in ways that gives rise to a novel natural language. Indeed, this kind of situation has played out many times in the brutal context of colonization in which a group of enslaved individuals who lack a common language manage to create pidgin communication systems which subsequent language learners use to construct the expressively rich natural language systems often called creoles.¹²

The inability of different species of organisms to interbreed with one another is an intrinsic fact about those organisms' species-specific biological make-up, one that is quite unlikely to change over the course of

¹²See Thomason and Kaufman (1992), Mufwene (2001), and DeGraff (2009) for relevant discussion of these points.

those organisms' lifetimes. But language users' group-specific language capacities and dispositions are a result of their external circumstances, and they can quite readily undergo change over the course of a single language user's lifetime, given the right linguistic environment and practical motivations. The disanalogies here between sexual reproduction and conversational exchange are profound.

Similar problems beset the weaker claim that meanings emerge in linguistic groups that have, as a matter of contingent fact, been isolated from linguistic contact with other such groups. Linguistic contact across the boundaries of linguistic communities has been a pervasive influence on language change for as long as there has been humans with languages at all.¹³ As Sarah Grey Thomason (2001) has put it, 'Language contact is everywhere: there is no evidence that any languages have developed in total isolation from other languages' (8). Within sociolinguistics, the interesting question is not whether across-group contact has been a pervasive source of linguistic change over time but, rather, which particular generalizations best describe the influence of linguistic contact on language systems over time; for example, whether contact tends to result in losses at the level of morphological or phonological complexity or to gains in complexity in other parts of the language system.¹⁴

Linguistic contact across groups is especially important for understanding the primary target of Richard's analogy: the meaning of open-class lexical items such as nouns, verbs and adjectives. Words from one community of speakers can be readily incorporated into the lexicons of another community of speakers—witness ordinary English speakers' lexical competence with 'loot,' 'glitch,' or, more recently, 'emoji.' Speakers of English are in no way remarkable in their use of such loanwords. While linguistic communities do differ from one another in the sheer volume of across-group contact they have engaged in and in their linguistic and social receptivity to the words and structures of other groups (Thomason 2020), it is a mistake to treat any single linguistic community as an isolated unit of independent linguistic evolution.

To be clear: I am not denying that communication and coordination tend to be easier to do successfully within-community than across-community, or that the notion of a linguistic community approximates something real. No doubt, it would require a good deal of time and interpretative effort for me to coordinate my lexicon with the lexicons

¹³See Scerri et al. (2018) for evidence of the importance of interaction between sub-populations in the context in which our species was evolving the capacity to readily acquire and use natural languages.

¹⁴See, for example, Trudgill (2011).

of monolingual speakers of Hiri Motu or Nicaraguan Sign Language—there are deep differences at play here that could readily stymie fluid linguistic communication. But it also requires a good deal of time and interpretative effort for me to coordinate my lexicon with the lexicons of highly skilled carpenters and chemists.

A linguistic community is not an undifferentiated population of language users, but a web of overlapping and sometimes crisscrossing linguistic networks.¹⁵ Even within a single geographical area, the interpretative common grounds operant among those in the same family or occupation are importantly different from the interpretative common grounds operant among those of the same social class or religious affiliation. The ease with which communication is achieved among members of approximately the same linguistic community will be a function of a wide range of intersectionally constituted social variables. Successful communication between members of distinct linguistic communities tends to be difficult (for most of us), but it is not categorically more difficult than successful communication between members of the same linguistic community who belong to very different social networks. Communication with other humans is, after all, just communication with other humans. This central fact should not be obscured when discussing group-specific differences in linguistic meaning.

The analogy between linguistic meanings and biological species that animates Richard's discussion does nothing to illuminate these central facts about language use. More than that, the analogy between linguistic meanings and biological species leads us to predict that linguistic communication across distinct linguistic communities should be impossible or otherwise quite uncommon. This prediction is mistaken, and it exaggerates the semantic barriers that separate communities of language users. In short: rather than allowing 'a hundred theoretical models to bloom, a hundred stories about meaning change [to] content,' as Richard rightly insists upon (204), the analogy with biological species drives our models of meaning down a narrow theoretical corridor with an unnecessarily restrictive space of linguistic possibilities.

4. Semantic amelioration and semantic stability

Let me close by considering some of the consequences these critical points about the species analogy have for Richard's discussion of broader issues in

¹⁵Similar points have been highlighted in slightly different theoretical contexts by Millikan (1998) and by Fracchia and Lewontin (1999).

the philosophy of language. I'll restrict my discussion to two sets of issues, namely those involving semantic amelioration and those involving semantic stability. I maintain that while abandoning the analogy with biological species does seriously complicate Richard's criticisms of the project of semantic amelioration, it does not fundamentally alter his important suggestions concerning the dynamic character of semantic stability.

4.1. *Networks of amelioration*

Conceptual engineering is a project that seeks to foster semantic change concerning words and other devices of representation, either by shifting the meanings of those words and devices or by introducing novel meanings and patterns of use. It has often been maintained—particularly by Haslanger (2012), among others—that conceptual engineering can be fruitfully carried out in an *ameliorative* mode. That is to say, in a way that characterizes the social functions that our words and devices of representation should be serving and how we ought to revise our practices of use and of social interaction accordingly.

Richard is pessimistic about the prospects of semantic amelioration, at least for the central cases that have been the focus of attention such as 'woman' or 'race.' This pessimism is fostered by the claim that meanings are species-like, for it suggests that 'meanings are molded by forces independent and out of the control of the organisms whose acts have meaning, be those forces Darwinian or 'merely' populational' (191). If meanings are indeed independent of the actions of individual agents in this way, then a proposed ameliorative semantic change is likely to be successful only if the proposed change is gradual and makes the continuities with prior forms of thought and talk clear to a sizable number of those in the relevant linguistic community. Given that many actual ameliorative proposals—e.g. for 'woman' or 'race'—lack these features, their chances of success would seem to be grim.

There are good reasons to resist this argument, especially if meanings are not much like biological species. There is, for instance, no reason to suppose that success in the ameliorative project always requires widespread uptake by a large community of language users.¹⁶ Success with respect to semantic amelioration—as with communication and social coordination more generally—begins at home, with respect to a *local* network of other agents. Whether the proposed changes are gradual or

¹⁶My discussion of this point has benefited from insightful comments by Hannah Widmaier.

quite revolutionary, what matters for the initial success of the ameliorative project is that the members of this local social network can successfully identify and carry out the proposed changes to meaning or to wider practice. In most cases, this network of agents will indeed hope that the relevant changes spread to myriad other social networks and do so in ways that remove the problematic devices and practices quite generally. But there is nothing incoherent or impractical about a network of agents engaging in a project of semantic amelioration even if they strongly suspect that their project will not be taken up by those in wider communities.

More centrally, I see no reason to believe that the forces of meaning change are independent of the actions of individual agents. Individual language users play an active role in shaping their linguistic environments: they produce novel words and interpret old words in new ways, they utilize patterns of phonology and expression that embody identification with some groups and distain for others, they select to whom they will defer and upon whom they will rely, and the list goes on and on. The innovations and changes made by particular individuals in particular contexts of use can have profound consequences for the subsequent linguistic history of a group.¹⁷ The seeds for widespread semantic amelioration can be sowed by quite modest means.

There is no denying that the menu of linguistic options that any individual has to choose from at any given time will be determined as a function of a prior, path-dependent history of use, and on the interpretative dispositions of those in their linguistic networks. Still, it would be wrong to conclude from this fact that meanings and the broader forces of meaning change are independent and out of the control of individual agents.

4.2. *Dynamic stability*

None of the foregoing is intended to undermine one of the central insights of Richard's book: the theoretical importance and viability of *dynamic* characterizations of semantic stability. Richard—following Quine and others—rejects the idea that we should understand semantic stability in terms of meanings having analytic cores or essences that are immune to rational revision or other forms of change. Instead, Richard holds that meanings are stable between and within agents in virtue of the specific manner of change they display.

¹⁷See Thomason (2007) for numerous examples.

This dynamic conception of stability is both interesting and important. The challenge is to explicate the specific manner of change at issue. More specifically, the challenge is to isolate a principled distinction between forms of change that result in *revisions* of meanings and forms of change that result in *replacements* of meanings—or, in Richard's preferred terms, to ground the difference between regular changes *in* meaning and more radical changes *of* meaning.

The analogy with biological species is supposed to help address this challenge. If meanings arise through parent-offspring relations, then we could expect them to change regularly but gradually, in ways that retain many features already present in prior generations. Furthermore, if meanings cluster in ways that support conversational cohesion at a time among the members of a group, then we could reasonably suggest that: (i) revisions to (or changes in) meanings are those that do not undermine the ability for fluid communication among the members of the group, whereas, (ii) replacements of (or changes of) meaning are those that undermine or otherwise 'stymie' the prospects of fluid communication among the members of the group.¹⁸ Richard is well aware that there will often be no sharp dividing line between (i) and (ii). But this is as he thinks it should be, for as he notes '[r]eal distinction are not always sharp distinctions' (96).

These points are well taken, but they don't depend on meanings being relevantly like biological species. Meanings might well change regularly but gradually, not because they are species-like, but because of the environmental and social pressures for which meanings arise as a response—that is to say, because our needs for representation and coordination change regularly but gradually. Likewise, the proposal that revisions in meanings involve changes that bend but do not break prior practices of interpersonal communication (or inference and inquiry, in the intrapersonal case) is utterly neutral on the question of whether meanings are species-like. The species analogy provides one way in which we might ground a dynamic conception of semantic stability, but it is not the only game in town.

Meaning variation and meaning change would undermine the possibility of semantic stability only if their presence precluded agents from ever being related to a common subject matter or from ever having overlapping means of dividing up or partitioning that subject matter in ways

¹⁸Some caveats are presumably needed here for stipulative or deliberate replacements of meaning that are easy to follow; as Lewis (1969) once pointed out with a nod to a remark of Wittgenstein's: 'I can't say 'It's cold here' and mean 'It's warm here'—at least, not without a little help from my friends' (177).

that support communication and inquiry. But two or more agents that differ in their attitudes about justice or jellyfish can nevertheless be related to a common subject matter and can overlap in the justice or jellyfish possibilities they treat as live options for the purposes of communication and inquiry—including those possibilities that concern one another's use of words such as 'justice' and 'jellyfish.' And a single agent can come to view the world with a finer grain of resolution by asking a new question about justice or by revising a series of false beliefs about jellyfish without thereby collapsing every distinction about justice and jellyfish they had drawn at earlier times.

Along with Richard, I thus see no reason to believe that widespread meaning variation and change require us to treat every difference in perspective as a difference in meaning. Like Richard, I also believe that in order to provide concrete explanations of both meaning change and meaning stability 'the semanticist or philosopher of language ... should steep herself in evolutionary theory and use it as a source for generating models of meaning and the processes that shape it' (202). However, in contrast to Richard, I suspect that in so doing, the semanticist or philosopher of language will need to leave behind the thesis that meanings are always relevantly like biological species.¹⁹

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