

Expressive Communication and Continuity Skepticism*

1. Introduction

Wittgenstein famously wondered whether, if a lion could speak, we would be able to understand him. Lions and other nonhuman animals, of course, cannot speak; but we do take ourselves to understand them, and not just as we understand inanimate objects. We regard them as *minded* creatures, with more or less specific interests, needs, pains, fears, and so on. And, if we are to believe practicing ethologists, comparative psychologists, and evolutionary anthropologists (not to mention zookeepers, park rangers, and pet owners), lions and other nonhuman animals, though languageless, can communicate with – and understand – *each other*. Yet a long tradition of philosophical skeptics, together with avid contemporary supporters, maintains that such attributions of understanding (both *to* and *of* nonhuman animals) rest on a good measure of intellectually irresponsible anthropomorphism. More radically,¹ they seek to establish on conceptual grounds that animal minds, understanding, and communication differ so greatly from ours, that they cannot be intelligibly regarded as located along a natural continuum culminating in our own mentality and language.

Historically, debates regarding animal mentality divided rationalists and empiricists. Rationalists like Descartes, Leibniz, and Kant, insisted that we humans are endowed with distinctive powers – intellect, reason, discourse, understanding, and apperception – which are wholly different from, and irreducible to, the powers possessed by nonhuman animals. Empiricists like Hobbes, Locke, and Hume, by contrast, insisted that all distinctively human powers can be understood as elaborations on abilities we share with nonhuman animals – sensation, memory, imagination, and perception. And the extent to which there is a deep gulf or *chasm* (as some put it) separating human from nonhuman mentality is still a hot topic of debate, not only among philosophers, but also among contemporary evolutionary biologists, ethologists, and comparative psychologists.²

Note that the ‘deep chasm’ claim can come in two flavors. One way to understand it is as the claim that there are deep and important differences between present-day humans and all the nonhuman animals around us, and that these are not just a matter of degree. Depending on what we

count as ‘deep and important’ and ‘a matter of degree’, this version of the claim may be philosophically undeniable and empirically supportable. Thus, in a recent article, Penn *et. al.* (2008), argue that Darwin was mistaken to “downplay the differences between human and nonhuman minds” and to take them to be a matter “of degree and not of kind”. They offer an analysis of comparative psychological findings aimed at showing that “the profound biological continuity between human and nonhuman animals masks an equally profound discontinuity between human and nonhuman minds” (2008: 109). It is clear, however, that these authors are concerned to establish what we may describe as a *synchronic* gulf between us and the nonhuman animals *currently* around us.

Alternatively, the ‘deep chasm’ claim can be understood *diachronically* – as the claim that we must recognize a sharp discontinuity in the natural history of our species. The idea is that there can be no philosophically cogent or empirically respectable account of *how* human minds could emerge in a natural world populated with just nonhuman creatures of the sort we see around us. Few would deny that, *biologically* speaking, we ‘came from’ the beasts. But the diachronic deep-chasm claim says that we must accept an unbridgeable gap in the natural history leading to the emergence of *human minds* – or, at the very least, in our ability to tell and make sense of such a history. Projecting back from extant to extinct species of nonhuman animals, no feasible candidates prefiguring our own mentality and linguistic behavior are to be found. Human mental and behavioral capacities as we now know them cannot be illuminated by seeing them as elaborations on the capacities of some nonhuman ancestors. This is the view I shall call ‘continuity skepticism’.³

The synchronic version of the ‘deep chasm’ claim clearly does not imply the diachronic claim – which is much more radical. As noted in a recent volume on the evolution of language by Fitch (2010)), when it comes to biological evolution, synchronic discontinuity is perfectly consistent with diachronic continuity – even with a thoroughly gradualist evolutionary view. For example, the gradual evolutionary transition from flightless reptiles to birds culminated in what is at present a sharp physiological and functional discontinuity between bird flight and reptile locomotion (2010: 175f.). As regards language, Fitch remarks: “[i]f only a few extinct hominid species had survived

longer, we might today have a revealing series of intermediate protolanguages on hand” (2010: 176). And Penn *et. al.* emphasize that “there must be some explanation of how the manifest functional discontinuity between extant human and nonhuman minds could have evolved in a biologically plausible manner” and affirm that there are “no unbridgeable gaps in evolution” (2008: 110). For, they presume that “the abilities of all extant species undoubtedly evolved along a multidimensional continuum and can still be distributed along that continuum” (2008: 154). In short, the presence of extant gaps, even if wide, is consistent with the existence of extinct intermediaries.

Yet it is not always easy to keep the two deep-chasm claims apart. On the one hand, the conviction that there must be *some* diachronic emergence story encourages proponents of continuity to over-interpret the mentality and communicative behavior of *existing* animal species, and to underplay some of the evidently unique features of human thought and language. On the other hand, skeptical opponents of continuity, who are impressed by significant differences between human and nonhuman animals, are pushed to portray animal behavior as all of a piece, and paper over behavioral nuances that could shed explanatory light on the origins of some of the features deemed distinctive of humans. At the same time, they are tempted to paint a picture of our *own* distinctive mindedness as ‘permeating’ everything we do, crowding out all vestiges of our nonhuman origins. No wonder each side is convinced the other simply doesn’t get it.

This sort of stalemate cries out for a sensible middle position. My modest aim in what follows will be to sketch such a position. I will begin by outlining a radical philosophical version of continuity skepticism defended in recent years (section 2 and 3). In section 4, I will briefly consider some attempts to support continuity that fail to meet the skeptic’s strictures. I will then turn to an idea inspired by some suggestive remarks of Wittgenstein’s. This is the thought that what facilitates our understanding of animal minds is the fact that, like us, our fellow beasts engage in a distinctive kind of behavior: *expressive behavior*. Even those skeptical about the cognitive powers and language-related capacities of animals, about their intelligence, rationality, ability to act for reasons, or engage in deliberate planning and deception, would likely agree that animals as biologically diverse as apes,

canines and felines, dolphins, and birds are able to engage in behaviors expressive of pain, fear, agitation, aggressiveness, excitement, contentment, playfulness, even puzzlement, and so on. My aim in the second half of the paper (sections 4-6) will be to portray expressive behavior as providing a ‘synchronic middle ground’, poised between the human and non-human poles that defenders of continuity skepticism so often contrast. Proper appreciation of the role expressive behavior plays in the lives of creatures capable of it, and the kind of communication it affords, will point to a way of meeting the skeptical challenge by providing a sensible ‘diachronic bridge’, one that could have put our nonhuman ancestors on their way to human mindedness and language.

2. Continuity Skepticism

The contemporary view I’m dubbing ‘continuity skepticism’, unlike some of its historical predecessors, is not intended to be a concomitant of Cartesian dualism; and it is advanced by thinkers who are self-proclaimed naturalists.⁴ Thus, for purposes of articulating the skeptical view of interest here, we can set aside arguments that purport to show that (human) minds cannot, by their metaphysical nature, be part of the material world. We can also set aside arguments that trade on essentially epistemic problems with knowing the minds of nonhuman animals. Instead, the view of interest here is motivated by reflections on (and alleged evidence for) fundamental differences between human and nonhuman behavioral and mental capacities.

Claims about such differences abound. Full-fledged human thought and communication is often portrayed as essentially intentional, flexible, objective, reflective, rule-governed, symbolic, world-directed, reason-based, and subject to social and rational norms. The behaviors animals engage in, by contrast, are said to be merely responsive, stimulus-bound, motivated by passions and needs (even when not purely reflexive), pattern-governed, non-symbolic, merely world-involving, causally driven, and subject to extinction or modification via external control and manipulation. Given these vast differences, some philosophers have maintained that the application of our concepts of intentional action, meaning, semantic content, reference, propositional attitudes, etc. to nonhuman creatures is at best a matter of analogy or ‘metaphorical extension’. Even thinkers who

are willing to attribute to nonhuman animals complex cognitive and affective states are concerned to identify distinctive, hallmark human capacities alleged to have no analogues or precedents among nonhuman animals.⁵

My main focus here will be on one central capacity – the capacity for meaningful linguistic communication – which is perhaps the most commonly cited, and least often disputed (keeping in mind, of course, both its interdependence with other capacities and its complex, multi-component character). It is this capacity that one of Darwin’s most vocal opponents – Friedrich Max Müller – famously seized upon as the “Rubicon” which “no brute will dare to cross” (1862: 360). For Müller, as for some contemporary skeptics, the uniqueness of human language that is revealed by comparing it to existing animal communication systems defies Darwinian evolutionary explanation. Language, Müller argued, provides the most “palpable” human achievement “of which we find no signs, no rudiments, in the whole brute world” (*ibid.*). Once the nature of the achievement is understood, he was convinced we would have to recognize that “no process of natural selection will ever distill significant words out of the songs of birds or the cries of beasts” (*op. cit.*, 361).

Less hyperbolically, and without any overt anti-Darwinian agenda, Grice (1959) famously drew a sharp distinction between the conventional, linguistic signs that we humans regularly use in communication and the natural signs, which both we and other animals use in coping with the world around us. Grice contrasted the way a sentence such as “It’s raining” is paired up with its meaning, on the one hand, and the way, say, the appearance of dark clouds in the sky is correlated with the same rainy conditions. Loosely speaking, both the sentence and the clouds may be said to *represent* rain, or convey information about its imminent presence. But they do so in radically different ways. Clouds, and other natural signs, such as deer tracks, or skin rashes, are reliable indicators that provide what Bennett has described as *intention-independent* evidence for worldly conditions (1976: 13 and *passim*), allowing observers to associate the presence of a condition with (or infer it from) the appearance of the relevant sign, thanks to a stable, causally-grounded correlation. Such signs possess what Grice called “natural meaning”. Utterances utilizing linguistic signs, by contrast, possess

“nonnatural meaning”, which Grice proposed to analyze in terms of complex ‘nested’ communicative intentions of speakers. Rational agents invest linguistic signs with meaning by using them in order to achieve certain communicative purposes; and their hearers recover their meanings through rational inference.⁶ Repeated public exchanges then ossify signs endowed with individual, ‘one-off’ speaker meanings into conventionally meaningful, reciprocally usable symbols.⁷ Thus, unlike natural meaning, nonnatural meaning à la Grice emerges as a consequence of *intersubjective intentional-inferential communication among rational agents*.⁸

Given the Gricean contrast, we can raise the following *continuity question*:

How, in a world replete with signs that possess only natural meaning, could linguistic symbols possessing nonnatural meaning emerge?

Continuity skeptics maintain that there cannot be a philosophically illuminating answer to this question. These skeptics do not deny that nonnatural meaning must in some sense ‘have come from’ natural meaning. But they do deny that we can get any conceptual purchase on nonnatural meaning by portraying it as building upon and continuous with any varieties of natural meaning. The continuity skeptic maintains that there can be no cogent or illuminating account of the emergence of meaningful linguistic communication (and more generally of distinctively human mindedness) from simpler behaviors and mental capacities.

Now, on the face of it, there is an obvious and promising strategy for responding to the continuity skeptic: reject the terms set by the continuity question. That is, deny that the task for a proponent of continuity is to explain how nonnaturally meaningful symbols could emerge in a world populated with signs that *possess only natural meaning*. The proponent could point out that Grice’s conceptual natural/nonnatural divide is in fact straddled by *animal signals*, which are different from Grice’s natural signs, in that they possess some, even if not all, the marks of speaker meaning as Grice construes it.⁹ It might be thought that animal signals, anyway, provide the right starting point for a continuity story, since they are caught up in complex networks of animal *communication*, which is the broader natural category under which linguistic communication should fall. A non-skeptical

answer to the continuity question would, then, seek to explain linguistic symbols as continuous not directly with natural signs, but rather with animal signals. As will become clear, I have sympathy with this general strategy and will later develop it in a particular way. However, before we can assess the potential success of the strategy, we must take a closer look at the skeptic's position – more specifically, at some of the philosophical reasons given to support the move from certain alleged synchronic differences to denying the possibility of answering diachronic continuity questions of the above sort.

We can discern three key components in the continuity skeptic's view:¹⁰

1. *Observation of significant, deep human/nonhuman differences ('synchronic discontinuity')*

Robert Brandom has claimed that, though like the “the brutes”, we are “natural beings” who “act according to rules”, “[a]s rational beings, we act according to our conceptions of rules” (1994: 30) and “are distinguished from the brutes by the fact that our actions are subject to assessment according to their propriety... Our activity *institutes* norms, *imposes* normative significance on a natural world that is significantly without [it]” (1994: 48). Like many nonhuman animals, we humans enjoy *sentience* – “the capacity to be aware in the sense of being awake” (1994: 5), and have the ability to classify things, in virtue of possessing “*reliable differential responsive dispositions*”. But we humans also enjoy *sapience* which “consists in knowing one's way around the space of reasons” (2009: 118) and is manifested in the capacity to apply *concepts*. “The parrot we have trained reliably to respond...is applying a label. A three-year-old child who knows that red lollipops have a cherry taste...is already applying a descriptive concept.” (2009: 8). A human's saying ‘that's red’ is different from a parrot's, for “in the former case, the utterance has the significance of making a claim.” (2009: 119); “...the parrot and the measuring instrument lack...an appreciation of the significance their response has as a reason for making further claims and acquiring further beliefs...” (1994: 89).

Similarly, John McDowell has claimed that “[d]umb animals are natural beings and no more. Their being is entirely contained within nature. In particular, their sensory interactions with the environment are natural goings-on.” But although “we are like dumb animals in that we, too, are perceptually sensitive to our environment” (1994: 70). Given our “conceptual powers”, we are not

confined to “coping with problems and exploiting opportunities, constituted as such by immediate biological imperatives”; for, we can exercise “spontaneity, deciding what to think and do” (1994: 115). Regarding linguistic communication, McDowell endorses the Gricean idea that what separates *linguistic* behavior from the “kind of information-transmission” characteristic of animal communication is the fact that the former is “wholly overt”: “In successful linguistic exchange speaker and hearer are mutually aware of the speaker’s intentions, in a way that could have no counterpart in merely instinctive responses to stimuli” (1983: 40f.).¹¹

2. *Denial of mental commonalities between us and ‘dumb animals’ (‘synchronic disconnect’)*

Both Brandom and McDowell think it’s a philosophical mistake to conclude, on the basis of observed commonalities between us and nonhuman animals, that we actually share *any* mental capacities. In us, even perception and sentience, are caught up in the logical space of reasons, and therefore importantly different from their apparent brute counterparts. Although “we share with dumb animals ... perceptual sensitivity to features of the environment”, which are “natural goings on”, we must not accommodate “the combination of likeness and difference ... by factorizing the truth about us into independent components” (McDowell, 1994:69).¹² Instead we should recognize that “there are two species of [sentience], one permeated by spontaneity and another independent of it” (*op. cit.*, 69); our “special form” of “perceptual sensitivity to our environment is taken up in the ambit of the faculty of spontaneity, which is what distinguishes us from them.” (*op. cit.*, 64). We become able to exercise spontaneity – “deciding what to think and do” – “[w]hen we acquire conceptual powers” which allow us to transcend mere “coping with problems and exploiting opportunities, constituted as such by immediate biological imperatives...” (*op. cit.*, 114). Yet *there is more to even* “our embodied coping than there is to the embodied coping of nonrational animals”. Our conceptual abilities allow us to become “open to the world, not just able to cope with an environment”, and “transform the character of the disclosing that perception does for us, *including* the disclosing of affordances” to which the sensitivities of nonhuman animals are confined (2007: 344). (To use

Müller’s vivid metaphor: “In the mind of man percepts, *pur et simple*, do not exist; they are always tinged with the first rays of the dawn which precedes the full sunrise of conceptual light.” (1887: 27).)

Note that ‘synchronic disconnect’ is a stronger claim than ‘synchronic discontinuity’; it does not directly follow from it and requires additional support. A mitigated version of it – under the umbrella of *constitutivism* – has been recently defended by *inter alia*, Akeel Bilgrami, who has argued that “we are creatures with responsibility and with states of minds properly described in radically normative terms and not merely as motives and dispositions” (2006: xiii). Thus, our paradigmatic intentional states (such as beliefs and desires) are essentially to be seen as *commitments*, as opposed to causal-dispositional states of the sort animals may have. But while reasons given for the constitutivist view may provide support for the claim that *some* – perhaps an important subset – of our mental states are ‘normatively constituted’, and do not overlap with superficially similar states of animals, these reasons are insufficient to support the synchronic-disconnect claim in its full strength.¹³

3. *Rejection of diachronic continuity in ‘the order of explanation’ (‘diachronic discontinuity’)*

Continuity skeptics embrace a stronger claim still. McDowell has urged that “[w]e must sharply distinguish natural-scientific intelligibility from the kind of intelligibility something acquires when we situate it in the logical space of reasons ...”. (1994: xix). True, scientific characterizations of animal communication, like commonsense ones, often fall into crediting animals with thoughts, beliefs, wants, and other mental states. But once we gain philosophical understanding of such attributions – as essentially embedded in the ‘logical space of reasons’ – we should be able to recognize any scientific account of the emergence of our mental states and the sort of communication they underwrite is bound to be philosophically inadequate. Thus, in response to our continuity question, McDowell would not deny that science can point to phenomena that are naturally implicated in animals’ ‘ascent’ to human mindedness. But he *would* deny that there is a legitimate philosophical characterization of such a progression – a way of making sense of stages that are neither completely unminded nor fully within the ‘space of reasons’. In a similar vein, Brandom acknowledges that “it is clear that there were nonlinguistic animals before there were linguistic ones,

and the latter did not arise by magic” (1994: 155). But to say this is to make a remark about ‘the order of being’, which is a *causal* order. Whereas on the correct “order of explanation” – which is a *conceptual*, as opposed to causal, order – “the intentionality of nonlinguistic creatures is dependent on, and in a specific sense derivative from, that of their linguistically qualified interpreters, who as a community exhibit a nonderivative, original intentionality” (1994: 152).¹⁴

Both McDowell and Brandom seem prepared to acknowledge that, biologically speaking (in ‘the order of being’), we *are* part of the evolved animal kingdom, and that we share with animals at least some perceptual and sensual abilities. Even our distinctively abilities as language users, they insist, “are not magical, mysterious, or extraordinary”. “Nothing more is required to get into the game of giving and asking for reasons”, says Brandom, than the same sort of “reliable dispositions to respond differentially to ... stimuli” that nonhuman animals have (1994: 155). Still, “an interpretation of a community as engaged in such [linguistic] practices” cannot “be paraphrased in a vocabulary that is limited to descriptions of such dispositions.” (1994: 156). It’s the conceptual *irreducibility* of our linguistic practices – the fact that they are normative through and through, and do not submit to characterization in the non-normative terms of the natural sciences – that makes it futile to concern ourselves with “where we come from” (Brandom 1994: 4). Such practices share in “the structure of the logical space of reasons” which is “*sui generis*, as compared with the structure of the logical space within which natural scientific description situates things” (McDowell, 1994: xix). This ensures that we cannot make our distinctive mental and linguistic capacities intelligible by portraying them as mere elaborations of capacities found among nonhuman animals, nor see them as continuous – either synchronically *or* diachronically – with the capacities of the beasts. In ‘the order of explanation’ nothing will support an illuminating continuity or emergence story.¹⁵

Like more familiar skeptics in other areas, continuity skeptics are prepared to distance themselves equally from the deliverances of both commonsense and the relevant sciences. (Indeed, an even-handed rejection of both contravening commonsense intuitions and contrary scientific findings may well be one hallmark of philosophical skepticism.) For example, the Quinean or

Wittgensteinian meaning skeptic dismisses as objectively ungrounded the commonsense confidence that alternative interpretations of speakers' utterances can be ruled out. But he is equally dismissive of scientific attempts to ground interpretation choices in objective facts (say, facts about speakers' behavioral dispositions, or brains) for failing to capture the ostensibly normative character of our practices of meaning or rule-following attributions.¹⁶ Similarly, the continuity skeptic regards commonsense mentalistic attributions to animals as shot through with uncritical application of concepts that are inherently tailored to understanding *our* minds. He would see 'folk ethology' (as we might call it) as hopelessly anthropomorphic – 'too thick' – and thus an unfit starting point for a philosophical explanation of our relation to the beasts. On the other hand, scientific accounts that place our mental and linguistic capacities in the 'order of being', insofar as they stay clear of uncritical anthropomorphism, are bound to be reductionist – 'too thin' – to deliver a philosophically credible account of the emergence of our minds from those of mere brutes.¹⁷

3. Davidson's Continuity Skepticism – a 'Case Study'¹⁸

We find a more explicit articulation of the interrelation of the above themes – synchronic discontinuity, synchronic disconnect, diachronic discontinuity – in the work of Donald Davidson. Davidson has famously argued that having a belief requires having the concept of belief, which in turn requires language.¹⁹ Less contentiously, perhaps, he has argued that attributing any propositional attitude to a creature requires crediting them with the concepts that figure in the specification of the attitude's content.²⁰ In more recent writings, Davidson highlights the *objectivity* of semantic content as a key feature of human thought and language, a feature that animal thought lacks. Objective thought, he says, "has a content which is true or false independent (...) of the existence of the thought or the thinker" (2001a: 130). It requires possession of concepts, whose employment involves *rule following* (as opposed to merely behaving *in accordance with* rules), which brings in its train the possibility of genuine error.²¹ Like Brandom and McDowell, Davidson thinks that the possibility of genuine error requires the rule-follower's *awareness of* that possibility. Not only, then, is thought objective, but "this is a fact of which a thinker must be aware; one cannot believe something, or

doubt it, without knowing that what one believes or doubts may be either true or false and that one may be wrong” (2001a: 130). Thus, *having* objective thought requires the thinker to have an awareness or *grasp of objectivity*, something that goes beyond the capacities of nonhuman animals.²²

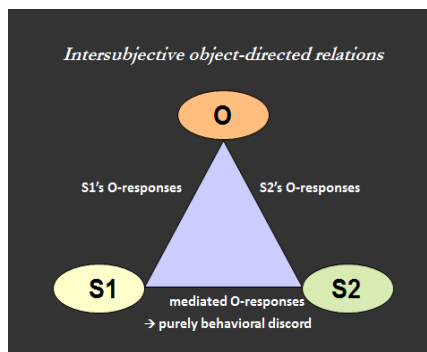
In “The Emergence of Thought”, Davidson directly addresses the question of “the emergence of mental phenomena” – which is the “conceptual problem ... of describing the early stages in the maturing of reason ... that precede the situation in which [mentalist] concepts have clear application” (2001a: 127). There (and elsewhere), he explicitly endorses continuity skepticism. Echoing some very similar remarks of McDowell and Brandom (see above), he says:

There cannot be a sequence of emerging features of the mental, not if those features are to be described in the usual mentalistic vocabulary. Of course, ... each stage in the emergence of thought can be described in physical terms. But this will fail as an explanation of the emergence of the mental since we ... cannot expect to find, a way of mapping events described in the physical vocabulary onto events described in the mental vocabulary. ... In both the evolution of thought in the history of mankind, and the evolution of thought in an individual, there is a stage at which there is no thought followed by a subsequent stage at which there is thought. To describe the emergence of thought would be to describe the process which leads from the first to the second of these stages. What we lack is a satisfactory vocabulary for describing the intermediate steps. (2001a: 127)

The move from the last claim, about *lack of vocabulary*, to Davidson’s claim that there can be no intermediate steps or emergence obviously requires justification. To reinforce this move, Davidson introduces the idea of *triangulation*. This is the idea that contentful thought about an objective world, as well as meaningful linguistic communication, require “the existence of a triangle” whose base connects two subjects, S1 and S2, and whose third apex is an object in the world, O (2001a: 121). In support of his continuity skepticism, Davidson invites us to contrast a ‘pure’ triangular scenario, of the sort prevalent among non-human animals, with the ‘reflective’ triangular scenarios we are familiar with in our own everyday intersubjective experiences.

Subjects in *pure* (non-linguistic) triangulation, Davidson allows, can “classify” and “generalize”, and form “habitual inductions”, even learned ones, grouping various stimuli together “by virtue of the similarity of the[ir] responses” (2001c: 5). He even allows that they can come to associate each other’s *responses* to O with O. For example, S1 could respond to S2’s O-reaction as S2 responds to O, and vice-versa. This makes room for a simultaneous *discrepancy* that is at the heart of objectivity (as Davidson understands it). When S1’s behavior as perceived by S2 fails to match the presence (or absence) of O, S2’s expectations go unfulfilled. Thus “space is created” for the concept of error to develop (see 2001d: 12).

Figure 1 ‘Pure’ Triangulation

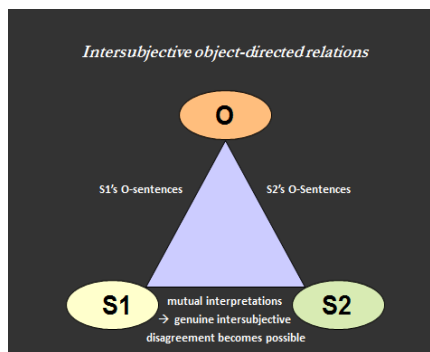


But although Davidson thinks that this sort of scenario is *necessary* for providing a conceptual foundation for the objective thought, he insists that it’s *insufficient* for its emergence. This is because nothing in the intersubjective interactions of pure triangulation supports the attribution of *reflective grasp* of the concepts of error, belief, truth, etc. From each subject’s point of view, the other subject’s behavior is simply something that can be correlated (or not) with items in the world – objects, events, state of affairs – as smoke is correlated with fire, or deer tracks with the nearby presence of deer. Any disagreement between them would amount to no more than *behavioral discord*. Yet what is crucial to objectivity (and to intentionality) as Davidson sees it is the idea of one subject treating another *as a subject* who has a *take* on the world, which take can fit or fail to fit with the way things are.²³

If pure triangulation is insufficient to account for objectivity, one may wonder (as Davidson himself does) what *would* suffice. Davidson’s answer is that *nothing short of linguistic communication*

between the two subjects could move us significantly beyond pure triangulation, for “[o]nly when language is in place can creatures appreciate the concept of objective truth... [and] make use of the triangular situation to form judgments about the world (2001a: 131).²⁴ In what he calls ‘reflective triangulation’, we have *language speakers*, capable of responding to objects with meaningful, true or false utterances. On a given occasion, S1 may produce a sentence (say, “There’s a leopard nearby”) which S2 presumes S1 to hold-true, and yet which he (S2) takes to be false. Genuine objectivity is provided for via the possibility of each subject recognizing a potential gap between what is *held* to be true (and thus believed) and what *is* the case.²⁵

Figure 2 ‘Reflective’ Triangulation



As Davidson is aware, insisting that reflective triangulation is not only sufficient but also necessary for the emergence of objective thought amounts to giving up on explaining the natural emergence of objective thought and linguistic communication (see 2001d: 13). But it is one thing to maintain that the non-linguistic animals around us have no propositional attitudes, and are thus incapable of reflective intersubjectivity, so that (therefore) their interactions cannot support genuine objectivity and full-blown semantic content. It is quite another to maintain that there is no significant, intelligible diachronic middle-ground that could be interposed between the intersubjective interactions of pure and reflective triangulations. Yet Davidson holds precisely that, the facts of nature notwithstanding, there is no hope of explaining the emergence of thought and language among creatures like us, with a certain natural history, capacities, and setting. A philosophical account of the emergence of objective thought and language is not to be had.

4. Some Continuity Scenarios

Much like Brandom and McDowell, Davidson connects continuity skepticism with the view that the mental is irreducible to the physical. To think that we *could* locate a significant stage between pure and reflective triangulation is to suppose that we could “have an analysis of thought” or “*a reduction of the intentional to the extensional*”, which, he thinks “is not to be expected.” (Davidson 2001d: 13; emphasis added). But this seems to be an overstatement. In what follows, I’d like to mention briefly three different continuity scenarios that are *not* guilty of reductionism: 1. a developmental scenario specifically tailored to meet Davidson’s triangular specifications, 2. a philosophical myth, and 3. Darwin’s speculative evolutionary scenario. Although, as we’ll see, none of these scenarios is fit to address the continuity skeptic’s concerns, understanding why this is so will prepare the ground for a scenario that may do better.

1. *Joint Attention – a Developmental Intermediate Triangulation*

In recent years, various authors have brought research done by psychologists and ethologists to bear directly on the topic of triangulation. Of particular interest here is research on the phenomenon of *joint attention* said to emerge in children between 1 and 2 years old, when they begin to engage in *triadic intersubjective interactions* with caregivers. These involve both child and adult attending to some worldly item that serves as a focal point for both, with mutual awareness of their doing so.²⁶ (Interestingly, in works that predate Davidson’s discussion of triangulation, some psychologists explicitly note an intimate connection between joint attention, understood as involving ‘triadic’/triangular interactions, and objective linguistic reference, which “emerges not as an individual act, but as a social one”.²⁷) One author in particular has proposed joint attention as providing a “halfway house” between Davidson’s “precognitive triangulations and the [reflective] triangulations explained by appeal to full-blown Gricean communicative intentions” (Eilan *et. al.* 2005: 14). This ontogenetic intermediate stage could deliver “a weakened version ... of the full-blown objectivity and mutual awareness we find in adults”, which draws on “conceptual and preconceptual skills” that are “more primitive than the kinds of conceptual skills drawn on by Davidson’s reflective triangulations”

(*op.cit.*). Notably, the work on joint attention in no way presupposes mental-physical reductionism; and the findings it introduces are characterized with the explicit use of mentalistic vocabulary.

This appeal to joint attention, however, fails directly to impact Davidson's continuity skepticism. Davidson might acknowledge that joint attention provides for the possibility of intermediate triangulation within *our* species, chalking it up to the fact that one corner in joint attention triangles – the adult caregiver – is occupied by an adult language user. But for this very reason he might argue that what effects the transformation from mere mutual intersubjectivity to objectivity in adult-child joint attention triangles is simply the adult's use of language. The adult, who already possesses a term for the object pointed at, *hands down* to the child a referential linguistic vehicle – a term that classifies objects of a certain sort under it, or expresses the relevant concept – which is already governed by norms of correctness. All this is consistent with there being no legitimate story to tell about the emergence of objectivity where *no* language is in the picture. Thus, the ontogenetic unfolding of linguistic capacities in our species – Davidson might insist – is not a proper model for the emergence of language; ontogeny does *not* recapitulate phylogeny.²⁸

2. Grice's 'Myth of X'

A rather different non-reductionist continuity scenario comes from Grice. Whereas in "Meaning" (1957) Grice presents nonnatural meaning as radically different from natural meaning, in "Meaning Revisited" (1989), he tries to explain how "nonnatural meaning [could be seen] as descendant [and] ... derivative from ... cases of natural meaning" (1989: 292). To that end, Grice spins a "myth" featuring a creature, X, who nonvoluntarily produces a certain piece of behavior – say, a yelp – that naturally indicates that X is in some state (pain). Grice then traces six stages that could allow X to move from the yelp, which only has natural meaning, to "something which is very much like nonnatural meaning" (*ibid.*).²⁹ At the first stage, X comes to produce *voluntarily* behavior of the sort whose nonvoluntary production would naturally indicate that X is in the relevant state. (For example, X might *intentionally emit a yelp to get his audience, Y, to come to think he's in pain.*) At the second stage, X's audience, Y, *recognizes* that X's performance is voluntary and overt, or *open*: although X's

behavior is ‘put on’, he’s letting Y see that it is put on and Y realizes it. In subsequent stages, X and Y get involved in a complicated game of transmitting and receiving information in which X not only intends Y to recognize his communicative intention, but also intends Y to take this intention to be a sufficient reason for believing that he, X, is in the relevant state. Finally, in the sixth stage, X produces some vehicle of communication – a bit of behavior or device – which is *not* a natural sign, but is more loosely connected to the message to be conveyed, but in a way that is discernible by Y, with the sort of intentions sufficient for speaker meaning to emerge.

Notably, however, already in the first stage, Grice credits X with a communicative intention directed at his audience: he produces a yelp voluntarily, *in order to get his audience to believe* that he (X) is in pain. Thus Grice’s Myth of X simply presupposes that prior to the emergence of linguistic meaning there could already be conceptually sophisticated creatures capable of thoughts, beliefs, and intentions, evidently with full-dress, structured propositional contents. But, as we’ve seen, Davidson denies that such contents can be sensibly attributed prior to reflective triangulation – that is, independently of mutual *linguistic* interpretation.³⁰

Both the joint attention scenario and the Gricean Myth of X offer for consideration mentalistic characterizations of intermediate stages that predate linguistic communication to help explain its emergence. However, it should be clear that neither sort of scenario is apt to block continuity skepticism. For one thing, both scenarios are confined to what we might expect to happen in *our* species, leaving seemingly untouched the question of the phylogenetic emergence of thought and language. Moreover, as we just saw, each scenario in its way falls afoul of specifically Davidsonian strictures. And neither succeeds in giving the lie to the spirit of the reasoning behind Davidson’s continuity skepticism.

3. *Darwin’s ‘Unusually Wise Ape-Like’ Progenitor of Language*

Grice’s arm-chair scenario can be usefully juxtaposed with a biologically grounded scenario offered by Darwin, when (in Ch. 2 of *The Descent of Man*, 1871) he finally turns to apply his evolutionary framework to language (partly in response to Müller’s ‘Rubicon’ challenge, mentioned

earlier).³¹ The scenario Darwin outlines posits the emergence of different aspects of language in sequential order, under the influence of different selection pressures. The first hypothetical stage, “before even the most imperfect form of speech could have come into use” required a general increase in intelligence and ‘mental powers’ (1871: 57). At the next stage comes “musical protolanguage”³²: this is a stage at which *vocal imitation* emerged, driven by sexual selection and used mainly “in producing true musical cadences, that is in singing” to aid in courtship and “challenge to rivals” as well as in “the expression of emotions like love, jealousy, and triumph”. The third stage took our ancestors from emotionally expressive musical protolanguage to propositionally meaningful speech. To support the idea that complex but not-yet-meaningful vocalizations preceded propositional, compositional speech, Darwin used comparative, synchronic data from detailed analogies between learned bird song and human song and speech.³³

It doesn’t take a linguist or a philosopher of language to wonder how meaningful speech *could* emerge from purely musical protolanguage. When trying to explain the leap, Darwin cites earlier work on language by his opponent Müller (and others), suggesting that articulate language “owes its origins to the imitation and modification, aided by signs and gestures, of various natural sounds, the voices of other animals, and man’s own instinctive cries”.³⁴ We can see how an animal capable of imitating a growl can come spontaneously to *produce* the growl (though it does require having voluntary vocal control – a far from trivial evolutionary feat³⁵). But a spontaneous growl thus produced still may seem, on the face of it, too much like a sign with merely natural meaning. Something must be added, if we are to understand the next key missing “step in the formation of language”: the symbolic mapping of sounds onto specific meanings. Darwin suggestion is that we can imagine that “some *unusually wise ape-like animal* should have *thought of imitating* the growl of a beast of prey, *so as to indicate to his fellow monkeys* the nature of the expected danger” (1871: 57, my emphases). So, on Darwin’s scenario, much as on Grice’s Myth, the transition from naturally meaningful vocalizations to even rudimentary meaningful speech is to be accomplished through the

deliberate, thoughtful production of an ‘unusually wise’ creature, who wishes to indicate or signal something to an audience.

The foregoing juxtaposition may help put in context a dominant theme among leading contemporary theorists of language evolution. Several such theorists put together Grice’s conception of what it would take to achieve even *proto* linguistic communication with Darwin’s goal of developing an evolutionary account of the emergence of language.³⁶ These theorists take it as non-negotiable that, for bits of behavior to be meaningful in the way linguistic behavior is meaningful, they must be deliberately issued by producers who possess at least rudimentary *communicative intentions*, and they must be understood by receivers who engage in some kind of *thoughtful interpretation*. So they share with Grice (and Darwin) a key idea that is regarded as deeply suspect by philosophers who are skeptical about animal mentality. That is the idea that we can make sense of creatures having complex psychological states with propositional structure and content prior to having language. Thus, taking for granted that our nonhuman ancestors had sufficient *representational and cognitive* sophistication, these theorists see their task as that of providing a broadly evolutionary explanation of how our ancestors could achieve the *communicative* sophistication needed to put them on their way to language as we know it.

In his recent comprehensive volume on the evolution of language, Fitch characterizes the task in explicitly Gricean terms:

Animal communication, before language, largely involved signalers who generate signals either automatically (e.g. innate calls) or selfishly (“manipulation”), and thus obeyed no Gricean maxims. Listeners, on the other hand, have been processing these signals inferentially, fulfilling their half of the Gricean equation, for the entire history of communication systems ... The component of this Gricean model that demands special evolutionary explanation is ... the speaker’s contribution to this cooperative endeavor. ‘Going Gricean,’ then, required a fundamental change in the rules of animal communication on the part of signalers, ... a logical necessity before language could get off the ground. (2010: 135).

Fitch shares with other theorists of language evolution an assumption rejected by the continuity skeptics discussed earlier, namely, that existing nonhuman animals as well as our pre-linguistic ancestors “had a whole range of different mental states, including beliefs and desires, which were ‘about’, and could even be ‘true of’, states of affairs in the world” (Hurford, 2007: 6)³⁷. These theorists then go on to identify the “intended effect on hearer” as the unique characteristic (“a core ingredient”) of human linguistic communication that demands an evolutionary explanation (Hurford, 2007: 172). “Apes have rich mental lives, but keep their picture of the world to themselves, like all other animals besides humans. Only humans tell each other in detail about events and scenes in the world.” (*op. cit.*, 332) The evolutionary puzzle is how to explain the emergence of “the unique human characteristic of freely giving information in such structurally complex ways as we do every day with language”, given that “[o]ur ape cousins have not evolved to exhibit shared intentionality or the appropriate degree of trust paving the evolutionary way for language” (*op. cit.*, 333).

From the point of view of our radical continuity skeptics, this Gricean conceptualization of the task facing theories of language evolution renders the task too easy. For it assumes from the start what the skeptic is concerned to deny, namely: that the sort of cognitive wherewithal required by the Gricean could in principle be intelligibly attributed to creatures prior to their possession of language and the conceptual resources it affords. But from the point of view of continuity advocates, the Gricean conceptualization has the effect of ‘upping the ante’. For it implies that *even setting aside* the structural complexity of the *vehicles* of linguistic communication (including syntactic recursion and semantic compositionality), there can be no appropriate precursor of linguistic communication absent the kind of intentional-communicative complexity demanded by the Gricean account. Once the Gricean conceptualization is embraced, it becomes pressing for language evolution theorists to determine whether it is *psychologically* reasonable to suppose that our ancestors might have possessed any of the communicative-interpretive capacities that are required for ‘going Gricean’ (including rudiments of theory of mind, metacognition, joint attention, so-called declarative pointing, etc.).³⁸

If our goal is to engage continuity skepticism, I submit, we should see how far we can get in our understanding of the emergence of linguistic communication *without* ‘going Gricean’. In the remainder of this paper, I will propose that attending to certain forms of *non-Gricean* communicative behaviors that we share with nonhuman animals will allow us to see that we can go much farther than has been assumed by theorists of language evolution. And, if I am right, this will also allow us to begin breaking through the barrier put up by continuity skeptics.

4. Expressive Communication as Foreshadowing Linguistic Communication

Somewhat unexpectedly, both Grice’s Myth of X and Darwin’s phylogenetic scenario connect up with the theme with which we began: Wittgenstein’s unspeaking lions. The behavior that initially puts Grice’s creature X on his road to nonnatural speaker meaning – that is, the nonvoluntary yelp – is what we would describe as a *natural expression* of pain or distress, something of which lions and other nonhuman animals (as well as, of course, pre-linguistic infants) are surely capable. And Darwin, too, characterizes a key stage in his language evolution scenario in terms of “the [vocal] expression of emotions”. Now, like many others, Grice thinks of the yelp as just a natural sign, or symptom of X’s distressed state. (By contrast, Darwin (1872), with characteristic prescience, articulates a much more nuanced view of expressive behavior.) For this reason, Grice supposes that an *intention to convey specific information* to his audience is needed in order to put X on his way to nonnatural meaning. (And Darwin, too, invokes the ‘unusual wisdom’ of an ape-like ancestor to bridge the gap between emotionally expressive musical protolanguage and meaningful speech.)

However, I believe it’s a mistake to assimilate yelps and other natural expressions to other signs with (merely) natural meaning. Indeed, as I explain below, expressive behavior exhibits features that can be seen to foreshadow significant aspects of linguistic communication, quite apart from the presence of communicative intentions or ingenious insight. If so, then perhaps this is the domain where we should be looking to find *legitimate natural precursors* of objective thought and meaningful linguistic communication.³⁹ By ‘legitimate natural precursors’ I here mean communicative interactions that (at least): a. can be found in the natural world, b. go beyond the merely discriminative

behaviors of pure triangulation, c. do not depend on crediting the relevant subjects with language, or language-like propositional thought, and d. are (in a sense to be made clearer) *proto-objective*, *proto-semantic*, and *proto-intentional*. By expressive behavior, I have in mind these sorts of displays



as well as yelps, growls, teeth-barings, tail-waggings, fear barks and grimaces, lip smacks, ground slaps, food-begging gestures, ‘play faces’ and play bows, copulation grimaces and screams, pant hoots, alarm, distress, and food calls, grooming grunts, open-mouth and ear-flap threats, eyebrow flashes, and so on.⁴⁰ These sorts of paradigmatic natural expressions are often assimilated to physiological symptoms, such as red spots on the skin, sneezes, or galvanic skin response, and regularly portrayed simply as *reliable indicators* or symptoms of the internal states that regularly cause them.⁴¹ But this purely causal construal fails to do justice to the richness and complexity of these behaviors.⁴²

Consider first expressive behavior in our own species. On various occasions, upon being presented with a new fluffy teddy bear, little Jenny’s face may light up; or she may let out an excited gasp, reaching for the toy; or she may emit a distinctive sound (“Uh!”), or call out: “Teddy!” as she eagerly stretches her hand toward the toy; or she may exclaim: “I want Teddy!” perhaps with no reaching. Jenny’s facial expression and her sigh plausibly fall under the rubric of natural expressions; whereas her eager hand-stretching and subsequent utterances are things she does voluntarily or perhaps even intentionally as she gives expression to her desire. Among the utterances, note, are English *sentences*, which have nonnatural linguistic meaning. They express *in the semantic sense* propositions. Still, these all seem genuine instances of expressive behavior. What renders them so has to do with similarities among the *performances* or acts (whether voluntary or not), which equally serve to give vent to Jenny’s state of mind. These similarities obtain despite significant differences among the *expressive vehicles* used. One can *give expression* – express in the *mental-state* sense – to one’s joy at seeing a friend by means of a beaming smile or a spontaneous hug (neither of which stands in a

semantic representational relation to the joy), as well as by uttering a sentence such as “It’s so great to see you!” (which does have a conventional nonnatural meaning). Similar expressive performances, different vehicles of expression.⁴³

The expressive performances of nonhuman animals do *not*, on my view, employ expressive vehicles that have structured nonnatural meaning. A yelp or a grimace – unlike the English sentence “This hurts!” or “I have a terrible headache!” – does not *semantically* express a proposition.⁴⁴ It *shows* the expresser’s state of mind to suitably attuned observers; it doesn’t tell of it. (And correlatively, a suitably attuned observer will directly recognize the expressed state, rather than figure out inferentially the expresser’s communicative intentions.) Still, *expressive signals* – as we may call them – form a special sub-category within the broader category of animal signals. And the complexity and texture of communication that exploits such signals, I believe, renders it especially apt for illuminating the emergence of linguistic communication.

The literature on the biology of communication is rife with examples of animal signals that convey detailed information about biologically significant attributes of the signaler, such as size, sexual readiness, overall fitness, or fighting ability, without requiring any intentions on the signaler’s part. (Examples include tiger scratch marks, spider web vibrations, peacocks’ tail displays, sexual swellings, birdsongs, and so on.)⁴⁵ Some animals produce idiosyncratic sounds (e.g. dolphins’ whistles) that allow conspecifics to identify them.⁴⁶ But on the view of expressive communication I favor, many human and nonhuman facial contortions, bodily gestures and demeanors, and various vocalizations go beyond simply conveying information about the producer’s biologically significant attributes. Acts of expressive communication often involve an overt gaze direction, head tilt, or distinctive bodily orientation, guiding the receiver’s attention not only to the expressive agent’s affective state but also to the *object* of that state—the source or target of the relevant state. An aggression growl not only represents the degree of its producer fighting prowess, but also reveals the growler’s target of anger, and thus his readiness to defend himself if challenged. A meerkat’s alarm behavior shows the direction from which the threat is coming. A dog’s cowering demeanor upon

encountering another will show to a suitably endowed recipient the dog's fear (kind of state), *how* afraid it is (quality/degree of state), *of* whom it is afraid (the state's intentional object), and how it is disposed to act – slink away from the threat, or hide from it behind his owner's leg (the state's dispositional 'profile'). Similarly for the recently much-studied canine play bows.⁴⁷ A vervet monkey's alarm call not only indicates the presence of an aerial predator, but also shows the caller's fear *of*, say, an aerial predator, thereby *moving others* to hide from the danger.

These sorts of performances point *inward*, to the animal's expressed state of agitation, fear, anger, etc., while at the same time pointing *outward*, toward the object or event at which the state is directed. And they reveal the relevant behavior's cause or motivation at the same time as they foretell the expresser's impending behavior and move others to respond appropriately. They thus partake in the Janus-faced character of paradigmatic expressive performances.⁴⁸

We can discern several dimensions in the communicative complexity of expressive signals: psychological, semantic, pragmatic. As suggested above, in contrast with automatic behavioral reactions and physiological symptoms, insofar as expressive signals point to a relevant worldly object or state of affairs, they exhibit a *referential* dimension. Early studies of alarm calls by ethologists (and philosophical discussions of them) presented them as *merely affective* displays: purely instinctive or reflexive reactions that are merely reliably correlated with the presence of certain types of predators. In sharp contrast with linguistic utterances, alarm calls were said to be at best only *functionally* referential. But more recently ethologists have begun to recognize the need for a more nuanced understanding. For example, discussing birds' alarm calls, the ethologist Peter Marler remarks: "if a bird couples a call with some kind of indexing behavior, such as head-pointing or gaze direction, a certain object or point in space or particular group member can be precisely specified: the combination adds significantly to the communicative potential of emotion-based signals." (2004: 176) Marler seems to suggest that a bird's alarm call can and often does fulfill its communicative role by showing the bird's agitated state of mind *at the same time as* it reveals its object. (Similarly, Snowdon has recently suggested that the food calls of chicken and other animals "can both be referential and

communicate an affective state, perhaps of social invitation” (2008: 75). And Seyfarth and Cheney (2003b) claim that “animal vocalizations, like human speech, simultaneously encode both semantic and emotional information”.⁴⁹⁾

Now in addition to the referential dimension of alarm calls, we may also acknowledge a *predicative* dimension. The acoustic intensity of an alarm call is closely associated with the perceived level of predator danger.⁵⁰ A loud eagle alarm call is in this respect not unlike an utterance of *Eagle here!* produced by a language speaker in spontaneous response to the appearance of a threatening eagle, whereas a softer call is a bit like *Eagle nearby!*⁵¹ Inasmuch as expressive signals are directed at objects and features of an animal’s environment *as apprehended* by the animal, they contrast with automatic physiological reactions, and may be said to exhibit a measure of intentionality or subjective directedness. But in contrast with perceptual and other, more passive representational states, which are also often said to exhibit intentionality, expressive communication has an additional *active* aspect. It embodies a certain kind of *agency*. A creature giving behavioral expression to a present state of mind often shows designated receivers how he is disposed to act, thereby moving the behavior’s ‘consumers’ to respond appropriately – showing them *how to act* or *what to do*. As a scared animal cowers away from a threat, or bows playfully, a like-minded witness will be moved to do likewise. Moreover, unlike rote, automatic, instinctive, or reflexive behaviors, expressive behaviors can be brought under voluntary control, modulated, intensified or toned down, even spontaneously produced.⁵² (In this respect animal calls seem quite different from bee dances.)

Note that to say that a psychological state exhibits complexity along several dimensions is *not* to say that it has recombinable *parts* or components that correspond to the dimensions or aspects of complexity. As Sellars helpfully observes, a single state, which may *not* have any distinct parts or components corresponding to referential or predicative parts of speech, may nevertheless have both a predicative and a characterizing function by virtue of its multiple *aspects* rather than its distinct *parts*.⁵³ The relevant psychological states could be understood as *non-propositional* affective and action-guiding states that are *directed at* (or are ‘about’) certain environmental objects: fear *of x*, anger/excite-

ment *at y*, attending to \bar{x} . Perhaps, then, we could recognize *prepositional* attitudes as prefiguring the propositional attitudes.⁵⁴ And, importantly, expressive signals can reveal semantic and pragmatic aspects of the complex states they express *even when lacking composite structure*.

Moreover, the production and uptake of expressive signals place much weaker demands on the cognitive capacities of both producers and consumers than does full-blown linguistic communication. On the expresser's side there's no need for the sort of sophisticated communicative intentions required for Gricean speaker meaning. There is no need for any active desire on the producer's part to achieve the characteristic effects on the audience (combined with some belief about what it would take to fulfill the desire). Nor does engaging in expressive communication require a desire to cooperate, or to share information, on the part of the producer. So less demand is put on producers' psychological makeup. At the same time, appropriate, active responses to producers' expressive performances can be entirely spontaneous, and grounded in empathy or simple contagion; they needn't be calculated or dependent upon a rational inference that deploys an understanding of others' minds. On the receiver's side, there's no need for complicated 'theory of mind', metarepresentational inferences.⁵⁵ So less demand is put on the interpretive capacities of receivers. Thus, all in all, expressive communication in no way requires 'going Gricean'.

5. Meeting the Continuity Skeptic

Elsewhere, [AUTHORS 10] have proposed the following hypothesis concerning expressive communication:⁵⁶

Expressive communication is a form of *social, intersubjective, world-directed* communicative behavior that is naturally designed to show the states of mind of expressers to suitably endowed observers, so as to move them to act in certain ways (toward the expresser or the object of her expressed state), in part by foretelling the expresser's impending behavior.

If the hypothesis is correct, then expressive communication can be seen as endowed with the texture and complexity required for prefiguring linguistic communication without the help of Gricean communicative intentions. The non-Gricean conception underlying the hypothesis meshes

well with the commonsense idea that a wide range of animals – and by no means only those most closely related to us phylogenetically – are capable of rich forms of communication, despite lacking some of the more sophisticated cognitive-conceptual resources that underlie language, or that depend on its possession.

Continuity skeptics often mention animals' affective displays (and in particular alarm calls) only to dismiss them as potential precursors of symbols used in linguistic communication.⁵⁷ By so doing, I believe, they miss the potential of expressive communication to supply us with legitimate natural precursors of linguistic communication and human mindedness. Even Marler's birds, we saw, are different from the bees; for their affective displays go beyond merely instinctive or reflexive behavior designed to transmit information to other birds. Though these displays are not learned behavior, and though (we may assume) they are not produced with communicative intentions, they form part of an intricate net of world-directed intersubjective interactions, and possess proto-semantic and proto-pragmatic features that foreshadow certain significant aspects of linguistic communication.

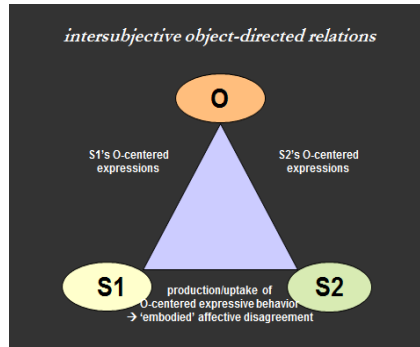
Furthermore, the intricate interactions involving the production and uptake of world-directed, action-guiding expressive behavior can give rise to a wide range of mismatches that go beyond mere behavioral discord, and embody a kind of disagreement that can ground *proto-objectivity*. The idea is briefly this.⁵⁸ Suppose, for example, that S1 produces an alarm call, which is naturally designed to show conspecifics, S2 included, his imminent flight from some specific type of nearby threat (some predator O), so as to encourage S2 to do the same.⁵⁹ Having observed the behavior, S2 is in a position to respond to it in some way that is not only responsive to the presence of O (as indicated by the behavior) but is also anticipatory of S1's subsequent behavior. Instead of also fleeing, for example, S2 may, upon hearing the alarm call and spying no predator, respond to S1's alarm call by, say, moving toward S1 to consume S1's soon-to-be-abandoned meal. When S1's O-behavior betrays her impending flight, the possibility opens for S2's response to the behavior to match it or not, depending on whether or not S2's response is *itself* a bit of behavior appropriate to

the presence of O. S2's behavior departs *both* from S1's (anticipated) behavior and from the appropriate responsive behavior; and it can be said to *embody* O-related disagreement with S1's behavior. Here it looks as though S2 is treating S1's O-related behavior as *separable from* the (imminent) presence of O (as assessed by S2). S2 is keeping two distinct but simultaneous tabs, as it were, on the world and on S1's reaction to it. The right space seems to be open for crediting S2 with treating S1 as having his own take on the situation. For O is no longer merely an external cause serving as a point of intersection of S1 and S2's discriminatory responses; nor is S1's behavior treated merely as a natural O-indicator by S2. Instead, S2's responsive behavior is one that takes account of what amounts to S1's getting things wrong (from S2's perspective). These sorts of interactions, which are evidenced in the behavior of *existing* nonhuman animals, suggest the sort of scenario that a proponent of continuity interpose *diachronically* between Davidson's pure and reflective triangulations – what we may call 'intermediate triangulation'.

Intermediate triangulation is poised between the 'thin', pure case, in which S2 simply responds or fails to respond to S1's O-behavior with her own O-behavior, on the one hand, and the 'thick', reflective case in which S2 *judges that* S1's O-behavior is incorrect (specifically, that S1 has uttered a false sentence, betraying a false belief), on the other hand. Intermediate triangulation features object-centered affective interactions. It allows for a kind of intersubjective disagreement that does not presuppose reflective grasp of objectivity or possession of intentional concepts on the part of the relevant subjects. So it's clearly different from the thick, reflective case. But it's also different from the thin case. To see the crucial difference, recall that, on the expresser's side, expressive behavior shows the affective state the expresser is in partly by revealing how he, S1, is prepared to react in light of O's presence. Faced with S1's expressive performance, the observer, S2, can anticipate not only O's presence, but *also* the behavior on S1's part that is foreshadowed by that performance. In that sense, S2 is responding to S1's expressive performance *as* O-centered behavior. Moreover, since expressive behavior also has the function of moving suitably attuned observers to behave in certain ways, proper uptake of S1's expressive behavior requires a certain O-related

reaction on S2's part. This interlocking of O-centered affective interactions makes room for a broader range of intersubjective mismatches/disagreements than Davidson allows in the pure case.

Figure 3 'Intermediate' Triangulation



The above scenario (like the Davidsonian ones after which it is modeled) is, of course, an imaginary one. But recent observations of animals' intersubjective interactions in the wild, as well as in captivity, and controlled experiments comparing the behaviors of higher primates and prelinguistic children, suggest that intermediate triangulation may be more than mere fiction.⁶⁰ And, although there is much disagreement among researchers regarding the *degree* to which the relevant interactions resemble adult human transactions, it is uniformly agreed that the interactions do not admit of any simple explanation in terms of conditioned reflexes, innate or species-wide signaling, or learning history. For example, Crockford et al. (2011) report recent triangulation-relevant experiments with chimpanzees in the wild, who emit snake calls highly selectively, exhibiting fine-tuned sensitivity to whether or not the call receivers have themselves seen the snake, whether they have been within earshot of the call, how far they are relative to the caller, and how affiliated they are with the caller. While it may be debatable whether the callers 'assess the state of knowledge' of the receivers (as the authors suggest), it seems undeniable that the callers are attuned to and monitor, specifically, other subjects' attention to (and impending behavior toward) a salient object of potential mutual interest or significance, as witnessed by the intricate pattern of their call production. And the call receivers are moved to take specific actions, to avoid the threat perceived by the caller (of which the call informs them), skirting the path to avoid the location of the threat (which is invisible to them).

A committed continuity skeptic could no doubt insist that the interactions involved in intermediate triangulation only merit purely behavioristic, non-intentional characterizations, just like those in its predecessor, pure triangulation.⁶¹ The obvious response to this will be to point out that *the same is true of reflective triangulation*. There is nothing to prevent a committed skeptic from redescribing intersubjective *linguistic* interactions in terms that leave it open whether the subjects involved are really minded, or really *treat* each other as minded subjects. Simply to invoke the possibility of redescription is to land in yet another kind of skepticism – a version of *other minds skepticism* – which is, in fact, even more radical than continuity skepticism. (It would require not only denying that the ‘light’ of mindedness ‘gradually dawns over the whole’ – to borrow Wittgenstein’s famous dictum – but also accepting that the lights are out everywhere, so to speak.) Insisting that the animal case *must* be treated entirely differently from the linguistic case would either be question-begging or require a separate, substantial defense. (Other-minds skepticism would, in any event, seem anathema to the anti-Cartesian philosophy of mind held by the continuity skeptics discussed here.)

Finally, if the aforementioned hypothesis regarding expressive behavior is correct, then the evolutionary emergence of the capacity for Janus-faced expressive communication could also mark a significant milestone in the Darwinian scenario leading to meaningful speech. In general, we can think of animals’ affective displays as expressive *performances* or acts that use certain *expressive vehicles*, where the vehicles lack syntactic structure and compositional meaning. An expressive vehicle – say, a gasp of fear that is nonvoluntarily ‘pressed from within’ in the presence of a threat – can in principle be separated from the affective state that caused its production, a fact that ethologists exploit when conducting playback experiments.⁶² The acoustic pattern can become gradually both more stylized and more refined; it can be reproduced and imitated, so as to culminate in a distinct, repeatable vocal pattern, distinguishable at least in part according to the broad type of threat occasioning it. Such patterns can potentially gain social currency as ‘stand-ins’ for the different objects toward which the states characteristically expressed when producing them are directed (that is, different sources of

threat – e.g., leopards vs. eagles vs. ...). The ground could be laid for the expressive vehicles to take on a proto-semantic and proto-pragmatic life of their own and to become stand-ins for the relevant objects, as they begin to form a standing (if limited) repertoire.⁶³ Thus, properly construed, the capacity to produce expressive, unlearned vocalizations and respond to them appropriately, coupled with the capacity for vocal control and imitation, could provide the shortcut needed to bypass the inventive insight and conscious effort of Darwin’s “unusually wise ape-like animal”. If so, then the Darwinian road to linguistic communication need not be paved with communicative intentions.

6. Concluding Remarks

My aim here has been twofold: to articulate a controversial yet seductive version of the view I labeled “continuity skepticism”, and to suggest a strategy for undermining it. The challenge posed by continuity skepticism, as I presented it, is to explain how the diachronic gap between us and the beasts could be bridged, given the palpable synchronic distance separating us from them. Given the skeptic’s strictures, I’ve argued, a plausible continuity story ought not to rely on crediting our nonlinguistic ancestors with complex, audience-directed intentions to communicate propositional attitudes and the cognitive wherewithal to attribute and interpret them. Thinking in terms of Davidson’s sharply contrasting triangles, the challenge was to try to bridge the diachronic gap without either underestimating the rich character of linguistic interactions in reflective triangulation or overestimating the power of non-linguistic interactions in pure triangulation. In response to this challenge, I urged a closer examination and a particular construal of expressive communication. The uncovered synchronic commonalities between us and existing species of nonhuman animals, I suggested, are apt to aid us in our search for a diachronic bridge.

As with other skeptical challenges, in the case of continuity skepticism, too, there are two familiar strategies for disengagement. We may simply embrace the theoretical deliverances of the relevant sciences, and thumb our nose at the skeptic. Or we may wrap ourselves in warm, fuzzy commonsense, insisting that philosophy should ‘leave everything as it is’. Neither strategy seems sufficiently responsive to the continuity skeptic’s concerns. I have here recommended trying to

engage continuity skeptics by offering a non-reductionist candidate for a legitimate middle-ground. It is a middle ground in two complementary senses: materially speaking, I've proposed that we can find *in nature* expressive behaviors that lie between the purely discriminative behavior of living organisms, on the one hand, and the fully rational behavior that is the prerogative of human beings, on the other hand. Formally speaking, I've proposed that our commonsense *descriptions* of expressive behavior may be a fit starting place for the conceptual task of fusing the scientific image and the naive commonsense image regarding relevant continuities between us and the beasts. For, although these are mentalistic descriptions, which do not carve behavior in purely causal terms, they do not presuppose the full battery of concepts that inform our descriptions of each other.

Finally, recall Davidson's claim that "[t]here cannot be a sequence of emerging features of the mental" which he supports in part by claiming that "we lack ... a satisfactory vocabulary for *describing* the intermediate steps". Some non-reductionist opponents of Davidson have maintained that nonhuman animals *already* share key features of human mindedness, and that we *can* legitimately apply our propositional attitude vocabulary to them.⁶⁴ I have not taken this route. I thus implicitly accepted that there may be a significant gap between our capacities and those of existing beasts, in keeping with the skeptic's claim of synchronic discontinuity. And, although I would take issue with the skeptic's claim of synchronic disconnect, my direct concern was rather to reject the skeptic's even stronger claim of diachronic discontinuity. I have tried to show that our commonsense descriptions of the expressive behavior we share with nonhuman animals – as well as those provided by ethologists – can guide us towards a natural intermediate stage in a path connecting the completely unminded parts of the animal world with the fully minded, linguistically infused parts that we humans occupy.⁶⁵

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References

AUTHOR 1, 4, 5, 7, 9, 10

AUTHORS 10, AUTHORS 11

- Anderson, S. (2004). *Doctor Dolittle's Delusion: Animals and the Uniqueness of Human Language* (New Haven: Yale University Press)
- Bennett, J. (1976). *Linguistic Behavior*. (Cambridge University Press)
- Bennett, J. (1964). *Rationality* (Routledge & Kegan Paul)
- Bermudez, J. L. (2009). "Mindreading in the animal kingdom", in Lurz, R. (ed), *The Philosophy of Animal Minds*, pp. 145-164.
- Bermudez, J. (2003). *Thinking Without Words*. (Oxford: Oxford University Press).
- Bilgrami, A. (2006). *Self-knowledge and Resentment*. (Cambridge, MA & London: Harvard University Press).
- Brandom, R. (2009). *Reason in Philosophy: Animating Ideas*. (Cambridge, Mass.: Harvard University Press), pp. 197-224.
- _____ (2000). *Articulating Reasons*. (Cambridge, Mas., London, England: Harvard University Press).
- _____ (1994). *Making it Explicit* (Cambridge, MA: Harvard University Press).
- Burling, R. (2005). *The Talking Ape: How Language Evolved* (Oxford: Oxford University Press).
- Byrne, R. & Whiten, A. (1991) "Computation and Mindreading in Primate Tactical Deception." in Whiten, A. (Ed.) *Natural Theories of Mind: Evolution, Developments and Simulation of Everyday Mindreading*.
- Call, J. and Tomasello, M. (1994). "Production and Comprehension of Referential Pointing by Orangutans", *Journal of Comparative Psychology*, 108, pp. 307-317.
- Camaioni, L. (1997). "The Emergence of Intentional Communication in Ontogeny, Phylogeny, and Pathology", *European Psychologist*, Vol. 2, No. 3. Pp. 216-225.
- Carruthers, P. (2009). "Invertebrate Concepts Meet the Generality Constraint (and Win)", in Lurz, R. (ed), *The Philosophy of Animal Minds*, pp. 89-107.
- _____ (2008). "Metacognition in Animals: A Skeptical Look", *Mind and Language* 23, pp. 58-89.
- _____ (2004). "On Being Simple Minded", *American Philosophical Quarterly* 41, pp. 205-220.
- Cheney, D. and Seyfarth, R. M., (2007). *Baboon Metaphysics* (Chicago: University of Chicago Press).
- Chomsky, N. (2010). "Some Simple Evo-Devo Theses: How True Might They Be for Language?", in Larson, R. et. al. *The Evolution of Human Language* (Cambridge: Cambridge University Press).
- _____ (1975). *Reflections on Language* (New York: Pantheon).
- _____ (1965). *Aspects of the Theory of Syntax* (Cambridge, Mass.: MIT Press).
- Crockford, et al. (2011). "Wild Chimpanzees Inform Ignorant Group Members of Danger", *Current Biology* 22, pp. 142-146.
- Darwin, C. (1872). *The Expression of the Emotions in Man and Animals*. (London: John Murray).
- _____ (1871). *The Descent of Man, and Selection in Relation to Sex*. (London: John Murray).
- Davidson, D. (2004) *Problems of Rationality* (Oxford: Clarendon Press)
- _____ (2001a) *Subjective, Intersubjective, Objective 2nd Edition* (Oxford: Clarendon Press)

- _____ (2001b) *Inquiries Into Truth and Interpretation 2nd Edition* (Oxford: Clarendon Press)
- _____ (1999) “Reply to Evnine”, in L. Hahn (ed.), *The Philosophy of Donald Davidson* (Chicago and La Salle, Ill: Open Court), pp. 305-310.
- Dennett, D. (2010). “The Evolution of ‘Why?’” *Reading Brandom: On Making It Explicit*, B. Weiss and J. Wanderer, eds., Routledge, pp. 48-62.
- Eilan, N., Hoerl, C., McCormack, T., and Roessler, J. (eds.) (2005). *Joint attention: communication and other minds* (Oxford: Clarendon Press)
- Fitch, T. (2010). *The Evolution of Language* (Cambridge UK: Cambridge University Press).
- Gómez, J. (2005). “Joint Attention and the Notion of Subject: Insights from Apes, Normal children, and Children with Autism”, in Eilan *et al* (eds.), pp. 65-84.
- _____ (2004). “Faces, gestures, and calls” in *Apes, Monkeys, Children, and the Growth of Mind*.
- _____ (1998a). “Some Thoughts About the Evolution of LASs, with Special Reference to SAM and TOM”, in Carruthers P and Boucher J. (eds.), *Language and Thought: Interdisciplinary Themes* (Cambridge Mass.: Cambridge University Press), pp. 76-93.
- _____ (1998b). “Do Concepts of Intersubjectivity Apply to Non-human Primates?”, in Braten S. (ed.) *Intersubjective Communication and Emotion in Ontogeny* (Cambridge: Cambridge University Press), pp. 245-259.
- _____ (1996) “Ostensive Behaviour in Great Apes: the Role of Eye-contact”, In Russon, Parker & Bard (eds.) *Reaching into Thought: The Minds of the Great Apes* (Cambridge: Cambridge University Press).
- _____ (1994). “Mutual Awareness in Primate Communication: a Gricean Approach”, in Parker, Mitchell, & Boccia (eds.) *Self-Awareness in Animals and Humans*. (Cambridge: Cambridge University Press).
- _____ (1990) “The emergence of intentional communication as a problem-solving strategy in the gorilla” in Parker, S. and Gibson, K. (Eds) “*Language” and Intelligence in Monkeys and Apes*.
- Grice, P. (1989). *Studies in the Way of Words*. (Cambridge, Mass.: Harvard University Press).
- _____ (1975). “Logic and Conversation”, in Davidson, D. and Harman, G., *The Logic of Grammar* (Encino, CA: Dickenson), pp. 64-153.
- _____ (1957). 1957. *The Philosophical Review* 66, pp. 377-88.
- Griffith, D. (1992). *Animal Minds: Beyond Cognition to Consciousness* (Chicago and London: University of Chicago Press).
- Green, M. (2007). *Self-Expression* (Oxford: Oxford University Press).
- Hare, B., Call, J. & Tomasello, M. (2001). “Do Chimpanzees Know What Conspecifics Know?” in *Animal Behavior* 61, 139-51.
- Hauser, M. (1999). “The Evolution of a Lopsided Brain: Asymmetries Underlying Facial and Vocal Expressions in Primates”, in Hauser, M. and Konishi, M. (eds.), *The Design of Animal Communication* (Cambridge, Mass., London England: MIT Press).
- Hauser, M., Chomsky, N. & Fitch, W. T. (2002). “The Language Faculty: What Is It, Who Has It, and How Did It Evolve?” *Science* 298, pp. 1569-1579.

- Heyes, C. (1998). "Theory of Mind in Nonhuman Primates", *Behavioral and Brain Sciences* 21, pp. 101-148.
- Hurley, S. & Nudd, M. (eds.) (2006). *Rational Animals?* (New York: Oxford University Press).
- Krebs, J. & Dawkins, R. (1984). "Animal signals: Mind-reading and manipulation", in Krebs, J. & Davies, N. (eds.) *Behavioral Ecology: An Evolutionary Approach, 2nd Edition* (Sunderland, MA: Sinauer), pp. 380-402.
- Leavens, D., Hopkins, W., and Bard, K. (2005). Understanding the Point of Chimpanzee Pointing: Epigenesis and Ecological Validity. *Current Directions in Psychological Science*, 14, pp. 185-189.
- Leavens, D. and Hopkins, W. (1998). "Intentional Communication by Chimpanzees: A Cross-Sectional Study of the Use of Referential Gestures". *Developmental Psychology*, 34, pp. 813-822.
- Lurz, R. (2011). *Mindreading Animals*. (Cambridge, Mass.: Cambridge University Press).
- Lurz, R. (ed.) (2009). *The Philosophy of Animal Minds* (Cambridge, Mass.: Cambridge University Press).
- Manser, M., Seyfarth, R., and Cheney, D. (2002) "Suricate Alarm Calls Signal Predator Class and Urgency", *Trends in Cognitive Science*, 6, pp. 55-57.
- Marler, P. (2004). "Bird Calls: a Cornucopia for Communication", in P. Marler and H. Slabbegoor (eds.) *Nature's Music: The Science of Birdsong* (Elsevier), pp. 132-177.
- _____ (1999). "On Innateness: Are Sparrow Songs 'Learned' or 'Innate'?", in Hauser and Konishi (eds.), pp. 293-318.
- Maynard Smith, J., and Harper, D. (2003). *Animal Signals* (Oxford: Oxford University Press).
- McDowell, J. (1994). *Mind and World* (Cambridge, MA: Harvard University Press).
- _____ (1983). "Meaning, Communication, and Knowledge", in Zak van Straaten (ed.), *Philosophical Subjects: Essays on the Work of P. F. Strawson* (Oxford: Clarendon Press), pp. 117-39.
- _____ (2007a). "Response to Dreyfus", *Inquiry*, Vol. 50, No. 4, pp. 366-370.
- _____ (2007b). "What Myth?" *Inquiry*, Vol. 50, No. 4, pp. 338-351.
- Miklosi, A., Topál, J., Csányi, V. (2003). "Comparative Social Cognition: What Can Dogs Teach Us?" *Animal Behaviour* 67, no. 6, pp. 995-1004.
- _____ (2000). "Intentional Behavior in Dog-Human Communication: an experimental analysis of 'showing' behavior in the dog", *Animal Cognition*, 3, pp. 159-166.
- Millikan, R. (2004). "On Reading Signs: Some Differences between Us and the Others", in D. Kimbrough Oller and Ulrike Griebel, editors, *Evolution of Communication Systems: A Comparative Approach* (Cambridge, MA: MIT Press), pp. 15-30.
- Müller, M. (1887). *Lectures on the Science of Thoughts* (London: Longman, Green, and Co.)
- _____ (1862). *Lectures on the Science of Language*, 3rd edition. (London: Longman, Green, Longman and Roberts).
- Nowicki, S., Searcy, W. A., and Peters, S. (2002). "Quality of Song Learning Affects Female Response to Male Bird Song", *Proceedings of the Royal Society of London, B* 269, pp. 1949-1954.
- Origi, G. and Sperber, D. (2000). "Evolution, Communication, and the Proper Function of Language", in Carruthers, P. and Chamberlain, A. (eds.) *Evolution and the Human Mind: Language, Modularity and Social Cognition*. (Cambridge University Press), pp. 140-169.

- Pack, A. and Herman, L. (2006). "Dolphin Social Cognition and Joint Attention: Our Current Understanding", *Annual Review of Psychology* 32, pp. 443-460.
- Penn D., Holyoak K., Povinelli D. (2008). "Darwin's Mistake: Explaining the Continuity and Discontinuity Between Human and Nonhuman Minds", *Behavioral and Brain Sciences* 31, pp. 109–178.
- Penn, D., and Povinelli, D. (2007). "On the Lack of Evidence that Non-Human Animals Possess Anything Remotely Resembling a "Theory of Mind"", *Philosophical Transactions of the Royal Society B* 362, pp. 731-744.
- Pfister, J., (2010). "Communicative Signs Meaning Naturally", *Pragmatics & Cognition* 18:1, pp. 40-67.
- Povinelli, D. and Vonk, J. (2004). "We Don't Need a Microscope to Explore the Chimpanzee's Mind", *Mind and Language* 19, pp. 1-28.
- _____ (2003). "Chimpanzee Minds: Suspiciously Human?", *Trends in Cognitive Science* 7, pp. 157-160.
- Reboul, A., (2007). "Does the Gricean Distinction Between Natural and Non-natural Meaning Exhaustively Account for All Instances of Communication?", *Pragmatics & Cognition* 15/2, pp. 253-276.
- Rosenberg, J. (2007) *Wilfrid Sellars: Fusing the Images* (Oxford: Oxford University Press)
- Sellars, W. (1981) 'Mental Events', *Philosophical Studies*, 39: 325-45.
- _____ (1969) 'Language as Thought and as Communication', *Philosophy and Phenomenological Research* 29: 506-527.
- _____ (1956) "Empiricism and the Philosophy of Mind" in Herbert Feigl and Michael S. (eds.), *Minnesota Studies in the Philosophy of Science, Volume I* (University of Minnesota Press), 253-329.
- Seyfarth, R. M. and Cheney, D. (2003a). "Signalers and Receivers in Animal Communication" *Annual Review of Psychology* 54, pp. 145-173.
- _____ (2003b). "Meaning and Emotion in Animal Vocalizations", *Annals of the NY Academy of Science* 1000, pp. 32-55.
- Snowdon, C. T. (2008). "Contextually Flexible Communication in Nonhuman Primates", in *Evolution of Communicative Flexibility: Complexity, Creativity, and Adaptability in Human and Animal Communication* (Cambridge, Mass.: MIT Press), pp. 71-91.
- Sperber, D. (2000). "Metarepresentations in an Evolutionary Perspective", in Sperber (ed.) *Metarepresentations: A Multidisciplinary Perspective* (Oxford: OUP).
- Sperber, D. and Wilson, D. (2002). "Pragmatics, Modularity and Mindreading", *Mind and Language* 17, pp. 3-23.
- _____, (1995). *Relevance: Communication and Cognition*. 2nd edition. (Oxford: Basil Blackwell).
- Stroud, B. (1996). "The Charm of Naturalism", *Proceedings and Addresses of the American Philosophical Association* 70 (2), pp. 43 - 55.
- Tomasello, M. (2008). *Origins of Human Communication* (Bradford Books).
- _____, (2005). "Uniquely human cognition is a product of human culture", in S. Levinson & Pierre Jaisson (Eds.), *Evolution and Culture* (Cambridge: MIT Press).

- _____, (1994). “Can an Ape Understand a Sentence?”, *Language and Communication*, Vol. 14 No. 4, pp. 377-390.
- Tormey, A. (1971). *The Concept of Expression* (Princeton NJ: Princeton University Press).
- Vihman and DePaolis (2001). “The Role of Mimesis in Infant Language Development: Evidence for Phylogeny?”, in Knight, C., Studdert-Kennedy, M., and Hurford, J., *The Evolutionary Emergence of Language* (Cambridge: Cambridge University Press), pp. 130-145.
- Wharton, Tim (2009). *Pragmatics and Non-Verbal Communication* (Cambridge University Press)
- _____. (2003). “Natural Pragmatics and Natural Codes”, *Mind & Language* 18, pp. 447-477.
- Whiten, A. (1996) “Imitation, pretense, and mindreading: Secondary representation in comparative primatology and developmental psychology?” in A. Russon, K. Bard, and S. Parker (eds.) *Reaching into Thought: The Minds of the Great Apes*, pp. 300-324.
- Wilson, D. (2005). “New Directions for Research on Pragmatics and modularity”, *Lingua* 115, pp. 1129-46.
- Zuberbühler, K. (2000). “Referential Labeling in Wild Diana Monkeys”, *Animal Behavior* 59, pp. 917-927.

Endnotes

- ¹ See below.
- ² For two recent volumes, see Hurley & Nudd (2006) and Lurz (2009).
- ³ Terminological point: I’m not here using the label “skepticism” to contrast with “dogmatism”. As we’ll see, my continuity skeptic is so-labeled for raising a systematic doubt about both our commonsense and the scientific views concerning our relation to the beasts, and consequently seeks to jettison a certain set of philosophical/explanatory projects. See section 2 below.
- ⁴ What is entailed by embracing naturalism is, however, far from clear. For discussion, see Stroud (1996).
- ⁵ For a small sample of specific claims regarding telltale differences between humans and nonhuman animals, see Whiten (1996), Bermudez (2003), Millikan (2004), Carruthers (2008), Tomasello (2005), and Penn *et. al.* (2008).
- ⁶ For a very insightful exposition of Grice’s account and the philosophical motivations for it – one that is particularly helpful when considering its relevance to animal communication – see Bennett (1976).
- ⁷ See Blackburn (1984: Ch. 4).
- ⁸ Grice’s conception of nonnatural meaning as essentially involving the overt, intentional provision and inferential decipherment of intention-dependent evidence, as well as his well-known account of implicatures in (1975), have provided the philosophical underpinning for many recent discussions of dis/continuity between nonhuman and human communication. This is in good part due to Sperber and Wilson’s influential (1995). Origgi and Sperber (2000) have appealed to the Gricean conception to support a sharp discontinuity between nonhuman ‘code-based’ communication and human intentional-inferential communication. Sperber (2000), Sperber and Wilson (2002), Wilson (2005), however, appear to depart from some of the key Gricean ideas; for discussion and additional references, see AUTHOR (under review.)
- ⁹ For recent discussions and references, see Wharton (2003), Reboul (2007), and Pfister (2010).

¹⁰ As my aim here is not exegetical, I provide a very selective sample of relevant citations below, without pretending to do justice to the richness and subtlety of the works cited.

¹¹ Regarding mentality more generally McDowell says that “a merely animal life ... is led not in the world, but only in an environment” and contrast with *our* lives, whose “shape ... is no longer determined by immediate biological forces” (1994: 115). But, he reassures us that our “being in charge of our lives” should not be understood to mark “a transcendence of biology” (*op. cit.*; see below). For more recent discussion and responses to objections, see McDowell’s (2007a) and (2007b).

¹² McDowell thinks we must resist the “temptation to think it must be possible to isolate what we have in common with them by stripping off what is special about us” in virtue of our conceptual abilities, so as “to arrive at a residue that we can recognize as what figures in the perceptual lives of mere animals” (1994: 64).

¹³ Indeed, Bilgrami limits his constitutivist claim to ‘judgment-sensitive’ states that “rationalize action” and acknowledges that we do share with nonhuman animals and pre-reflective children *some* states, such as brute sensations, passing thoughts and perceptions, intrusive cravings and impulsive wants or irrational beliefs. (He does, however, relegate the latter to a second class, ‘lower case’ mental status. See his 2006: esp. Ch. 3 and 6.) For critical discussion of constitutivist views of our mentality, with their commitment to ‘Mental-mental’ dualism, see my AUTHOR 4 (Ch.), AUTHOR 7, and AUTHOR 9.

¹⁴ For the different ‘orders’, see Sellars (1956), (1981). For a recent critique of Brandom’s view from an evolution-friendly philosophical perspective, see Dennett (2010).

¹⁵ We return to the theme of irreducibility when discussing Davidson’s continuity skepticism below.

¹⁶ For discussion, and a comparison between meaning skepticism and external world skepticism, see AUTHOR 1.

¹⁷ There are versions of continuity skepticism that are more directly informed by empirical studies of human and nonhuman behavior and cognition. For a small sample, see e.g. Chomsky (1965), (1975) (though see his (2010) as well as Hauser, Chomsky, and Fitch (2002) for some reevaluation), Heyes (1998), Povinelli and Vonk (2003), (2004), Anderson (2004), Tomasello (2005), (2008), and Penn, *et. al.* (2008).

¹⁸ The discussion in this section draws on (AUTHORS 11).

¹⁹ See e.g. Davidson “Thought and Talk” (2001b: 156-171). For an early discussion of the interdependence of thought and language, the reader is invited to look at Müller (1862) and (1887).

²⁰ See, e.g. Davidson (2001a), (2001b) and (2004).

²¹ For an earlier articulation of this claim about what distinguishes language from communication systems such as bee dances, see Bennett (1964: 87f.).

²² Brandom and McDowell agree with Davidson that even perceptual thought, if it is to enjoy objectivity, requires reflective grasp of the contrast between subjective and objective (though Brandom assign a much more central role than McDowell to the role *community* in grounding the relevant norms). See Brandom (1994: 48, 63) and McDowell (1994: 114ff.). For a recent criticism of this view of objective thought as betraying a thoroughly misguided “Individualist Representationalism”, see Burge (2010: Ch. 2). Burge’s work is a sustained defense of a (synchronic) continuity view on which even arthropods are capable of objective perceptual representations. In AUTHORS (in progress), we evaluate the extent to which Burge defense of continuity succeeds in engaging Davidson’s skepticism.

²³ See Davidson (2001c: 11-13), (2001a: 121), and See Eilan (2005: 9) for a helpful interpretation of this point.

²⁴ Also see, Davidson (2001a: 105-106; 131), (2001d: 13), (2004: 140-141). And compare McDowell (1994: 114f.), who argues that a perceiver’s *grasp* of the difference between subjective and objective is required to render her environment “more than a succession of problems and opportunities”, and to allow both a [subjective] self and an [objective] world to “be in view”.

²⁵ For more on the role language plays, see especially (2001a: 111ff., and 119ff.). Unlike Quine, Davidson is not a wholesale skeptic about the legitimate application of the intentional idiom. For him, once mutual linguistic interpretation is in place, there *is* room for genuine rule-following, conceptualization, and the possibility of genuine error and disagreement.

²⁶ The philosophical significance of the relevant stages is discussed by several articles in Eilan *et. al.* (2005); see, especially, the articles by Eilan, Heal, Reddy, Gomez, Hobson, and Roessler.

²⁷ See Eilan *et. al.* 2005: 18 (and 2005: 1 for additional citations).

²⁸ For Davidson's view on the ontogenetic development of language, see (1999: 308-309). See also (2001d: 13f.).

²⁹ For discussion of Grice's Myth and its significance for naturalizing semantics, see AUTHOR. AUTHORS 10, on which the present discussion draws, revisits the Myth in connection with continuity. See also Wharton (2009: Ch. 8).

³⁰ See, e.g., Davidson's "Rational Animals" and "The Emergence of Thought" in his (2001a).

Strictly speaking, Grice's scenario fails to be properly triangular, since neither X's behavior nor his audience's is directed toward an external object that serves as common ground for their intersubjective interactions. That problem, however, can be avoided by beginning with some 'world-directed' expressive utterances, instead of a yelp of pain (see AUTHORS 11), and see below.

³¹ I'm here drawing on Fitch's presentation in "Musical Protolanguage: Darwin's Theory of Language Evolution Revisited" <http://www.st-andrews.ac.uk/~wtsf/DarwinLanguageEvolution.html>

³² See Fitch (2010: Ch. 14).

³³ Specifically, he cites the fact that birds, like humans, have instinctive calls and an instinct to sing, but they *learn* their songs, and the fact that songbirds exhibit 'subsong', which is analogous to infant babbling, as well as having regional dialects. These analogies have been studied and substantiated by contemporary ethologists and neuroscientists. See e.g. Marler (1999) and Nowicki *et. al.* (2002.)

³⁴ Darwin was thus embracing all three major views of word origins popular amongst his contemporaries (onomatopoeia, gesture replacement, and controlled imitation of emotional vocalizations). See Fitch (2010: Ch. 11).

³⁵ See Fitch (2010: Ch. 9).

³⁶ See, e.g., Krebs and Dawkins (1984), (Origg and Sperber (2000), Wilson (2005), Cheney and Seyfarth (2007), Hurford (2007 *passim*), Tomasello (2008 *passim*), Fitch (2010). The Gricean conceptualization of the task facing theories of language evolution is the subject of AUTHOR (under review).

³⁷ Hurford goes on to consider, and reject, Davidson's arguments to the contrary (2007: 9ff.)

³⁸ And their assumption is that finding synchronic, comparative evidence for such capacities is necessary for removing a major evolutionary mystery concerning language evolution; hence the prevalent current use of the so-called *comparative method* to determine the active or latent presence of the relevant capacities in extant species of nonhuman animals by studying them both in the wild and in captivity. For discussion, see e.g. Krebs and Dawkins (1984), Gomez (1994), Camaioni (1997), Tomasello (1994) and (2008), Seyfarth and Cheney (2003a), Pack and Herman (2006), Penn and Povinelli (2007), Fitch (2010: §3.8, Ch. 4).

³⁹ In AUTHOR (under review), I develop further the claims to follow and provide support from recent literature on animal communication. My main aim here is to bring these ideas to bear on the challenge posed by continuity skepticism.

⁴⁰ For some descriptions and analyses of facial, vocal, and gestural expressions, see e.g. Leavens and Hopkins (1998), Hauser (1999), Miklosi *et. al.* (2000), Gomez (1990), (1994), (1996), (1998b), (2004), Leavens *et. al.* (2005), Pack and Herman (2006), (Cheney and Seyfarth (2007). A must-read is Darwin (1872).

There is a degree of heterogeneity in the class of behaviors I'm including here. I am relying on a measure of pre-theoretic understanding, without assuming that it can take the place of proper (future) theorizing.

⁴¹ See, for example, Grice (1957), Alston (1965), Bennett (1976). But see also, in the animal communication literature, e.g. Maynard Smith and Harper (2003: esp. Ch.7), Anderson (2004: Ch. 2 and *passim*), and Fitch (2010: Ch. 4 and *passim*).

⁴² For the account of expressive behavior that follows, see AUTHOR 4. See also Green (2007) (but see AUTHOR 10 for some reservations). And see AUTHORS 10.

⁴³ For the distinction between semantic and mental-state expression see (AUTHOR 4, 10), and see Sellars (1969). AUTHOR 4 distinguishes between an *act* of expressing and its *product*, on the one hand, and between the *process* and *vehicle* of expressing, and defends a 'neo-expressivist' construal, according to which the avowal: "I'm so glad to see you!" m-expresses the speaker's joy at seeing the addressee, using a vehicle that s-expresses the self-ascriptive proposition (that the speaker is glad to see her addressee) (see especially Ch.s 6-8).

⁴⁴ Contrast McIninch *et. al.* (2009), who use the present framework to argue that animals' alarm calls and other vocalizations do express propositions.

⁴⁵ For an excellent discussion, see Mayard Smith and Harper (2003).

⁴⁶ See Griffith (1992).

⁴⁷ For discussion of play bows, see Miklosi *et. al.* (2004).

⁴⁸ For an early occurrence of the idea that expressive behavior shows what's within while pointing to what's without, see Alan Tormey (1971: 27f. and *passim*). Note that the Janus-face character discussed here is different from the dual force ascribed by Millikan (2002), (2004) to 'pushmi-pullyu' representations. While Millikan helpfully draws attention to the fact that many communicative signals of animals are best understood as at once indicative and imperative in force (a hen's food call says at once: "Food here" and "Come get it!"), her discussion focuses exclusively on the *semantic content* of the calls; she does not take account of the expressive dimension of the signaling acts.

⁴⁹ However, in keeping with the broadly Gricean perspective they take in (2003a), they conclude that animal vocalizations still "differ from language in at least one fundamental respect. Although listeners acquire rich information from a caller's vocalization, callers do not, in the human sense, intend to provide it. Listeners acquire information as an inadvertent consequence of signaler behavior." (2003b: 33f.)

⁵⁰ See Manser *et. al.* (2002) and Seyfarth and Cheney (2003b).

⁵¹ See Cheney and Seyfarth (2007: 221). And see Hurford (2007).

⁵² There is considerable experimental evidence that the production of alarm and other calls, as well as other expressively communicative gestures, can be brought under control in all primates, many mammals, and even birds; there is also evidence of various flexible 'audience effects' in the production of calls in a number of species. (See Fitch 2010: §4.9.3, and Snowdon 2008.)

⁵³ To illustrate, suppose 'a' refers to a, 'b' to b, italicization represents something as red, bold font represents something as blue and one symbol being left of the other represents its being larger than the other. On Sellars suggestion, the complex symbol "***ab***" shares the *propositional* but not the *logical* (composition) form of the sentence "Red **a** is larger than blue **b**". (See Sellars (1981: 336ff.) and Rosenberg (2007: 105ff.).

⁵⁴ Tormey (1971: 10f.) speaks, somewhat misleadingly, of the 'prepositional *objects*' of mental states such as being fascinated *by* centaurs, apprehensive *over* money, angry *with* the cook, or afraid *of* the dark as designating their intentional objects.

In some places Davidson suggests that having *any* intentional state requires conceptualization of the intentional object, which, in turn, presupposes having lots of propositional beliefs. (See, e.g. 2001a: 124; and compare Brandom 2000: *passim*.) This argument clearly rests on a rather specific view of human concepts as

devices of classification that must be backed up by general beliefs (a similar inferentialist view is explicitly endorsed in Brandom (2009)). For a telling critique see Millikan (2000).

⁵⁵ For some support, see Gomez (1998a) and (1998b).

⁵⁶ The formulation below diverges in certain way from that found in AUTHORS 10.

⁵⁷ See e.g. McDowell (1983), Bennett (1976: §62), Davidson (2001a: 129). And see e.g. Anderson (2004: Ch.s 2, 7 and *passim*), Hurford (2007: Ch. 6 and *passim*), Fitch (2010, esp. Chs. 4 and 13).

⁵⁸ What follows is a brief summary of relevant sections of AUTHORS 11.

⁵⁹ We need not attribute to S1 and S2 the *concept* PREDATOR, but only whatever discriminatory dispositions vis-à-vis O — that Davidson allows subjects to have in pure triangulation. See again, e.g., Davidson (2001c: 12-13), (2001a: 117ff).

⁶⁰ See e.g. Gomez (1994), (1996), (1998a), (1998b), (2005) Byrne and Whiten (1991), Whiten (1996), and Hare et. al. (2001), Hobson in Eilan *et. al.* (2005), Bermudez (2009). Several of these authors offer congenial construals of intersubjective interactions in perception-like terms (as opposed to the terms of so-called ‘theory of mind’), not only among animals and prelinguistic children but also among adult human beings. See Lurz (2011) for discussion of existing experiments and proposed experimental protocols for testing the ‘mindreading’ abilities of animals and prelinguistic children.

⁶¹ Davidson, for example, does sometimes suggest that it may be only ignorance that prevents us from explaining the behavior of non-linguistic creatures in non-intentional vocabulary: “it is only necessary to reflect that someone might easily have no better or alternative way of explaining the movements of a heat-seeking missile than to suppose the missile wanted to destroy an airplane and believed it could by moving in the way it was observed to move.” (2001a, 102).

⁶² See e.g. Zuberbühler (2000) and Cheney and Seyfarth (2007).

⁶³ For a very congenial characterization of a similar trajectory in ontogeny (and implications for phylogeny), see Vihman and DePaolis (2001).

⁶⁴ For two recent notable examples, see Carruthers (2004), (2009) and Burge (2010).

⁶⁵ [THANKS to co-authors, RAs, discussions/comments, and audiences.]