Representations of the world: Memories, perceptions, beliefs, intentions, and plans

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Abstract

'Mental states' are retheorized from the standpoint of social statuses (qua commitments and entitlements to signify and interpret in particular ways) and speech acts (qua signs with propositional contents). Using ideas developed in 'The semiotic stance' (2005a), it theorizes five interrelated semiotic processes that are usually understood in a psychological idiom: memories, perceptions, beliefs, intentions, and plans. It uses this theory to account for the key features of human-specific modes of intentionality (or 'theory of mind'), as well as the key dimensions along which culture-specific modes of intentionality may vary (or 'ethnopsychologies'). And it theorizes 'emotion' in terms of a framework that bridges the distinction between social constructions and natural kinds.

1. Introduction

Intentionality is usually understood to be that quality of mental states whereby they are directed at objects or states of affairs. For example, Brentano, one of the first to theorize this quality, thought that each mental state includes an 'object within itself' (1995 [1874]: 88), but not necessarily corresponding to something existing outside of the mind. In his own words, '[i]n presentation something is presented, in judgment something is affirmed or denied, in love loved, in hate hated, in desire desired and so on' (1995 [1874]: 88). Famously, Brentano's notion of intentionality was a major influence on Frege and Husserl; Frege and Husserl were major influences on Wittgenstein and Heidegger, respectively; and Wittgenstein and Heidegger were major influences on analytic and continental philosophy more generally (see Dummett 1994). In short, many of the most important categories and cleavages within modern philosophy can be traced back to intentionality in one guise or another.

Semiotica 162–1/4 (2006), 73–125 0037–1998/06/0162–0073
DOI 10.1515/SEM.2006.074
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Modern scholars usually take Brentano's *object within itself* to be some kind of propositional content, which may represent some state of affairs.[1] And the entities that exhibit intentionality (or express propositional contents more generally) are taken to be either psychological entities (aka mental states) or linguistic entities (aka speech acts). Besides having propositional contents, speech acts and mental states have propositional modes — or ways of relating to the propositional contents in question. Thus, just as one may *assert*, *promise*, and *forgive* in the case of speech acts, one may *hope*, *believe*, and *want* in the case of mental states. (Note then that the terms 'speech act' and 'mental state' are used to refer to either the propositional mode alone, or both the propositional mode and content together.) While philosophers seem to agree that the propositional contents of mental states and speech acts are equivalent, there are long-standing debates regarding which kind of intentionality — the psychological kind or the linguistic kind — is originary and which is derivative (so far as it is inherited from the kind that is originary).[2] Indeed, there are even degrees of derivativeness. For example, in the case of linguistic intentionality, the intentionality of written language might be taken to be derivative of the intentionality of spoken language. And in the case of psychological intentionality, the intentionality of intentions and perceptions might be taken to be derivative of the intentionality of beliefs.[3]

In addition to keeping distinct the notions of proposition and state of affairs, propositional mode and propositional content, speech act and mental state, and originary and derivative intentionality, there are a number of other key distinctions to make. First, keep distinct the notions of intentionality (as just characterized) and intentions (as purposes with propositional content, as characterized in 'Residence in the world'). Intentions are just one species of intentionality, taking their place alongside other species such as belief, desire, perception, and so forth. Second, intersecting the philosophical literature on intentionality is a more recent literature on theory of mind and ethnopsychology, stemming from disciplines like psychology, primatology, and anthropology (see, for example, Lillard 1998; Premack and Woodruff 1978). If theory of mind refers to cross-cultural ways of understanding others in terms of intentionality, ethnopsychology refers to culture-specific ways of understanding others in terms of intentionality (where, owing to the disciplines that take it up, intentionality is usually understood in terms of mental states and not speech acts). And third, keep distinct the capacity to have one's behavior understood in term of intentionality (regardless of why or how one actually behaves), and the capacity to understand others' behavior in terms of intentionality (regardless of why or how they actually behave). For example, many of us might be inclined to understand the behavior of a rabbit

(or robot) in an intentional idiom, and understand it predictably well (say, in term of wanting carrots, fearing predators, envying the Easter Bunny, and so forth). However, most of us do not expect a rabbit (or robot) to understand others' behavior, including the behavior of its conspecifics, in an intentional idiom — Bugs Bunny (and C3PO) aside.

In this essay, the notion of an intentional status is put forth to replace the notion of a mental state. In particular, an intentional status is a set of commitments and entitlements to signify and interpret in particular ways: normative ways of speaking and acting attendant upon being a certain sort of person — a believer that the earth is flat, a lover of dogs, one who intends to become a card shark, and so forth. An intentional role is any enactment of that intentional status: actually putting one or more of those commitments and entitlements into effect; or speaking and acting in a way that conforms with one's intentional status. And an attitude is just another's interpretant of one's status by way of having perceived one's roles: I know you are afraid of dogs, as an intentional status, insofar as I have seen you act like someone afraid of dogs; and as a function of this knowledge (of your status through your role), I come to expect you to behave in certain ways — and perhaps sanction your behavior as a function of those expectations. In this way, an intentional status is treated as a special kind of social status: one which involves a *mode of commitment* (which is a semiotic way of accounting for propositional modes, à la belief and desire) and a *content of commitment* (which is a semiotic way of accounting for propositional contents, à la what is believed and what is desired). In short, so-called 'mental states' are theorized in terms of social statuses, on the one hand, and speech acts, on the other.

This terminology is introduced to reframe seemingly 'psychological' questions in a social and semiotic idiom. If assuming an 'intentional stance' involves using an intentional idiom to understand behavior (Dennett 1978), assuming a *semiotic stance* involves using a semiotic idiom to understand behavior. This essay demonstrates how 'The semiotic stance' accounts for the intentional stance more generally.

Whatever the inclination of scholars (intentional status versus mental state, semiotic stance versus intentional stance), everyone agrees that the directedness of any entity (i.e., an intentional status, or semiotic process more generally) is only meaningful in the context of other directed entities. As Haugeland puts it (1998: 130), at some level of description there must be a non-accidental larger pattern within which the directedness of any particular entity makes sense. In the case of non-propositional modes of semiosis, the non-accidental larger pattern was called the *residential whole*. In the case of propositional modes of semiosis, it may be called

the *representational whole*. If the key constituents of the residential whole were affordances (who objects are purchases), instruments (functions), actions (purposes), roles (statuses), and identities (values), the key constituents of the representational whole are intentional statuses — loosely correlated with what are usually called memories, perceptions, beliefs, intentions, and plans (whose emblematic roles are various kinds of speech acts and non-verbal behaviors).[4]

Like the constituents of the residential whole, the constituents of the representational whole are holistically interrelated by various modes of coherence. In particular, each is *inferentially* articulated relative to other constituents of the representational whole (being able to stand as a reason or stand in need of a reason); and each is *indexically* articulated relative to other constituents of the residential whole (being causal of, or caused by, such constituents). For example, and loosely speaking: beliefs may justify and be justified by other beliefs; perceptions may justify beliefs and be caused by states of affairs; and intentions may be justified by beliefs and be causal of states of affairs. Residence in the world and representations of the world, taken together as irreducibly interrelated, provide a social and semiotic theory of being-in-the-world.

Besides the large-scale move from the intentional stance to 'The semiotic stance,' and from mental states to intentional statuses, there are a number of general arguments put forth in this essay. First, as semiosis must primarily be understood in terms of sign-interpret relations rather than sign-object relations, intentionality should primarily be understood in terms of inference rather than representation. In this regard, the account of inferentialism put forth in Brandom (1994) plays a large role in section 5. And in the background of this essay are philosophers like Kant, Frege, Wittgenstein, Sellars, and Dummett. Second, rather than coming to inferentialism through analytic philosophy, this essay comes to it through American pragmatism and Boasian anthropology. In this regard, this essay continues with the model of semiosis that was developed in 'The semiotic stance,' and which was inspired by Peirce, Mead, Linton, Goffman, and linguistic anthropology more generally. Third, rather than offer an account of propositionally contentful signs and either ignore non-propositionally contentful signs, or state that they are important without offering a complementary account, this essays builds on the essay entitled 'Residence in the world.' Fourth, rather than argue about intentionality in ahistorical and/or species-specific terms, as philosophers tend to do, this essay follows scholars like Vygotsky and Tomasello in keeping distinct interactions among processes that occur on three different timescales: phylogenetic (species-level mediation), historical (culture-level mediation), and ontogenetic (individual-level mediation).[5] And finally, the

accounts of residence in the world and representations of the world need to be related to agency and selfhood more generally, as discussed in 'Agent, person, subject, self.'

With these assumptions and stakes in mind, the theory of intentionality to be presented in this essay may be understood as seven modes of thirdness in which any intentional status is implicated.[6] Section 1 shows how an intentional status may be understood as an ultimate (representational) interpretant: any number of different kinds of sign events can lead to it (constituting its 'roots') or follow from it (constituting its 'fruits'). Part of what it means, then, to understand the behavior of others as intentional, to 'read others' minds,' is to be able to infer fruits from roots, by reference to the intentional statuses that mediate between them (and vice versa).

Section 2 discusses the phylogenetic, historical, and ontogenetic mediation of intentional statuses. Using the work of Michael Tomasello and colleagues, it outlines the cultural and cognitive conditions for, and consequences of, this mind-reading — or rather sign-interpreting — ability.

Section 3 shows how an intentional status may be understood as a semiotic object: any number of intentional roles can stand for it (as signs); and any number of intentional attitudes can interpret it. And it theorizes relatively emblematic roles of intentional statuses: modes of behavior, such as facial expressions and speech acts, which provide relatively incontrovertible evidence of one's intentional statuses.

Section 4 discusses the grammatical properties of utterances used to ascribe intentional statuses, and frames these in terms of their iconic, indexical, and symbolic properties. It argues that (such relatively emblematic roles of) intentional statuses may be cross-linguistically ordered and categorized as a function of the ontological disjuncture between the intentional status and the state of affairs it represents: for the example, the extent to which an event of believing or desiring is causally implicated in the event believed or desired.

Section 5 shows the inferential and indexical articulation of intentional statuses with propositional content. And it offers a detailed account of the five most fundamental intentional statuses: memories, perceptions, beliefs, intentions, and plans.

Section 6 shows how modes of commitment acquire propositional content through intentional status predicates (ISPs) that refer to them (e.g., words like 'believe,' 'perceive' and 'intend'); and it details how these ISPs allow speakers both to predicate intentional statuses of people (e.g., 'John believes she'll go') and to predicate properties of intentional statuses (e.g., 'belief is a weak form of knowledge').

Section 7 shows how intentional statuses become implicated in epistemes that allow them to be the objects of empirical investigations, theoretical representations, and practical interventions.

And section 8 shows how the phenomena currently grouped under the term 'emotion' can be understood relative to the foregoing framework.

2. Antecedent sign events, consequent sign events, and mediating embodied signs

In 'The semiotic stance,' it was argued that many interpretants are *ultimate interpretants*: they involve a change in status, where status is understood as a set of commitments and entitlements to signify and interpret in particular ways (as evinced in the sanctioning practices of a community and as embodied in the dispositions of its members). Unlike most interpretants, such ultimate interpretants are not signs that stand for something else; rather, they are dispositions to signify and interpret. And insofar as they are not signs that stand for something else, but merely dispositions to signify and interpret, they are 'invisible' — being known only through the signs that *lead to* them (insofar as they are interpretants), or through the patterned modes of signifying and interpreting that *follow from* them (insofar as they are dispositions to signify and interpret).[7] Using Colapietro's metaphor (1989), the underlying idea is that ultimate interpretants have both roots and fruits.

These ultimate interpretants were also called *embodied signs* to stress that they involved thirdness (like signs more generally), but that they were non-sensible (unlike signs more generally). Examples were offered such as social statuses (being a mother or banker) and intentional statuses (believing god is dead or intending to grow a large mustache).[8] And the idea of *semiotic framing* was put forth: on the one hand, sign events may be understood to lead to, and follow from, embodied signs; and on the other hand, embodied signs may be understood to lead to, and follow from, sign events. That is, one can focus on relatively public sign events (such as speech acts) that lead to or follow from relative private embodied signs (such as social and intentional statuses); or, inverting the frame, one can focus on relatively private embodied signs that lead to or follow from relatively public sign events.

The two views are equivalent, like the two perspectives of a Necker cube, but the former focuses on non-sensible entities being mediated through sensible events; and the latter focuses on sensible events being mediated through non-sensible entities. It may now be seen that semiotic framing allows one to focus on intentional statuses (the non-sensible

entities) or on speech acts (the sensible events) — or, generalizing to non-propositional semiosis, semiotic framing allows one to focus on either embodied signs or sign events. In short, at this level of analysis, the distinction between 'derivative' and 'originary' intentionality is reduced to a question of semiotic framing, such that to ask which came first — the sign event or the embodied sign (the speech act or the mental state) — is equivalent to asking whether it was the chicken or the egg.

The basic structure of these embodied signs, with their roots and fruits, is shown in figure 1. There is a class of antecedent sign events, or roots (labeled A1, A2, A3, etc.). This is the class of signs events that lead to the embodied sign (so far as it is an interpretant of them). There is a class of consequent sign events, or fruits (labeled C1, C2, C3, etc.). This is the class of sign (and interpretant) events that follow from the embodied sign (so far as it disposes one to signify (and interpret) in particular ways). And there is the non-sensible but inferable mediating variable that links them (M). This is the embodied sign (or intentional status) itself.

To summarize the peculiar features of embodied signs, note the following. The antecedent and consequent sign events are sensible; whereas the mediating variable is non-sensible. The antecedent sign events are prior to the consequent sign events (as presupposed by the terminology). There is no mapping between particular antecedent sign events and particular consequent sign events; there is only a mapping between the class of antecedent sign events and the class of consequent sign events. That is, any antecedent sign event can lead to the mediating variable, and any consequent sign event can follow from the mediating variable (i.e., following either the seeing of a rattlesnake or the hearing of *ssst* could be either the yelling of *snake* or the unholstering of a pistol). The class of antecedent sign events, like the class of consequent sign events, is heterogeneous: the various antecedent sign events, and the various consequent sign events, are not sensible tokens of a common type (i.e., seeing a rattlesnake has very little in common, as a phenomenological experience, with hearing *ssst*).[9] Their commonality as a class is entirely due to their leading to, or following from, the same mediating variable. Thus, to define antecedent sign events as a class, one must necessarily specify the consequent sign events as a class, and the mediating variable between them (and vice versa). There need not be a many-to-many relation between the number of different antecedent events and the number of different consequent events: there may be a many-to-one relation, a one-to-many relation, a few-to-few relation, a few-to-one relation, and so forth. Finally, temporal latency is possible. That is, while the consequent event must follow the antecedent event, it need not follow it instantaneously.[10]

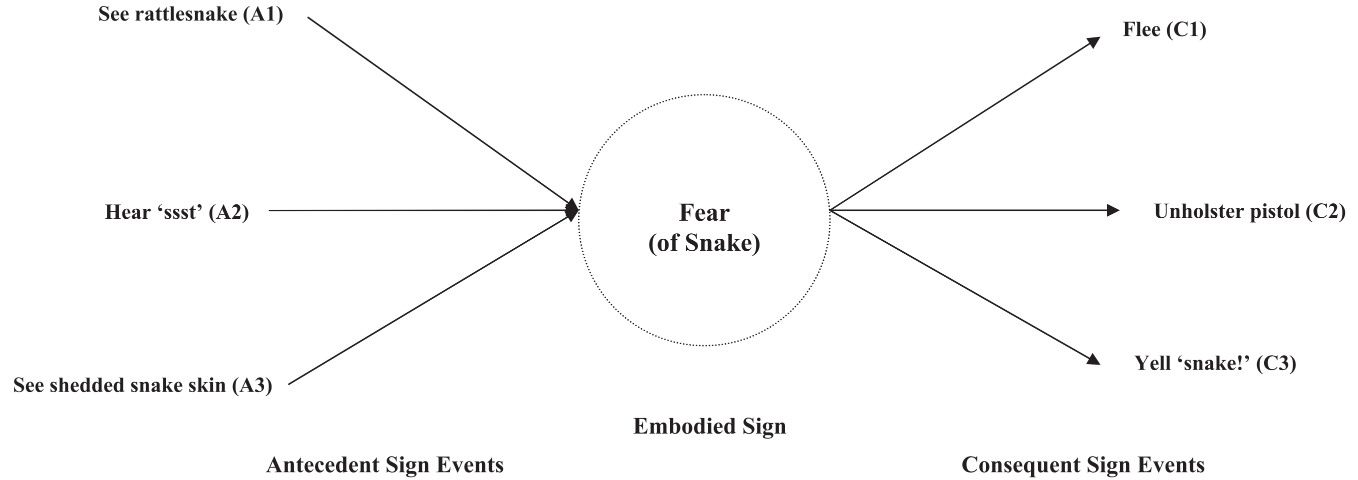

Figure 1. *Antecedent sign events, consequent sign events, and mediating embodied sign. See Tomasello and Call (1997: 37).*

Note how the mediation of antecedent and consequent sign events differs from the pairing of stimuli and responses in the behavioralist idiom. In particular, the class of stimuli, like the class of responses, consists of sensible tokens of a common type. Any response must immediately follow any stimulus. And there is no need to postulate a mediating variable: the stimuli and the responses are all there is. For these reasons, the triadic structure of embodied signs begins to look like the dyadic structure of stimulus-response pairing only in the limit that all antecedent sign events are sensibly alike and all consequent sign events are sensibly alike; only in the limit that the consequent sign events immediately follow the antecedent sign events; and only in the limit that no embodied sign (or 'mediating variable') is required to explain the relation.

These embodied signs — also known as ultimate (representational) interpretants, social and intentional statuses, and/or mediating variables — are worth exemplifying in detail. They may be thought of as 'emotions' (in the pre-theoretical sense that will be disavowed in section 8). For example, 'jealousy' as an embodied sign can follow from any number of antecedent sign events (seeing your spouse being intimate with a stranger, reading about your lover's fantasy in his diary), and can lead to any number of consequent sign events (making an appointment with one's analyst, attacking the stranger, berating one's spouse, crying uncontrollably). And 'anger' as an embodied sign can follow from any number of antecedent sign events (reading the headlines, not sleeping, spilling soup), and can lead to any number of consequent sign events (becoming irritated by car alarms, being brusque with the questions of children, taking personal offence at graffiti). As theorized in the 'Residence in the world,' embodied signs may also be thought of as the objects of the constituents of the residential whole: purposes, statuses, and values.[11] Indeed, in the spirit of Aristotle's final cause, William James (1950 [1890]: 6–8) had a prescient understanding of embodied signs that had been cut in half: any number of means may lead one to infer an identical end. Embellishing his famous example, a desire or intention to woo Juliet (as an embodied sign) leads to a relatively heterogeneous class of consequent sign events (ringing the doorbell, knocking on the door, climbing the wall, sending a telegram, waiting for her to come outside, practicing the pole vault, and so on), such that if one of them is frustrated Romeo can try another, and such that an observer of Romeo's actions can explain his many disparate behaviors with a single purpose. And, as will be seen, perceptions, intentions, wishes, memories, beliefs, and plans have very similar structures: any number of sign events can lead to the same intentional status; and any number of sign events can follow from the same intentional status.

The antecedent and consequent sign events of embodied signs may be other embodied signs. This leads to patterns that are reminiscent of the normative pairings between circumstances and behaviors examined in 'The semiotic stance' (for the simple reason that dispositions are the most common kinds of embodied signs). There is *chaining*: an antecedent sign event leads to an embodied sign which leads to a consequent sign event which leads to another embodied sign (as its antecedent sign event). There is *nesting*: an antecedent sign event leads to an embodied sign which leads to another embodied sign which leads to a consequent sign event. There is *feedback*: an antecedent sign event leads to an embodied sign which leads to a consequent sign event which leads to the same embodied sign (as its antecedent event). There is *conditional mediation*: an antecedent sign event leads to an embodied sign only in the context of there already being another embodied sign (and hence another antecedent event). And so on, and so forth. Indeed, one sense of 'thinking' or 'semiotic action' or 'interiority' is really the idea that embodied signs can beget other embodied signs without the necessary mediation of (publicly sensible) antecedent or consequent sign events. Needless to say, these types of patterns make behavior exceptionally complicated, and make interpreting behavior necessarily holistic.

With these examples in mind, it should be noted that there is a major difference between an entity that understands event-sequences in terms of stimulus-response pairings, or secondness, and an entity that understands them in terms of mediating embodied signs, or thirdness. As a mathematical analogy, imagine being given a set of numerical correlations: 1 and 1, 2 and 4, 3 and 9, 4 and 16, and so forth. A non-mathematically inclined person may remember the set of individual pairings, and hence come to expect — quite accurately — that 1 goes with 1, 4 goes with 2, 9 goes with 3, and so forth. In contrast, a mathematically inclined person — one who can infer the mediating function, $y = x^2$, from the set of pairings — is able to predict pairings she has never seen: 25 and 5, 36 and 6, and so forth. The difference between a beast that can note correlations between individual variables, and a beast that can infer functions between types of variables, is analogous to the difference between a beast that can note correlations between individual antecedent events and individual consequent events, and a beast that can infer mediating variables between classes of antecedent events and classes of consequent events. In short, as the non-mathematically inclined is to the mathematically inclined in the realm of variables and functions, 'second-seeing' entities (or behavioralists) are to 'third-seeing' entities (or semioticians) in the realm of sign events and embodied signs. And one suspects that there are differences in individuals, not just differences in species — in the realm of mathematics

and physical causes there are Newtons, and in the realm of intentionality and psychological motivations there are Dostoyevskys.

3. Embodied signs in phylogenetic, historical, and ontogenetic timescales

In the literature on primate cognition, something empirically (but not theoretically) analogous to what are here called embodied signs, have been called 'mediating variables' (Whiten 1993) and/or 'tertiary relations' (Tomasello and Call 1997: 383). While the ideas of these scholars are couched in terms of Aristotle's final cause rather than sociality and semiosis, it is useful to review their general arguments.[12]

The primatologists Tomasello and Call (1997) note that intentionality and causality both involve 'temporally ordered events' (antecedent-consequent relations), where the antecedent event and the consequent event are 'external to the observer,' and where there is 'some inferred intermediary cause or goal that organizes and "explains" the event sequence such that different antecedents may lead to the same consequent . . . and the same antecedent may lead to different consequents in different circumstances' (Tomasello and Call: 1997). Their crucial argument is this: while a non-human primate may understand 'the antecedent-consequent relations among external events in the absence of its own involvement,' it does not 'understand the mediating forces in these external events that explain "why" a particular antecedent-consequent sequence occurs as it does — and these mediating forces are typically not readily observable' (Tomasello 1999: 23). That is, non-human primates cannot infer mediating variables: they cannot understand embodied signs.

In this regard, Tomasello and Call (1997) argue that understanding 'the relevant intermediaries in a particular case enables individuals to devise novel ways of producing the intermediary and thus the end result. That is, in a particular circumstance in which the usual antecedent event is not present or not possible, an organism should in some cases be able to create a different antecedent event leading to the same intermediary and thus to the same result as usual (e.g., creating fear in conspecifics so that they will scatter or creating the movement of a limb so that fruit will fall)' (1997: 390). For example, and in the idiom introduced here, when a purpose is the embodied sign at issue, one can assess it independent of the means used (or controlled behavior undertaken) to realize it, and even independent of its realization (say, in cases of frustrated action). Notwithstanding their inability to infer mediating variables (or understand embodied signs), non-human primate behavior is still exceptionally rich and complicated. Tomasello and Call (1997: 388) argue that this is due to

several interrelated capacities: one, non-human primates understand conspecifics as animate and directed, and hence understand stimulus-response pairs between environmental events and behavioral events; and two, they understand tertiary social relations (as discussed in section 1 of 'The semiotic stance'): not just pecking orders (how ego relates to alter), but ego's ability to infer how one alter relates to another alter, insofar as ego knows how it is related to each of these alters. The complicated behavior enabled by such capacities often looks like an ability to interpret embodied signs; hence, all the anecdotes of monkey mind reading.

While subsequent research has shown that this hypothesized cognitive distinction between human primates and non-human primates is not so clear cut (see Tomasello, Call, and Hare 2003, and references therein), it is still a major distinction. Phrased in terms of embodied signs, and in a more tempered fashion, non-human primates can understand the behavior of conspecifics in terms of pair-wise correspondences between individual antecedent events and individual consequent events; but they are not particularly good at seeing the mediating relation between the class of antecedent events and the class of consequent events. In short, *in terms of understanding the behavior of their conspecifics*, non-human primates are much better behavioralists than they are semioticians.

As noted in the introduction, and as just emphasized, it is important to distinguish between the capacity to have one's behavior understood in an intentional idiom, and the capacity to understand another's behavior in an intentional idiom. In this regard, it is useful to provide a hierarchy of different ways an entity may be understood as understanding the behavior of other entities. The following hierarchy is inspired in part by Tomasello and Call (1997: 190), and in part by Brandom (1994: 4–6) and Sellars (1997 [1956]) — though its categories are taken from 'The semiotic stance.' To understand an entity as *responsive* is to understand it as reacting predictably to changes in its environment: some class of causes leads to some class of effects. A rock, for example, may be understood as responsive (to gravity, wind, and so forth). To understand an entity as *animate* is to understand it as generating its own behavior, or as 'self-moving' as Aristotle called it. To be animate, in a sense, is to be self-responsive. To understand an entity as animate, then, is to not be surprised when it moves on its own accord. To understand an entity as *sentient* is to understand it as both predictably responding to sensible events with behavioral events and predictably causing sensible events with its behavioral events. That is, one expects one-to-one causal relations from the entity to the environment and from the environment to the entity (where the environment can be other such entities): one is not surprised that certain circumstances can lead to changes in its behavior; nor

surprised that certain of its behaviors can lead to changes in circumstance. This is the realm of behavioralism. To understand an entity as *semiotic* is to understand it as having embodied signs which mediate between antecedent sign events and consequent sign events, and hence interpreting sensible events (or antecedent sign events) via embodied signs, and as interpreting embodied signs via sensible events (or consequent sign events). Indeed, there is nothing 'anthropomorphizing' or 'fetishizing' in the fact that humans see animals as having purposes. Rather, animals experience purchasefully and behave purposefully — and any human account of animal behavior must turn on this (even if animals don't understand other animals' behavior as such — and hence don't purposively act to change the purposes of other animals). Finally, to understand an entity as *sapient*, is to understand the embodied signs that organize its behavior as having propositional content, and hence being both indexically related to the world and inferentially related to other embodied signs. This is the realm of the representational whole, and the exemplary embodied signs are perceptions, beliefs, and intentions.

Using this idiom, one can contrast human primates and non-human primates, and infant and non-infant human primates. In particular, non-human primates are *relatively* responsive, animate, sentient, and semiotic; but they only understand other conspecifics as responsive, animate, and sentient. Human primates are *relatively* responsive, animate, sentient, semiotic, and sapient, but only begin to understand other conspecifics as semiotic between nine and twelve months (as evinced in joint-attention), and only begin to understand other conspecifics as sapient between one to three years (as evinced in language use).[13] Human primates also, of course, tend to understand non-human primates and infant humans as responsive, animate, sentient, semiotic (correctly), and sapient (incorrectly). Indeed, the ethnographic record shows that human primates are willing to understand just about every process, natural or cultural, as sapient.[14] And one suspects that, just as humans anthropomorphize non-human primate behavior (treat sentient and semiotic behavior as sapient), non-human primates probably 'simian-pomorphize' human primate behavior (treat sapient and semiotic behavior as sentient). And much of Heidegger's critique of western metaphysics is that it attempts to understand semiosis in terms of sapience, or non-propositional modes of semiosis in terms of propositional modes of semiosis: to understand residence in the world in terms of representations of the world. Attempts to understand the behavior of entities in terms of capacities that are above or below its understanding — thereby bumping it up or down this hierarchy — are part and parcel of what anthropologists call 'fetishization' and 'reification,' respectively.

Tomasello (1999) has argued that the human capacity to see other conspecifics as semiotic (what he calls 'intentional') is a phylogenetic adaptation, and the ability to see other conspecifics as sapient (what he calls 'mental') is the precipitate of this phylogenetic adaptation in conjunction with ontogenetic development in historical time. His hypothesis is quite elegant, and it should be paraphrased in terms of the framework offered here (1999: 10, 48). Human primates have cognitive skills that originated via biological inheritance working in phylogenetic time — in particular, the ability to identify with conspecifics and thereby understand them in semiotic (or 'intentional') terms. That is, human primates can understand the embodied signs of other human primates (in particular, their purposes). With these cognitive skills, and the modes of socialization and sociogenesis they allow, they exploit cultural resources that evolved in historical time — which we might theorize as all the culture-specific constituents of the residential whole (affordances, instruments, actions, roles, and identities) and all the culture-specific constituents of the representational whole (perceptions, memories, beliefs, intentions, and plans). And they do this in ontogenetic time. In particular, benefiting from accumulated historical traditions (i.e., the constituents of the residential and representational wholes), through joint-attention they learn linguistic symbols (and subsequently all the language-specific cognitive resources that such symbols enable: construal, metaphor, displacement, generativity, performativity, etc.), and they come to internalize complicated constructions involving these symbols (and hence acquire dialogic thinking, meta-cognition, and related discourse-based cognitive resources). Broadly speaking, then, it is a theory of intentionality that makes reference to complicated interactions among different processes that are occurring on three separate time-scales (phylogenetic, historical, ontogenetic), and thereby complicates many of the more rarified philosophical arguments regarding 'primary' and 'derivative' intentionality.

4. Intentional statuses, intentional roles, and intentional attitudes

The last two sections focused on embodied signs: the 'invisible forces' that mediate between antecedent sign events and consequent sign events. Using Linton's understanding of status and Peirce's understanding of ultimate (representational) interpretants, they were understood both as a complex kind of interpretant that an antecedent sign event could lead to, and as a complex kind of sign that a consequent sign event could follow from. Indeed, through semiotic framing, they could be understood not only as (embodied) signs, but also as (dynamic) objects and (ultimate)

interpretants. Those embodied signs that seemed the most 'psychological' were gathered together under the term *intentional status*. The basic idea behind roots and fruits, then, is that intentional statuses have all the properties of signs except that they are embodied and private rather than expressed and public. In this section, another related mode of thirdness is taken up: how expressed and public signs stand for these intentional statuses, and give rise to interpretants which may themselves be other intentional statuses. In short, having examined intentional statuses, one may now examine the intentional roles that signify them, and the intentional attitudes that interpret them.

The first thing to notice is that there is no isomorphism between intentional roles and intentional statuses, or between signs and objects. In particular, under the right semiotic frame, the same role (or sign more generally) can stand for many different intentional statuses (or objects more generally), and the same intentional status (or object more generally) can be stood for by many different roles (or signs more generally). For example, an infinite number of behaviors and utterances could be said to index 'disgust' — as its roots or as its fruits: a facial expression, an interjection like *yuck* or *gross*, 'turning up one's nose,' saying 'I'm disgusted,' leaving a room in a hurry, never standing downwind of a particular establishment, never entering a particular part of town, obsessively washing one's hands, using large amounts of perfume, stumbling upon fresh feces, nervously fingering a barf bag, and so on. Indeed, any one of these behaviors or utterances could also index any number of other objects — for example, social statuses like gender, age, class, nationality, and so forth.

As an example in the other direction, one may turn to Q'eqchi'-Maya, a language spoken in Guatemala (see Kockelman 2003a for a full discussion). Here the interjection *chix* is commonly thought to index one's 'disgust' (as an intentional status). However, *chix* also indexes a number of other objects. For example, it may index an object that causes the disgust (e.g., chicken feces, vomit, rotten eggs, and so on), and thereby serve to call another's attention to the offending object. It may index a sign of such a disgusting object (e.g., as another is describing the carcass of a dead dog they found in the river), thereby functioning as a back-channel cue, indexing the speaker's interest in what their interlocutor had just been saying. In such a usage, it often indexes the gender of the speaker as well, being said by women in the context of back-channeling, and thereby signaling that the male speaker should continue speaking. And it may index another's proximity to an object of disgust, and thereby serve as an imperative not to touch the object. In such a usage, it may index the status of the speaker as well, signaling that they are in a care-giver relation to the one who is in proximity to the object of disgust (e.g., a parent

Table 1. *The four dimensions of relatively emblematic roles*

Phenomenological	Relational	Normative	Epistemic
A role which is maximally public (i.e., perceivable and interpretable); and a role which is minimally ambiguous (i.e., one-to-one and onto).	A role which all members of an intentional status have in common; a role by which members of different intentional statuses contrast; and a role of which all members are conscious.	A role which may (only) be expressed by members of a particular intentional status; and a role which must (always) be expressed by members of a particular intentional status.	A role which provides necessary and sufficient criteria for inferring (and/or ascribing) the intentional status in question.

in relation to a child who is about to touch something gross). In short, any behavior or utterance can index an intentional status, and thereby be an intentional role; and any behavior or utterance that seems to index an intentional status, and thereby be an intentional role, can index objects other than the intentional status.

With this lack-of-isomorphism in mind, the following typology of common intentional roles (or signs of intentional statuses) may be developed.[15] The point behind this typology is to begin examining *relatively emblematic intentional roles*. That is, 1) roles which are minimally ambiguous and maximally public; 2) roles which members of an intentional status have in common, by which members of different intentional statuses contrast, and of which all such members are conscious; 3) roles which may only and must always be expressed by members of a particular intentional status; 4) roles which provide necessary and sufficient evidence for inferring or ascribing the intentional status in question. See table 1. Intentional roles which satisfy all of these criteria are maximally emblematic; however, anyone of these criteria, and often several at once, may be relaxed, and still a role is relatively emblematic. Relatively emblematic intentional roles, then, are the semiotic resources we have for dealing with this otherwise lack-of-isomorphism between intentional roles and intentional statuses. They constitute relatively incontrovertible evidence of our intentional statuses.

First, there are signs of modes of commitment (à la propositional modes or 'intentional states') and signs of contents of commitment (à la propositional contents or 'intentional objects'). For example, there are signs that indicate the state of affairs that one's intentional state is directed at (say, 'that lions are dangerous' or 'that he is a lawyer'); and

there are signs that indicate the type of intentional state that is directed (say, 'believe' or 'hope').

Second, these signs of modes of commitment and contents of commitment may have propositional contents or not. For example, 'I feel disgusted by the mess in your room' is a relatively propositional sign of both the content of commitment (the mess in the room) and the mode of commitment (the feeling of disgust). In contrast, *yuck* is a non-propositional sign of the content of commitment (e.g., the disgusting object it indexes), and a non-propositional sign of the mode of commitment (e.g., disgust per se).

Third, propositional signs of modes of commitment or contents of commitment may involve grammatical forms (or 'operators') or lexical forms (or 'predicates'). For example, the modal auxiliary verbs *may* and *must* are grammatical operators that can indicate degrees of deontic (and epistemic) commitment and entitlement; whereas the adjectives *permitted* and *obligated* are lexical predicates that can indicate degrees of deontic entitlement and commitment. Other grammatical operators include verbal categories such as status (e.g., I was going to go), mood (e.g., take out the trash), and illocutionary force (e.g., if only it would rain). And other lexical predicates include what linguists call 'propositional attitudes' denoting intentional statuses — words like *believe*, *know*, and *hope*.

Fourth, non-propositional signs of modes of commitment or contents of commitment may involve indexical-symbols or iconic-indices. For example, interjections like 'ugh' (and many forms of prosody) are relatively indexical-symbols of modes of commitment, and relatively iconic-indices of contents of commitment. And facial expressions (as well as tears and laughter) and direction of attention (as well as changes in it, as occur in joint-attention) are relatively iconic-indices (and sometimes indexical-symbols) of modes of commitment and iconic-indices of contents of commitment. (Notice that the iconic-index/indexical-symbol division is not the same as the grammatical operator/lexical predicate distinction. And note that both are relative notions.)[16]

This typology correlates with several other important semiotic and social features. First, as a general tendency, the more an intentional status has a sign of both its mode and content of commitment, the more a sign is propositional (versus non-propositional), the more a sign is lexical (versus grammatical), and the more a sign is indexical-symbolic (versus iconic-indexical), the more the signer can control the expression of its sign, the more the signer can composes the sign-object relation, and the more the signer can commit to the interpretant of the sign-object relation. Insofar as the question of control, composition, and commitment arises with any semiotic process, one can ask these questions of intentionality.

In particular, to control the expression of a sign is to control the expression of an intentional role; to compose the relation between a sign and a object is to compose the relation between an intentional role and an intentional status; and to commit to the interpretant of a sign-object relation is to commit to the intentional attitude of an intentional role-status relation. For example, one has fewer degrees of control, composition, and commitment with facial expression than with interjections, with modal auxiliary verbs than with propositional attitudes, and so forth. Indeed, partially scaling with this typology is a distinction between normative regimentation and causal regimentation: hence, facial expressions will tend to be more cross-cultural than interjections; and grammatical operators will tend to be more cross-linguistic than propositional attitudes. In short, this typology of common pairings of intentional statuses with intentional roles correlates with the degree of 'sharedness' (across semiotic communities) and the degree of 'sincerity' (between expressing of role and inhabiting of status) of the pair.

5. Iconic, indexical, and symbolic properties of grammatical patterns involving Intentional Status Predicates

While explicit reference to grammatical patterns has been avoided in these essays, one key grammatical pattern involved in propositional signs of modes of commitment and contents of commitment (or intentional statuses more generally) should be mentioned: the notion of *tightness*. This is a difficult idea, but it is worthwhile to go grammatically out of the way to discuss it insofar as the linguistic constructions which express it are also the linguistic constructions that maximize the degree of control, composition, and commitment, insofar as both the mode and content of commitment are signified by signs with propositional content. Indeed, many of the most emblematic intentional roles (in particular, speech acts, such as *I believe that it will rain*), may have their grammatical structure characterized in terms of tightness.

It is well known that across languages the semantic structure of complement-taking predicates (or verbs that have as their arguments constructions involving other verbs) correlates in a relatively systematic way with the morphosyntactic structure of their complements (or the constructions involving the other verbs) (cf. Givón 1980; Kockelman 2003b, 2005b; Silverstein 1993; Van Valin and LaPolla 1997). In particular, the closer the semantic relation between the narrated events denoted by a predicate and its complement, the more the morphosyntactic encoding of the predicate-complement construction appears as a single clause. Given

that modes of commitment are often denoted by complement-taking predicates (e.g., *I believe* or *I want*), and given that contents of commitment are often denoted by the complements of these predicates (e.g., *that he is a lawyer*, or *to go to the store*), this shows that propositional signs of intentional statuses may be grouped and ordered as a function of their tightness: the degree to which the mode of commitment and the content of commitment express a single event, or the degree to which the complement-taking predicate and the complement are expressed in a single clause.

This iconicity may be demonstrated in English by comparing two signs of modes of commitment events: full-clause constructions involving the verb *believe* and non-finite constructions involving the verb *want*. An example of a full-clause complement in English is the clause following the complementizer *that* in the sentence *John believes that Mary might have been a witch*. Notice that in full-clause constructions the subject of the complement verb may be different from that of the main verb, and the timing and truth-value of the action denoted by the complement verb may be different from that of the action denoted by the main verb: *John* is the subject of *believe* while *Mary* is the subject of *be*; and John's belief is true at the time of the utterance, while Mary's being a witch is possibly true before the time of the utterance. In other words, the grammatical encoding of these two events (each can be distinctly inflected for person-number and tense-aspect-modality) resembles the semantic relation denoted by this encoding (Mary's being a witch is a relatively distinct event from John's believing it).

An example of a non-finite complement in English is the verb *be* in the sentence *John wants to be a warlock*. Notice that, unlike in full-clause constructions, the subject of the complement verb is the same as that of the main verb, and the timing and truth-value of the action denoted by the complement verb is directly related to that of the action denoted by the main verb: *John* is the subject of both *want* and *be*; and John's being a warlock is constrained by the timing and truth-value of John's desire. Again, the grammatical encoding of these two events (the complement cannot be distinctly inflected for person-number and tense-aspect-modality) resembles the semantic relation denoted by this encoding (John's becoming a warlock is directly related to his desire to be a warlock).

As the event of wanting (as a mode of commitment) is more closely implicated in the event wanted (as a content of commitment) than the event of believing (as a mode of commitment) is implicated in the event believed (as a content of commitment), the predicate-complement constructions in which the verb *want* are implicated are more like a single clause

than the predicate-complement constructions in which the verb *believe* are implicated. This form-functional iconicity presents a range of relative 'tightness' along which complement-taking predicates can be scaled relative to one another. In this example, predicate-complement constructions involving *want* are 'tighter' than those involving *believe*: their morphosyntactic encoding looks more like a single clause, and the events encoded look more like a single event. This is the logic underlying the lexical expression of intentional statuses.

Givón (1980) has noted that English complement-taking predicates may be ordered as follows (moving from less tight to more tight constructions): *say* and *tell*; *think*, *know*, *believe*, *doubt*, and *learn*; *decide* and *agree*; *like*, *hope*, *expect*, *love*, and *hate*; *plan*, *intend*, and *try*. This list moves from predicates that may take full clauses, to predicates that may take both full clauses and infinitives, to predicates that may only take infinitives. And Kockelman (2003b, 2005b) demonstrates this hierarchy in Q'eqchi,' a Mayan language, and relates it to the function of grammatical categories like status (which marks features such as facticity, counterfactivity, afacticity, and so forth). This form-functional iconicity may also be generalized across languages (Van Valin and LaPolla 1997: 478–479) using the following hierarchy of potential constructions (ranging from denotata that are most like two events to denotata that are most like one event): unrelated events; sequential events; simultaneous events; conditionals (if-then constructions); reported speech (say); cognition (know, think); propositional attitude (believe, consider); perception (see, hear); jussive (ask, order); purposive (go, come); psych-action (forget, want); aspectual (start, continue); and causative (let go, push open). Regarding the intentional statuses at issue in this essay, the following ordering generally holds (from least tight to most tight): belief and knowledge, memory, perception, planning, intention.

If these complement-taking predicates are understood to denote modes of commitment — in particular, cognition predicates, propositional attitude predicates, perception predicates, and psych-action predicates — then the logic which orders intentional statuses may be seen: the greater the tightness between a mode of commitment (the complement-taking predicate) and the content of commitment (the complement), the more the construction encoding them appears as a single clause. In this way, signs of intentional status can be ordered as a function of the tightness between the mode of commitment and the content of commitment. This is shown in figure 2. It thus appears that the best way to group and order the propositional expression of intentional status is by the degree to which the 'intentional state' (i.e., mode of commitment) is implicated in the 'intentional object' (i.e., content of commitment event). Phrased in terms of embodied

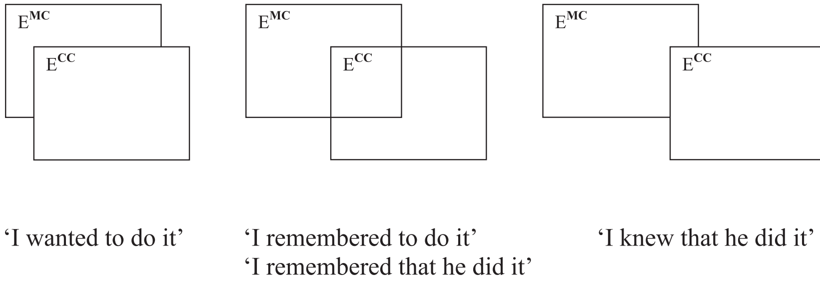

Figure 2. *Relative tightness of interclausal relations involving Mode of Commitment Events* (E^{MC}) *and Content of Commitment Events* (E^{CC}), *where Mode of Commitment is* Want, Remember, *and* Know, *and Content of Commitment is* Does It. *Constructions Involving* Want *are Tighter than Constructions Involving* Remember, *which are Tighter than Constructions Involving* Know.

signs and antecedent and consequent sign events, this is the question of how iconic-indexical (or iconically overlapping in quality and indexically related though causality) the embodied sign is with either the antecedent sign event (I saw him do it) or the consequent sign event (I want to do it).

In short, by attending to the grammar of certain linguistically-encoded signs of intentional statuses, one has a way of accounting for the genus of intentionality itself (complement-taking predicates), various species of intentionality (complement-taking predicates grouped as a function of their relative tightness), and the logic of intentionality (how much causal/ontological overlap there is between a mode of commitment and a content of commitment). This point has broader implications insofar as understandings of intentionality (as a putative psychological phenomenon) are often grounded in, if not derived from, these overt linguistic encodings. This conclusion is surprisingly absent in works by philosophers of Mind, although their data is primarily morphosyntactic (cf. Brentano 1995 [1874]; Ryle 1984 [1949]; Searle 1983). As will be seen in sections 6 and 7, the lexicalization of modes of commitment is a condition for speakers' understanding of intentionality: hence, these facts will have ramifications for speakers' theories of mind insofar as their intuitions about mind are so often grounded in their experience with language.

6. Beliefs, perceptions, and intentions (knowledge, memories, plans, wishes)

There are a number of ways to characterize a *proposition*. Propositions can serve as the premises and conclusions of inferences. For example, *all*

p are q, *John is a p*, *therefore John is a q*. This stresses the relation of propositions to logic. Propositions can serve both as reasons (for other propositions) and in need of reasons (by other propositions). For example, if someone asserts *p*, one can ask for a reason why; and if asked a reason why (someone said or did something), one can assert *p*. This is equivalent to the first point, but stresses the relation of propositions to rationality. Propositions can be expressed by assertions. For example, 'John is a dentist.' This stresses the relation of propositions to language, specifically the seemingly most unmarked form of utterances, the declarative sentence. Propositions can represent states of affairs. This stresses the relation of propositions to *res cognitans*, representationalism, and Mind more generally. Propositions can be ascribed by *that*-clauses. For example, 'I believe that John is a dentist.' This stresses the relation of propositions to complementation, sense and reference in Frege's sense, and Brentano's classic definition of intentionality as 'object-directedness' more generally. Propositions may be understood as the contents of assertions, commands, or questions which have been shorn of their illocutionary force. For example, sentences with declarative, interrogative, and imperative illocutionary force, respectively, can have identical propositional contents: 'you will go to the store,' 'will you go to the store?' and 'go to the store!' And propositions may be understood as the inferentially articulated objects of assertions. This stresses the relation of propositions to semiosis: (natural language) signs, (inferentially articulated) objects, and (ultimate representational) interpretants.

In 'The semiotic stance,' two semiotic styles were discussed: one that focuses on sign-object relations to the neglect of interpretants; and another that focuses on sign-object-interpretant relations, with an emphasis on sign-interpretant relations. It was argued that, though both styles are compatible, the former is by far the most frequently used (as exemplified in Saussurian semiology and modern semantics), and tends to objectify the object and subjectify the interpretant (if taking the latter into account at all). The approach used here, one that focuses on sign-interpretant relations in the larger context of sign-object-interpretant relations, tends to objectify the interpretant (making it as object-like as signs) and intersubjectify the object (making it relatively dependent on symmetric attitudes within a community). When the objects in question have propositional content, a similar point can be phrased in terms of *representationalism* versus *inferentialism*. For example, philosophers like Searle will argue that intentional states have representational contents: they represent states of affairs in the world (satisfactorily or not).[17] In contrast, philosophers like Brandom will shift emphasis from the correctness of representation to the appropriateness of inference. Again, while neither one of

these styles is necessarily prior, the former has had explanatory privilege over the latter in western philosophy and linguistics, while the latter has been underappreciated and undertheorized (Brandom 1994). In this section, the sign-interpretant approach to semiotics introduced in earlier essays is further articulated in terms of propositionally contentful signs and interpretants. The key text is Brandom's *Making it Explicit*, and various authors whom Brandom is in indebted to or in dialogue with — from Kant, Frege, Wittgenstein, Sellars and Dummett to Anscombe, Davidson, Austin, Grice and Searle. Nonetheless, none of these scholars would probably agree with precisely this formulation.

In light of these theoretical commitments, there are three basic constituents of the representational whole: observations, assertions, and actions (see Brandom 1994: chapters 3 and 4). Each of these constituents is a semiotic process, and hence has a sign, an object, and an interpretant. As with the constituents of the residential whole, the constituents of the representational whole are mainly defined via their objects — in this case, *intentional statuses*. Intentional statuses involve a *mode of commitment* and a *content of commitment*. The content of commitment is just a proposition. And the mode of commitment is a way of relating to the content of commitment. In this regard, the intentional status, or object-component, of an assertion is an *epistemic* commitment (to a propositional content).[18] The intentional status of an observation is an *empirical* commitment (to a propositional content). And the intentional status of an action is a *practical* commitment (to a propositional content). When these modes of commitment are lexicalized, they are often called 'propositional attitudes' — in this case, the words *believe*, *perceive*, and *intend*. And when these modes of commitment are psychologized, they are often called 'psychological states' — in this case, 'belief,' 'perception,' and 'intention.' (While there are other modes of commitment, for present purposes these are the three most important kinds.)[19]

If an epistemic, empirical, or practical commitment to a proposition is an intentional status, it has an intentional role: any enactment of that commitment to a proposition. To have an epistemic, empirical, or practical commitment to a propositional content, and hence to hold a particular intentional status, is to be committed and entitled to certain modes of signifying and interpreting — in particular, those modes of signifying and interpreting that logically and causally, or inferentially and indexically, cohere with one's epistemic, empirical, and practical commitments. To assert (e.g., utter a declarative sentence), to observe (e.g. attend to a state of affairs), and to act (e.g., engage in a controlled behavior) are perhaps the most *emblematic roles* of these intentional statuses. In particular, to assert, observe or act is to undertake an epistemic, empirical, or practical

commitment — and thereby license others (by making it appropriate for others) to attribute such a commitment (and sanction one's behavior accordingly). Other behaviors and utterances may lead others to attribute an intentional status, as seen in section 3, but they do not necessarily make it appropriate for others to make that attribution. In short, keep distinct intentional roles in general (any utterance or behavior that could lead one to attribute an intentional status to another), and emblematic intentional roles: those utterings of declarative sentences, attendings to states of affairs, and undertakings of controlled behaviors that *license* others to attribute an intentional status.

Brandom (1994) has introduced four useful terms in this regard: undertaking, attributing, acknowledging, and ascribing. As just mentioned, to *undertake* an intentional status (or, more precisely, a mode of commitment to a propositional content), is to engage in some intentional role that licenses, or entitles others to attribute it to you. For the constituents of the representational whole, the emblematic intentional roles are uttering a declarative sentence (in the case of epistemic commitments, or 'belief'), engaging in a controlled behavior (in the case of practical commitments, or 'intention'), and attending to a state of affairs (in the case of empirical commitments, or 'perception'). To *attribute* an intentional status is just to take another to have an intentional status, as evinced in one's sanctioning practices. To *acknowledge* an intentional status is to attribute an intentional status to oneself, and hence to engage in self-sanctioning practices. And to *ascribe* an intentional status is to explicitly attribute both a mode of commitment and a content of commitment to another — say, with a propositional attitude: *John believes she's a witch* — and hence simultaneously attribute an intentional status (to another — i.e., what John believes) and undertake an intentional status (oneself — i.e., what one believes about what John believes).[20] Ascriptions will be treated in detail in section 6.

A 'belief' in the psychological sense is best understood as acknowledgement, or self-attribution, of an epistemic commitment: one attributes an epistemic commitment to oneself, such that one can self-sanction as a function of whether one's behavior conforms with that epistemic commitment or not.[21] An 'intention' in the psychological sense is best understood as acknowledgement of a practical commitment: one attributes a practical commitment to oneself, such that one can self-sanction as a function of whether one's behavior conforms with that practical commitment or not. And a 'perception' in the psychology sense is best understood as acknowledgment of an empirical commitment: one attributes an empirical commitment to oneself, such that one can self-sanction as a function of whether one's behavior conforms with that empirical commitment or

Table 2. *Inferential and indexical articulation of intentional statuses*

Couched as Semiotic Process	Observation		Assertion	Action	
Couched as Mode of Commitment	Empirical		Epistemic	Practical	
Couched as Mental State	Memory	Perception	Belief	Intention	Plan
Stand as Reason	X	X	X		
Stand in Need of Reason			X	X	X
Caused by State of Affairs	X	X			
Causal of State of Affairs				X	X
Non-displaced causality		X		X	
Displaced causality	X				X

not. Such modes of self-attribution, or acknowledgment, of epistemic, practical and empirical commitments pick up the reflexive sense of intentional states that is classically attributed to believing, intending, and perceiving. Thus, acknowledging an epistemic, practical, or empirical commitment is inferentialism's equivalent to having a belief, intention, or perception. In short, while intention, perception, and belief as theorized here look and behave like 'mental states,' they are theorized in a radically different idiom.

The three key constituents of the representational whole differ in regard to the *inferential* and *indexical articulation* of their objects.[22] Assertions (or the undertaking of epistemic commitments) can stand as reasons, and in need of reasons. Observations (or the undertaking of empirical commitments) can stand as reasons, but not in need of reasons; and they are indexically caused by a state of affairs. And actions (or the undertaking of practical commitments) can stand in need of reasons, but not as reasons; and they are indexically causal of a state of affairs.[23] See table 2.

These points should be developed in detail. Insofar as empirical commitments can stand as reasons they have propositional contents; and insofar as they reliably stand in contiguity with the states of affairs represented by their propositional contents, they have empirical contents. For example, one's perception of a state of affairs must be caused by that state of affairs. That is, the empirical commitment to the propositional content must be indexically connected to (in the sense of 'caused by') the state of affairs represented by that content; and the empirical commitment to the propositional content may be inferentially *grounding of* an assertion (or epistemic commitment) — it can justify a belief.[24] Insofar as practical commitments can stand in need of reasons they have propositional contents; and insofar as they reliably stand in contiguity with the states of

affairs represented by their propositional contents, they have practical contents. For example, one's intention to undertake a state of affairs must cause that state of affairs. That is, the practical commitment to the propositional content must be indexically connected to (in the sense of 'causal of') the state of affairs represented by that content; and the practical commitment to the propositional content may be inferentially *grounded in* an assertion (or epistemic commitment) — it can be justified by a belief. Assertions are inferentially *grounding of* and *grounded in* other assertions. In this way, assertions have both modes of inferential grounding, but neither practical nor empirical contents — being neither (directly) caused by, nor (directly) causal of, states of affairs (but they can both justify a belief and be justified by a belief).[25]

As made famous by Searle (1983), and as rearticulated by Brandom, there are two types of practical commitment, and hence two types of 'intention': intentions in action and prior intentions. *Intentions in action* are distinguished by the fact that the action itself (or controlled behavior) is the acknowledgment of the practical commitment. For *prior intentions* (which are often called 'plans'), the acknowledgment of the practical commitment can come anytime before the action itself (for example, by a promise or an 'I shall' assertion). Both prior intentions and intentions in action must have practical contents that (reliably) stand in contiguity with the states of affairs represented by their propositional contents — either immediate contiguity in the case of intentions in action, or displaced contiguity in the case of prior intentions. It is precisely because of displaced contiguity (or non-immediate indexicality) that prior intentions (or 'plans') more easily miss their mark, and are more often subject to dispute, than intentions in actions. Prior intentions specify the action one is committing oneself to in general terms; intentions in action specify the action in demonstrative terms (Brandom 1994: 257). A prior intention or 'plan' matures into an intention in action (Brandom 1994: 257). Thus, intentions in action are often prior intentions whose time has come.[26]

Analogously, it may be argued that there are two types of empirical commitment, and hence two types of 'perception': perceptions in observation and subsequent perceptions (cf. Grice 1989; Searle 1983). *Perceptions in observation* are distinguished by the fact that the observation itself (or attention to a state of affairs) is the acknowledgment of the empirical commitment. For *subsequent perceptions* (which may be called 'memories'), the acknowledgement of the empirical commitment can come anytime after the observation itself (for example, by a statement like 'I saw . . .' or 'I remember . . .'). Both subsequent perceptions and perceptions in observation must have empirical contents that (reliably) stand in

contiguity with the states of affairs represented by their propositional contents — either immediate contiguity in the case of perceptions in observation, or displaced contiguity (or non-immediate indexicality) in the case of subsequent perceptions. It is precisely because of the displaced contiguity that subsequent perceptions (or 'memories') more easily miss their mark, and are more often subject to dispute, than perceptions in observation. Echoing Brandom's ideas regarding the relation between intentions in action and prior intentions, subsequent perceptions specify the observation one is committing oneself to in general terms; perceptions in observation specify it in demonstrative terms. A perception in observation matures into a subsequent observation or 'memory.' A subsequent perception is a perception in observation whose time has past.

To attribute *reliability* to an actor or observer is to undertake an epistemic commitment to the propositional contents of their practical or empirical commitments (see Brandom 1994: 206–212; and Sellars 1997 [1956]). More narrowly characterized, to attribute reliability to an *observer* is to attribute a disposition to respond to a state of affairs by bringing about (normatively) an empirical commitment to a proposition representing that state of affairs. And to attribute reliability to an *actor* is to attribute a disposition to respond to a practical commitment to a proposition by bringing about (normatively) the state of affairs represented by that proposition. In the case of intentions in action and perceptions in observation, one can test the reliability of the actor or observer by examining the state of affairs itself (either the one that brought about the observation, or the one that was brought about by the action). On the one hand, states of affairs normatively bring about epistemic commitments to propositions that represent those states of affairs; on the other hand, practical commitments to propositions normatively bring about the states of affairs represented by those propositions. In this way, reliability licenses others to undertake epistemic commitments to the empirical and practical commitments undertaken by observers and actors, respectively. Thus, one's acknowledging an empirical commitment to the effect that there is a red thing in front of one is good reason for another to undertake an epistemic commitment to the effect that there is a red thing in front of one (Brandom 1994: 236). And one's acknowledgment of a practical commitment to raise one's arm is good reason for another to undertake an epistemic commitment to the effect that one will raise one's arm (Brandom 1994: 236). Notice, then, how reliability licenses inferences inter-personally, not just intra-personally. Needless to say, memories (or subsequent perceptions) and plans (or prior intentions) are much less reliable than perceptions in observation and intentions in action — precisely because of their displaced contiguity.

So far the focus has been on *intra-personal* inferential articulation: how being entitled or committed to some propositional content entitles or commits one to other propositional contents. With assertions, inferential articulation is both intra-personal and inter-personal. As Brandom sees it, the *inter-personal* inferential articulation of propositional contents is the way in which being committed or entitled to a proposition may commit or entitle others to a proposition (1994: 168–175). For example, if one makes an assertion, and thereby undertakes an epistemic commitment to the propositional content of that assertion, not only does one commit to the propositions that logically follow from that commitment (via intra-personal inferential articulation), and not only does one entitle others to attribute that commitment (and its logical consequences) to one, but one also entitles others to undertake that commitment (and its logical consequences) themselves, and one entitles others to inquire into one's entitlement to that commitment. This entitling of others to undertake one's commitment may be called *discursive authority*. And this entitling of others to inquire into one's entitlement to that commitment may be called *discursive responsibility*. Thus, if discursive authority involves having one's commitment provide reasons for others' commitments, discursive responsibility involves having to provide reasons for one's commitments to others. In this framework, assertions are crucial then because of the structure of their intra- and inter-personal inferential articulation: another can use one's assertion as a reason (authority); or another can demand a reason for one's assertion (responsibility).

Knowledge is usually taken to mean justified true belief (Brandom 1994: 202): that is, the attribution of an epistemic commitment (i.e., 'belief'); the attribution of being entitled to that commitment (i.e., 'justified'); and the acknowledgment by the attributor of that commitment (i.e., 'true'). Assertions, being inter-personally and intra-personally inferentially articulated, are fundamentally knowledge claims. And believing is dependent on knowing as a sort of attribution of commitment without attribution of entitlement to commitment and without acknowledgment of commitment (oneself). Insofar as epistemic commitments are dependent on assertions, and insofar as assertions are implicated in knowledge (via inter- and intra-personal inferential articulation), this says that *knowing is prior to believing*. Indeed, belief is a kind of knowledge without discursive responsibility (to be entitled) or discursive authority (to entitle others). Somewhat paradoxically (if one ignores the inter-personal inheritance of inferential articulation), it is not that knowing is an upgraded form of believing, it is that believing is a downgraded form of knowing.

Not only is knowledge prior to belief, but belief is prior to perception and intention — or, rather, epistemic commitments are prior to empirical

and practical commitments. This should come as no surprise insofar as declarative sentences are the only constituents of the representational whole whose propositional contents are explicit. (Though in ascriptions, one may explicitly assert what the observer is perceiving, or what the actor is intending). This is, of course, why Anscombe's intentions are actions under a description: intentions require representational interpretants. And as intentions are actions under a description (or within a representational interpretant, as argued at the end of 'Residence in the world'), perceptions may be understood as observations under a description (or within a representational interpretant). That is, the movement from mere purchase and purpose to perception and intention — or from sentience to sapience — requires assertions. This is just to say that assertions (qua representational interpretants) confer propositional content on purchases and purposes. Of course, purposes (and purchases) are prior to assertions. *Notice, then, that from the standpoint of this theory, knowledge is prior to (or more originary than) belief, belief is prior to perception and intention, and purchases and purposes are prior to belief.*

Justifying a practical commitment consists in exhibiting a suitable piece of *practical reasoning* in which it figures as a conclusion (Brandom 1994: 244).[27] This follows a Kantian lead in which to treat a performance as an action is to treat it as something for which it is appropriate to demand a reason. If undertaking an epistemic commitment entitled others to attribute it to you, and thereby involved a conditional responsibility to demonstrate entitlement (e.g., provide a reason for one's assertion), then to undertake a practical commitment involves a conditional responsibility to demonstrate entitlement: in particular, to exhibit a suitable piece of practical reasoning for which it figures as a conclusion (Brandom 1994: 245). In particular, an intention should be understood as the conclusion of an inference that has two parts: an epistemic commitment and a pro-attitude, where the latter can be a personal preference (particular to an individual), a status commitment (particular to a role), or a value commitment (particular to an identity). For example, an intentional action of opening an umbrella can be rationalized by attributing to the actor an epistemic commitment that it is raining, and either a personal preference or 'wish' (say, to stay dry), a role commitment or status (say, one must keep one's uniform clean), or an identity commitment or value (say, dryness is godliness). In this way, intentions intrinsically relate to 'wishes,' (social) statuses, and values (as species of pro-attitudes which might explain them); and intentions intrinsically relate to reason-giving, and rationality more generally. (Though note that these pro-attitudes are usually implicit, and only become explicit in cases of strange actions: why did she do that?) Here, then, is another key locale where identities and roles,

as theorized in 'Residence in the world,' are expressed in modes of representation.

Regarding personal preferences or 'wishes,' what is crucial is not where they reside nor what they are, but that they are person-specific rather than role-specific or identity-specific. (They nevertheless can be people-specific: say, to seek pleasure and avoid pain.) These *wishes* will be left relatively untheorized here. Nonetheless, note the following characteristics of them: one, as just discussed, they should be defined in relation to pro-attitudes and primary reasons (and they should be distinguished from social statuses and values); two, their emblematic roles are optative utterances (e.g., *if only it would rain*), and they are attributed to others with *desire* and *wish* predicates (e.g., *she wants to be a witch*, or *he wishes he were a warlock*); three, in contrast to perceptions and intentions, they seem to lack indexical articulation; four, no distinction is being made between 'desiring' and 'wishing'; and five, they relate to selfhood (as turning on what would preserve the boundaries of the self: e.g., in general one wishes for, or desires, that which allows the self to wax and/or that which prevents the self from waning).[28]

These three pro-attitudes (wishes, statuses, and values) are all species of a common genus: they are to be defined by the way they complete primary reasons.[29] In particular, pro-attitudes link epistemic commitments and practical commitments (or 'beliefs' and 'intentions'). For Brandom, a pro-attitude is what turns a materially good inference into a formally good inference: it makes explicit (by expressing in the form of a claim) what is implicit (in the endorsement of a claim). Indeed, it makes explicit the endorsement of a *pattern of inferences*: if one is entitled to an epistemic commitment, then to inherit entitlement to a practical commitment is to implicitly attribute a pro-attitude. This gives rise to patterns: for that pro-attitude will allow for inheritance from entitlement to epistemic commitments to entitlement to practical commitments in many situations. These patterns are, of course, just the key locale where wishes, statuses, and values come to the fore: they provide the best evidence for the existence of such semiotic objects — especially when the patterns are violated.[30]

There is nothing corresponding to discursive authority in the case of practical commitments (Brandom 1994: 253). Thus, while one can entitle others to one's epistemic commitments by undertaking them (say, one makes an assertion), one cannot entitle others to one's practical commitments by undertaking them (say, one engages in an action). In part, this is a consequence of the fact that intentions are typically intrapersonal, whereas beliefs are interpersonal. Nonetheless, in the case of individuals with the same role, and hence the same status, one's status provides a

reason for actions, and hence can count as a reason for the other's actions. And, in the case of individuals with the same (group) identity, and hence the same value(s), insofar as one's identity can provide a reason for one's actions, it can act as a reason for the others' actions. In this way, in the case of shared roles and shared identities, one's practical commitments can provide reasons for another's practical commitments. Indeed, particular identities that purport or attempt to be transcendental identities involve values that all rational people should commit to (e.g., the categorical imperative or the golden rule).[31]

Finally, just as questions of coherence arose in the residential whole, they arise in the representational whole. In particular, there are five kinds of coherence that can be defined in terms of the foregoing discussion: rational, causal, representational, intersubjective, and sincerity. *Rational coherence* (or inferential coherence) is just the degree to which commitments that may stand as reasons or in need of reasons actually do. What is the reason for one's epistemic commitment, and what is one's epistemic commitment a reason for? What is the reason for one's practical commitment? And what is one's empirical commitment a reason for? *Causal coherence* (or indexical coherence) is the degree to which the states of affairs represented by the propositional content of empirical commitments actually caused the empirical commitment, or the degree to which the states of affairs represented by the propositional content of practical commitments actually cause the state of affairs. Was a perception caused by a state of affairs, and was an action causal of a state of affairs? *Representational coherence* is the degree to which commitments are satisfied.[32] This is not the causality of the connection but the correctness of the connection. Are beliefs true? Are perceptions veridical? Are intentions sated? *Intersubjective coherence* is the degree to which intentional statuses attributed are acknowledged, and the degree to which intentional statuses undertaken are attributed. Are one's understanding of one's own intentional statuses in agreement with others' understanding of them? And *sincerity coherence* is the degree to which the intentional status undertaken is acknowledged. Does one believe what one asserts, intend what one promises to do, remember what one recounts?

Insofar as the constituents of the representational whole are holistically governed, these five kinds of coherence can exist (or not) at many different levels: representational whole, institutional whole, situational whole, intersubjective whole, or experiential whole. Finally, by focusing on coherence is not to stress that coherence is unmarked (or the usual everyday case): the representational whole can be massively incoherent — globally or locally. The emphasis is rather that coherence is a normative question that exists in (at least) five dimensions. Just as in the case of coherence

discussed in ‘Residence in the world,’ to find more coherence than is (socially) warranted is a key feature of fetishization.

7. Predicating intentional statuses of people and properties of intentional statuses

As seen in the last section, intentional statuses involve both modes of commitment (how one relates to a propositional content — i.e., *whether* one believes, intends, or perceives) and contents of commitment (the propositional content one relates to — i.e., *what* one believes, intends, or perceives). What is of interest in this section is *how modes of commitment become contents of commitment*. Phrased in a psychological idiom, this is equivalent to intentional states becoming intentional objects. And phrased in a semiotic idiom, this is equivalent to having propositional contents conferred on modes of commitment by representational interpretants of them — typically via processes of *ascription*. Insofar as propositional contents are the inferentially articulated objects of assertions, this means three things: 1) examining the words that refer to intentional statuses (e.g., *believe*, *intend*, *fear*); 2) examining the utterances that predicate intentional statuses of people (e.g., *John is angry*); and 3) examining the utterances that predicate properties of intentional statuses (e.g., *anger is an emotion*). Such referring and predicating expressions — or intentional status predicates (ISPs) and the utterances in which they are implicated — introduce a new order of mediation into intentionality. While this order of mediation is introduced with any representational interpretant (compare the conferral of propositional contents on constituents of the residential whole via words like *tree*, *hammer*, *run*, *mother*, and *Christian*), it is worth drawing out the repercussions for intentionality. There are two key processes, lexicalization and displacement, each of which involves a number of interrelated sub-processes.

Lexicalization is the process whereby the signs of modes of commitment become lexical predicates (rather than grammatical operators). Such lexemes were referred to as ISPs. For example, rather than undertaking an empirical commitment by attending to a state of affairs (say, physically looking in a certain direction), one undertakes an empirical commitment by asserting ‘I see that . . .’ or ‘I remember that . . .’ Or rather than undertaking a practical commitment by engaging in a controlled behavior, one undertakes a practical commitment by asserting ‘I intend to . . .’ or ‘I plan to . . .’ An analogy may be made with speech acts. In particular, most utterances have illocutionary force and propositional content: one asks a question, issues a command, or makes an assertion.

What is crucial about speech act predicates (e.g., 'say,' 'ask,' 'order,' and so forth), is that they confer propositional content on illocutionary force. And just as there are usually only a handful of grammatical operators for indexing illocutionary force (optatives, exclamatives, imperatives, interrogatives, and declaratives), there may be hundreds of lexical predicates for referring to it. The movement from illocutionary force (or grammatical operator) to explicit performative (or lexical predicate) is a movement from closed class to open class. In the case of intentional statuses, as in the case of speech acts, this process involves a number of important and interrelated features: conceptualization, semantic fields, language-internal glossing, metaphorical elaboration, and projection.

First, *conceptualization* is the process whereby modes of commitment come to have conceptual content, insofar as the ISPs that refer to them are implicated (as referring and predicating expressions) in utterances that have propositional content. Insofar as concepts expressed by ISPs are the inferentially articulated objects of ISPs, one may inquire into the conceptual structure of ISPs like 'belief,' 'intention,' and 'fear.' In particular, a number of questions can be posed. Are the conceptual contents of certain ISPs more basic or primary than the conceptual content of other ISPs? For example, does 'knowing' necessary depend on 'believing,' but not vice versa; or does 'lust' necessarily depend on 'desire,' but not vice versa? Are there basic ISPs — ones whose conceptual structures does not depend on the conceptual structure of other ISPs, but whose conceptual structure other ISPs depend on? How does the conceptual structure of such predicates differ as a function of whether the speaker using them is an expert or not? How should these words be translated — or calibrated across languages, cultures, and eras? Are some concepts found in all languages, cultures, and eras? One can ask about how these concepts are structured. For example, are emotion concepts structured like a script? Are there basic level terms? Are expert definitions structured like Aristotelian categories? Finally, one may ask how the conceptual structure of ISPs relate to the practical content of intentional statuses. For example, if emotions are structured like a script, how does this script-like structure relate to roots and fruits of emotional statuses — meaning the actual sign events that lead to them and follow from them?

Second, in the movement from grammatical operator to lexical predicate, there may be a large number of ISPs, constituting a kind of *semantic field* of modes of commitment (i.e., a lexicon of mental states), which are all related to each other via relations like synonymy, antonymy, partonomy, taxonomy, and so forth. In this way, a menagerie of putative mental kinds acquires a kind of objectivity so far as these ISPs seem both to refer to concrete things, and to belong to a common genus. For example, just

as there are different kinds of fruit (bananas, apples, oranges) and different kinds of food more generally (fruit, vegetables, etc.), there are different kinds of emotions (say, fear, joy, anger, etc.) and different kinds of intentional statuses more generally (say, the volitive, the cognitive, and the emotive).

Third, so far as these ISPs have conceptual content, this semantic field of intentional statuses allows for *language-internal glossing*. For example, 'belief is a kind of knowledge,' 'there are two key components to mind: emotion and cognition,' 'fear and shame are types of emotion,' 'desire and belief are basic intentional states,' and so on. People's understanding of intentional statuses, or mental states, can be articulated and explicit rather than just intuitive and implicit. There are dictionaries, and self-help books, basic psychology texts, and maxims. Again, a kind of objectivity is introduced so far as speakers can define, and hence regiment and standardize, the definitions of intentional statuses.

Fourth, these ISPs are often derived through *metaphorical elaboration*. For example, among the Q'eqchi'-Maya (Kockelman 2003b, 2005b), most ISPs are articulated in terms of relatively concrete processes involving the heart: for the heart to shrink is to become afraid; for the heart to double is to become conflicted; for the heart to be red is to be jealous; for something to get lost in the heart is to forget it; and so on. In this way, lexical constructions expressing relatively abstract concepts (intentional statuses) are metaphorically articulated in terms of lexical constructions expressing relatively concrete concepts (color, size, shape, number, etc.). In this way, relatively novel and abstract concepts can be readily introduced, and readily understood, in terms of the properties of the relatively old and concrete domain the terms were borrowed from. And, in this way, inferences appropriate in the concrete domain may be extended to be appropriate in the abstract domain. This metaphorical construal of the abstract through the concrete is another process whereby intentional statuses acquire a kind of objectivity.

And fifth, lexicalization may lead to *projection*: the process whereby features belonging to the signs (of objects) are projected onto the objects (of signs). In regard to the representational whole, projection is the way in which linguistic or semiotic features of ISPs are understood as ontological or natural features of the intentional statuses that such ISPs seem to refer to (cf. Whorf 1956 [1939]). In certain cases, such as explicit metaphor, this process is relatively trivial: for example, the degree to which one actually takes one's heart to be red when one is jealous, or to double when one is conflicted. In other cases, involving grammatical features, this is less trivial: for example, the degree to which one takes intentional statuses to be *ontological* states (believe), state-changes (become angry), or activities

(think) insofar as the ISPs that refer to these statuses are *semantic* states, state-changes, or activities. Indeed, as discussed in section 4, intentionality as a genus-level phenomenon is often phrased (following Brentano) as 'object-directedness,' and exemplified by listing the ISPs that are all just complement-taking predicates. That is, the 'object-directedness' of mental states is related to the 'complement-takingness' of intentional status predicates. And notice how many philosophers will take the intentionality of 'mental states' to be equal to the intentionality of speech acts, and theorize all the properties of mental states using evidence derived from speech acts — and then take these features to be fundamental to mental states rather than to speech acts (see Searle 1983 as the canonical example). In any case, this is yet another process whereby the putative referents of ISPs acquire a kind of objectivity through the phenomenal, structural, and semantic properties of the signs themselves.

In conjunction with lexicalization (and its attendant features: conceptualization, semantic fields, language-internal glossing, metaphor, and projection) is *displacement*: the way that ISPs, insofar as they are lexical predicates (such as nouns and verbs), may take grammatical operators that displace them in space, time, possibility, and person. That is, ISPs such as 'believe,' 'fear,' and 'desire' can be attributed to oneself and others, in the present, past or future, and in actual, possible or counterfactual worlds. For example, one can say 'I believe that . . . ,' 'you believe that . . . ,' and 'she believes that . . .' One can say 'I fear that . . . ,' 'I feared that . . . ,' and 'I will fear that . . .' And one can say 'I want to . . . ,' 'I may want to . . . ,' and 'I would have wanted to . . .' Displacement is a function of the fact that ISPs are operated on by grammatical categories that are shifters — person, tense, mood, and status. These shifters calibrate the spatial-temporal-logical-personal position of the narrated event relative to the speech event (see Goffman 1981 [1979]; Jakobson 1990). In this way, ISPs allow one to displace the mode of commitment event from the sign event, or the event of having an intentional status from the event of indicating that one has it. This giving of the mode of commitment an event-like character (being positioned in space and time, and being particular to a specific person or a possible world) is another way in which intentional statuses acquire a kind of objectivity. Displacement is related to several other properties which should be discussed in detail: tightness, ascription, transparency, meta-intentionality, and assertability.

First, if one adds to the discussion of displacement the account of *tightness* offered in section 4, one sees that there are really three events that may be 'positioned' relative to each other: the sign event (or the event in which one expresses an utterance that involves an ISP); the mode of

commitment event (or the event in which one is committed to some propositional content); and the content of commitment event (or the event one is committed to). For example, in the utterance 'you believed she went to the store,' her going to the store is the content of commitment event, your believing this is the mode of commitment event, and the uttering of this assertion is the sign event. All of these events can involve displacement in person, space, time, and possibility. Section 4 described the ways in which mode of commitment events relate to content of commitment events via tightness: the degree to which the mode of commitment event and the content of commitment event are ontologically a single event. In contrast, displacement is the degree to which the mode of commitment event and the sign event are ontologically a single event. If tightness is a relation between the mode of commitment event and the content of commitment event, displacement is a relation between the sign event and the mode of commitment event (and often the content of commitment event).

Second, *ascription* is the process whereby an ISP is explicitly predicated of another person (or oneself), thereby providing a representational interpretant of another's (or one's own) intentional status. As Brandom sees it, 'Ascriptions are propositionally explicit attributions' (1994: 504). And 'Ascribing is *attributing* one commitment (to another), while *undertaking* (acknowledging) a different commitment (oneself)' (1994: 504). It is the species of displacement that turns on the grammatical category of person (rather than other shifters like deictics, tense, or status). What is crucial about ascription is that in attributing an intentional status to another one is undertaking an intentional status oneself. In particular, in the case of the intentional status ascribed, both the mode of commitment and the content of commitment are explicit; in the case of the intentional status undertaken, only the content of commitment is explicit (which is equal to the mode and content of the commitment attributed). For example, in saying 'John hopes that Woody Allen will run for governor,' one attributes to John a mode of commitment (hope) and a content of commitment (that Woody Allen will run for governor); and one undertakes a mode of commitment (an epistemic commitment or 'belief') to another content of commitment (that John hopes that Woody Allen will run for governor). Ascription is crucial insofar as it is the site in which differences between ways of representing the world most forcefully arise — between what is attributed to another and what is undertaken oneself. Hence, debates can arise as to what is the 'correct' or 'true' representation. Indeed, our very sense of the 'subjectivity' of mental states is just that different people can be committed to contradictory and/or incoherent propositional contents. There is evidence that such discrepancies (between commitments

undertaken and attributed) arise in the context of arguing over states of affairs in the world, as with sibling rivalry (see Tomasello 1999, and references therein); and one suspects that the ability to track such discrepancies is crucial for passing 'theory of mind' tests.[33]

Third, *transparency* characterizes the degree to which the semiotic means of undertaking (or expressing) an intentional status is the same as, or similar to, the semiotic means of ascribing (or describing) an intentional status. Silverstein (1981) introduced this idea (which he called 'metapragmatic transparency') to describe how explicit performatives (e.g., words like *baptize*, *wed*, *bet*, *promise*, etc.) can be used both to perform speech acts (e.g., 'I promise that ...') and to describe speech acts performed (e.g., 'he promised that ...'). And he argued that the more transparent a sign is, the more easily speakers can provide an interpretation of its meaning — in the sense of what must be the case for it to be used appropriately, and what comes to be the case if it is used effectively. The same distinction is partially operative here: ISPs can be used both to undertake (or express) an intentional status and ascribe (or describe) an intentional status. For example, the ISP *believe* is transparent: it can be used both to undertake an intentional status ('I believe that ...') and to ascribe an intentional status ('he believed that ...'). Contrast this with interjections, or various other non-propositional signs, that can be used to undertake an intentional status (e.g., 'ouch!'), but not to ascribe an intentional status (e.g., *'he ouched').[34] It should be stressed that ISPs are different from explicit performatives in that explicit performatives perform what they describe by describing it: I can only wed you by saying 'I wed you' (see Austin 2003 [1955]). Such a reflexive-feature is not usually operative with ISPs.

Fourth, *meta-intentionality* is the process whereby one has modes of commitment whose contents of commitment represent other modes of commitment. For example, one can say 'I believe she wants a hamburger,' or 'I wish I didn't fear snakes,' or 'I'm afraid her beliefs don't mesh with my own,' and so on. Such reflexivity can, of course, go on indefinitely: I believe that he believes that she believes ... This property turns on the fact that ISPs typically take complements, and these complements can themselves consist of ISPs, and so on indefinitely. Various forms of meta-intentionality are often understood to be the *sine qua non* of human-specific cognitive processes: choice (desiring particular desires); empathy (feeling others' feelings); conscience (evaluating one's own motivations), and self-knowledge (in the Socratic sense). And these are crucially implicated in various forms of self-reflexivity.

Fifth, *assertability* (or explicitness) is the process whereby predicating intentional statuses of people, or predicating properties of intentional

statuses, involves ISPs that are parts of assertions — and hence can both stand as reasons (for other assertions) and stand in need of reasons (by other assertions).[35] For example, one can ask someone to explain why they ascribe an intentional status to another person; and one can ascribe an intentional status to another person to explain why (say, they engaged in some controlled behavior). In particular, as with any assertion, the speaker is responsible to justify her entitlement to the epistemic commitment undertaken by that assertion; and the speaker authorizes others to undertake that epistemic commitment. In this way, questions of discursive responsibility and authority arise as to intentional statuses predicated of people and properties predicated of intentional statuses. For example, arguments may arise as to what counts as good evidence for ascribing an intentional status, or what behavior may be predicted if someone has been ascribed an intentional status, and hence one may debate what are 'rational' and 'irrational' intentional statuses given a person's experience. Such assertions are therefore subject to challenge, justification, argument, revision, testimony, repetition, inculcation, extirpation, gossip, and so forth. In this way, assertions ascribing intentional statuses, and the reasons that lead to them and follow from them, can become fodder for public discussions and political interventions. In the next section, these points will be generalized.

8. Empirical investigations, theoretical representations, practical interventions

In the course of acquiring propositional content through words (ISPs) that refer to them, intentional statuses may become the object of empirical investigations, theoretical (or epistemic) representations and practical interventions. This involves two interrelated processes. First, as seen in the previous section, in addition to predicating intentional statuses of people via ISPs (e.g., 'he's angry' or 'he believes that she wants to do him in'), intentional statuses have properties predicated of them via ISPs (e.g., 'anger is a negative emotion' or 'belief is a kind of weak knowledge'). And second, via both these kinds of predication, modes of commitment (*as* contents of commitment) are themselves inferentially and indexically articulated. Thus, the following kinds of questions are at issue: what observations or assertions would entitle or commit one to predicate property X of intentional status Y, or predicate intentional status W of person Z; and if one predicates property X of intentional status Y, or predicates intentional status W of person Z, what assertions or actions does this entitle or commit one to?

In short, *theoretical representations* of intentional statuses might be best understood as assertions (epistemic commitments to propositional contents) which either represent people as having certain intentional statuses, or represent intentional statuses as having certain properties. Such theoretical representations can stand as reasons and in need of reasons. *Empirical investigations* of intentional statuses might be best understood as observations (empirical commitments to propositional contents) of the intentional statuses of people or the properties of intentional statuses. These can stand as reasons for theoretical representations; and these are indexically caused by states of affairs. And *practical interventions* of intentional statuses might best be understood as actions (practical commitments to propositional contents) which are directed towards affecting the intentional statuses of people or the properties of intentional statuses. These can stand in need of reasons; and these are indexically causal of states of affairs. In short, by taking the analysis put forth in section 5, and reflexively turning it back on itself at the level of mode of commitment rather than content of commitment, this is a way of moving from a theory of mind to a theory of truth of a theory of mind, or from an account of intentionality to an account of the epistemology of intentionality.

More generally, the term *episteme* might be used to describe any institution that involves a relatively coherent cluster of such propositional modes of semiosis (e.g., empirical observations, theoretical representations, and practical interventions) in conjunction with a relatively coherent cluster of non-propositional modes of semiosis (e.g., modes of comportment turning on affordances, instruments, actions, roles, and identities).

And, for any episteme, one might ask a number of questions: What is the *topic* of the episteme? What *questions* are members of this episteme trying to answer regarding this topic? What are the *stakes* of posing such questions (and potentially answering them) for members of that episteme? How are these topics and questions (and stakes) *theoretically elaborated*? That is, how are they conceptually articulated relative to other topics and questions within a research tradition. How are such theoretically elaborated topics and questions *methodologically grounded*? That is, how are they rendered empirically tractable, in terms of their conceivable practical bearings. What *methods*, or instruments and techniques, are used to actually create, collect, store, organize, analyze, interpret, compare, exemplify, present, and communicate this data? What *epistemological practices* are implicit in this episteme? In particular, if knowledge is 'justified true beliefs,' how are beliefs (i.e., representations of how things stand in some context) turned into:

1) justified beliefs (i.e., representations that one can be responsible for asserting if called upon to justify them by some community of scholars); and 2) true beliefs (i.e., representations that other members of this community will take for granted in their own work, or qualify using their own research). What *ethical practices* are implicit in this episteme? If epistemology is about the responsibility and authority members of an episteme have (regarding their representations) with respect to other members of the episteme, ethics is about the authority and responsibility members have toward those whom it represents, and those for whom it represents.[36]

While the term *episteme* is Foucault's, and while the spirit of this point is Foucaultian,[37] an episteme as used here is grounded in the foregoing accounts of residence in the world and representations of the world; and the episteme of interest here is the one whose topics (qua 'objects' of investigation) are intentional statuses per se (rather than, say, electrons, trees, benzene rings, the common cold, and so forth). In this regard, these questions might be posed of Freudian psychoanalysis or ethnopsychologies of far-flung peoples, of modern biomedical forms of pill-pushing to parental wisdom concerning how to soothe the feelings of a distraught child, of Skinner's version of behavioralism to Chomsky's version of cognition, from Bettelheim's theory of autism to Kohut's theory of the self, and so on, perhaps indefinitely. While this essay is too circumscribed to take up any of these questions, there are many monographs that may be partially understood in this light: from Goffman on asylums to Hacking on multiple personality disorder and fugue, from Foucault on madness and civilization to Danziger on the historical origins of mainstream psychological research.

For present purposes, one pervasive trend across many of these literatures may be foregrounded: *psychologization*, or the modern, western understanding of intentional statuses in terms of 'mental states,' and the range of ontological commitments that go with it. In particular, intentional statuses are: localized (taken to be located in a particular part of a person — say, the mind); privatized (taken to be hidden or invisible in a way that other phenomena are not); interiorized (taken to be internal rather than external to a person); subjectified (taken to be more easily in error, and/or more person-specific, than 'objective' phenomena); dichotomized (understood in terms of a set of oppositions: subjective versus objective, interior versus exterior, private versus public, etc.); individualized (taken to be held by individuals, rather than larger-than-individual or less-than-individual entities); moralized (caught up in legal and religious judgments regarding whether one should be responsible for a behavior or not, and whether such behavior is 'good' or 'bad'); universalized

(treated as something all human groups have); humanized (treated as something only human groups have); and humunculized (treated as having agency, or human-like drives, themselves).[38] The psychologization of intentional statuses, then, tends to see them as little pieces of furniture in the house of Mind. Contrast the categories used to describe intentional statuses that have been put forth in this essay, which treats 'mental states' in nearly the same terms as it treats social statuses and linguistic utterances.

Indeed, from a cross-cultural perspective, this psychologization need not occur at all, or at least not in this particular way. For example, the ethnographic record (Kockelman 2002) shows that intentional statuses can be theoretically represented in any number of ways. In particular, intentional statuses in general, or certain kinds of intentional statuses (e.g., second-order ones, such as beliefs about beliefs) need not be attributed to humans, to all humans, and only to humans. Intentionality, or Mind, need not be understood as a faculty; it may also be understood as, say, a gift or a curse. And the faculty need not be psychological; it can be physical, theological, or medical.

Intentional statuses need not be attributed to individuals, but can be shared across individuals, or occur within individuals. For example, there may be super-individual who hold a single intentional status: couples, friends, fraternities, nations, tribes, etc. And there may be supra-individuals who hold a single intentional status: faculties (unconscious drives versus conscious ones), split-personalities, etc. And, indeed, intentional statuses need not be evinced by the same individual who holds them: one's role may be the primary evidence for another's intentional status.

There need not be the same species of intentionality (say, perception, wish, intention, feeling, and belief); nor need there be the genus itself (intentionality, qua directedness). Intentionality need not be understood as a unified domain — say the 'mind module; but may be understood as the precipitate or effect of many interacting domains. And intentionality need not be understood as having more basic statuses (say, belief and intention) out of which all others are built, or definable.

Intentional statuses need not be understood as one part of a dichotomy (mind versus body, or mental versus physical). Intentional statuses need not be located in some single, internal, particular place (e.g., 'the mind' or 'the heart'); they can be located outside of the body, in other parts of the body, or not be localizable at all. Intentional statuses need not be understood as private (relative to sources of evidence for them); they can be as public as any other phenomenon, or at least no less public than, say, kinship statuses.

Intentional statuses may not be caught up in the causal web of ways of explaining behavior: to explain another's behavior one makes reference to their social statuses rather than their intentional statuses — i.e., nobody speculates on others' motives. Indeed, there may be injunctions against ascribing intentional statuses to others.

Intentional statuses need not be linked to morality in the same way — as caught up in responsibility and rights, as judged as good or bad, as seen as rational or irrational, or as understood as a site where value or knowledge (about the individual or the world in general) is revealed. And intentional statuses need not be related to selfhood and agency in the same way.

Of course, intentional statuses might be theoretically represented in these ways — not because they really are 'mental states,' but because they have certain semiotic properties. They are embodied signs (and hence 'invisible' or 'private') — but no different from social statuses like being a mother. And they are propositional (and hence 'representational') — but no different from linguistic expressions. And hence one would do well to understand 'mental states' as complicated semiotic processes that stand at the intersection of social statuses and speech acts.

9. Conclusion: Emotions as natural constructions and social kinds

In 'The semiotic stance,' the following example was given to show the ways in which any interpretative event may give rise to a number of simultaneous signs: upon hearing a gunshot (as a sign), one may be suffused with adrenaline (affective interpretant); one might make a frightened facial expression (relatively non-purposeful energetic interpretant); one may run over to look what happened (relatively purposeful energetic interpretant); one might say 'that scared the hell out of me' (representational interpretant); one may never go into that part of the woods again (ultimate interpretant); and one might forever believe that the woods are filled with dangerous men (ultimate representational interpretant). This example was provided to show that most interpretants are not 'mental signs,' or even subsequent utterances (à la answers to questions), but various modes of embodied comportment: feelings, (re)actions, assertions, and habits. And it was noted that all these interpretants are, through semiotic framing, just signs (or dispositions to signify) that themselves can be interpreted by others — indeed, they are often bundled together as evidence for a single ascription: 'Jake must be terrified of the woods.'

To this set of interpretants, one may now add the local episteme in which *terror* is understood (say, as a psychological entity that is relatively

uncontrolled, subjective, and natural — i.e., an 'emotion'); one might add Jake's own, simultaneous interpretants of any of these interpretants (as signs) — as what is often understood as the affective experience, or 'subjective feeling,' that occurs with these other components (e.g., the material qualities of the affective interpretant experienced in light of the eliciting sign); and finally one might also include within the ultimate interpretant a disposition to reinterpret all signs in a new light (e.g., seeing forests as hiding places for thieves, being spooked by bird calls, trembling at the mention of the anything arboreal, and so forth).[39]

As this example demonstrates, 'The semiotic stance' provides a natural entry into what are usually called the *emotions*.[40] Indeed, 'emotions' as they have been traditionally theorized are just the relatively systematic bundling of some of these components (all of which are signs or interpretants of a particular sort: affective, energetic, representational, epistemic, ultimate, and so on). It should be stressed that no single one of these components is an 'emotion'; rather, any 'emotion' involves all of them. Moreover, despite the common assumption that emotion is a subjective state or psychological kind, the ethnographic record shows that second-order interpretations of this bundling (theorized as epistemes in the last section) are just as often rendered in moral, spiritual, and physical idioms as in psychological ones (see Levy 1973; Shweder 1994). From this standpoint, any account of 'emotions' is just an account of how these components articulate with each other (as an ensemble of semiotic processes), in any sign-community, across sign-communities, and indeed across many species.

With these general ideas in mind, several caveats should be mentioned. First, in a monograph entitled *What Emotions Really Are*, Griffiths (1997) argues that the phenomena typically grouped under the term 'emotion' actually fracture into three ontologically distinct parts, such that the concept itself does not delimit a natural kind.[41] He thinks that such distinct pieces have been grouped together in the past only because they share a general feature of 'passivity' in contrast to other cognitive phenomena (in particular, mental states underlying means-end reasoning: e.g., beliefs and intentions). And, in place of a single category, he argues that one must (minimally) keep separate affect programs, irruptive motivational states, and socially-sustained pretense. These should be discussed in turn.

As introduced by Darwin (1965 [1872]), and most elaborately investigated by Ekman (1982), *affect programs* are short-term, stereotypical responses that involve facial expressions (e.g., non-purposeful energetic interpretants) and autonomic nervous system arousal (e.g., affective interpretants). Although there is some disagreement on the number of such programs, most researchers agree on a basic, seemingly cross-cultural

(and, to some extent, cross-species) set, including anger, fear, disgust, sadness, joy, and surprise.[42] Next, *irruptive motivational states* affect cognitive processes involved in long-term, planned action, and seem to be designed to enforce commitments to strategies that would otherwise be disrupted by individual calculations of self-interest (see Frank 1988). These are the most poorly understood; but are essentially complicated ultimate interpretants. Examples of such states are jealousy, guilt, envy, and shame. Lastly, Griffiths uses Averill's definition of *socially-sustained pretense* as a 'transitory social role ... that includes an individual's appraisal of the situation, and is interpreted as a passion rather than as an action' (Averill 1980: 312). Thus the affect program of 'anger' is to be contrasted with the socially-sustained pretense sense of 'being angry,' which involves a characteristic, but culturally-dependent pattern of behavior that is appropriate in certain situations, and which is thought to be impossible to control. Socially sustained pretense, then, is just an ultimate (representational) interpretant under another name; and which comes along with a representational interpretant of the role as relatively uncontrolled. (And, in general, socially sustained pretence is a covert social construction, in the terms discussed in 'The semiotic stance.')

Note, then, that although one may be 'angry' as an affect program or as a socially-sustained pretense or even, perhaps, as an irruptive motivational state, the pathologies of such modalities of anger are distinct (even if such modalities are referred to with the same term, even if similar conditions may elicit both modalities, even if one modality may influence another, and even if they are culturally valued in similar ways). In this way, for the purposes of expert reasoning (generalization, induction, etc.),[43] it does not help scholars to group such forms of anger together — what one discovers about one form cannot be used to understand the others (Griffiths 1997). It is for this reason that Griffiths argues that the category delimited by our everyday concept of 'emotion' does not constitute a natural kind.

Second, assuming that what Griffiths says is plausible, a key question is why second-order interpretations, or epistemes, of such disparate domains take them to belong to a single, unified domain. While most scholars tend to think emotions have the quality of 'passivity' in contrast to other cognitive phenomena, in a semiotic idiom, one would rather say that semiotic processes understood in terms of emotion have signs that are relatively difficult to control, sign-object relations that are relatively difficult to compose, and interpretants of sign-object relations that are relatively difficult to commit to. Relatedly, insofar as affect programs involve the most emblematic roles of emotional statuses (that is, facial expressions), and insofar as affect programs are on the boundary of what is regimented by

natural causes versus cultural norms (and hence what is maximally motivated), properties (and theories) of affect programs are easily projected onto other seemingly emotional phenomena: naturalness, motivation, uncontrollability, and so forth. And relatedly, 'emotions' seem causally articulated, but not logically articulated — caught up in indexicality, but not inference. In this way, one does not demand a reason for them, or invoke them if a reason is demanded. That is, relatively speaking, they fall out of the inferential articulation, and inter- and intra-personal inheritance (of commitments and entitlements), that was seen to be fundamental to beliefs, perceptions, and intentions.

And finally, the distinction between natural kinds and social constructions is far too simple. As mentioned in 'The semiotic stance,' a distinction between natural constructions and social kinds should be introduced. In particular, a *social kind* takes into account the relation between two relations: or how one relatively motivated set of non-propositional semiotic processes (say, facial expressions as non-purposeful energetic interpretants) is articulated in terms of one relatively motivated set of propositional semiotic processes (say, in the spirit of section 4, complement-taking predicates that denote 'emotions' as representational interpretants). Such an abstract formulation of a social kind is a way of grounding social kinds in *reflexive* semiosis, or the ways in which signers use one set of signs to interpret and/or regiment the meaning of another set of signs — in this case, the way both lay-speakers and psychologists gloss the meaning of facial expressions in terms of a vocabulary of 'emotion' words. One might then use the term *natural construction* to describe cross-cultural social kinds: or shared patterns of regimentation linking sets of propositional and non-propositional semiotic processes, or modes of residence in the world and modes of representation of the world.

If human beings are those entities whose agency is both enabled and constrained by the fact that their modes of residence in the world are never commensurate with their modes of representations of the world), then the relevant locus for cross-cultural comparison should not be some mode of residence or representation (e.g., comparing their facial expressions, or comparing their emotion vocabulary) — but rather a relationship between the two (e.g., comparing one group's interpretation of facial expressions in terms of their emotional vocabulary with another group's interpretation of facial expressions in terms of their emotional vocabulary). So far as human-being is constituted by reflexivity, shared modes of human-being should turn on shared patterns of reflexivity. Natural constructions and social kinds, then, are a way of formulating cross-cultural and culture-specific processes in terms of relations between residence and representation.

Notes

1. In certain cases, it may just be a concept rather than a proposition, and hence refer to a referent rather than represent a state of affairs. For example, *I hate cheese* or *I want my mother*.
2. See Haugeland (1998) for a wonderful summary of various understandings of intentionality.
3. So, for example, Searle will argue that the intentionality of speech acts is derivative of the intentionality of mental states, and that mental states are pretty much what philosophers like Descartes take them to be: 'The capacity of speech acts to represent objects and states of affairs in the world is an extension of the more biologically fundamental capacities of the mind (or brain) to relate the organism to the world by way of such mental states as belief and desire, and especially thought and action' (1983: vii). And scholars like Haugeland (1997) and Brandom (1994) will argue that the intentionality of mental states is derivative of the intentionality of speech acts — and, more generally, that 'mental states' and even 'speech acts' are not what they are traditionally understood to be.
4. Speech acts were treated in 'The semiotic stance.' Here the emphasis is on declarative utterances.
5. Such an approach radically alters attempts to come to grips with intentionality in terms of binary distinctions like originary versus derived, or 'speech act' versus 'mental state,' and such an approach necessarily takes into account empirical research in primatology, developmental psychology, anthropology, and linguistics.
6. Unlike 'Residence in the world,' in which the organizing principle was different things (the constituents of the residential whole) mediated in similar ways, the organizing principle here is similar things (the constituents of the representational whole) mediated in different ways.
7. For example, I know you are a husband insofar as 1) I saw the sign-event in which you were married (e.g., a wedding), or 2) I see the patterns of interaction you have with your spouse (e.g., exclusive lovemaking, shared credit cards, public intimacy, wedding rings, and so forth).
8. Indeed, it was noted that, as a function of semiotic framing, embodied signs could be understood in several ways: first, as an (ultimate) interpretant of another sign; second, as a (dynamic) object that gives rise to a sign; third, as an (embodied) sign that gives rise to an interpretant.
9. That is, the various antecedent sign events need not have any sensible properties in common; and the various consequent sign events need not have any sensible properties in common.
10. Though one suspects that the longer the latency, the more difficult the inference.
11. This is even true of purchases and functions. For example, from one particular interpretation of an artificed object (someone wields it a particular way), one can infer its function, and then offer any number of other appropriate interpretants of it.
12. It should be noted that many scholars think our ability to understand psychological forces comes before our ability to understand physical forces. For example, Collingwood argues that, 'Causal propositions . . . are descriptions of relations between natural events in anthropomorphic terms' (1972: 322, quoted in Tomasello and Call 1997: 388).
13. Joint attention (in the wide sense of this term) — turning to observe what another is observing or ostending, or observing or ostending so another turns to observe — is the exemplar of this two-part process: interpreting others' signs of embodied signs;

signifying embodied signs for others' interpretants. In joint attention, the intentional role is either an observing position or an ostensive action; the intentional status is the object of observation or ostension; and the interpretant is a change in observing position. Thus, in joint attention, the intentional status need not have propositional content (though it can have propositional content for parents and older children); the ground, or relation between the intentional role and intentional status, is maximally iconic-indexical (rather than indexical-symbolic); and the intentional attitude is an energetic interpretant (though it can be an ultimate (representational) interpretant for parents and older children). As noted, joint attention is the developmental milestone: non-human primates never acquire the ability; and human primates only acquire it at nine to twelve months of age. For later observational and ostensive behavior, the intentional attitude can be an ultimate representational interpretant, the ground can be symbolic (*look!* or *get a load of him*), and the intentional status can have propositional content.

14. Purposes were prior to purchases, functions, statuses, and values; epistemic commitments are prior to empirical and practical commitments; and, somewhat paradoxically, purposes are prior to epistemic commitments — and hence purposeful actions are prior to assertions (which are, of course, purposeful speech actions!), but assertions are prior to intentional actions and observations. The following hierarchy emerges. Assertions are prior to observations and (intentional) actions; (purposeful) actions are prior to affordances, instruments, roles, and identities; and (purposeful) actions are prior to assertions. Regarding 'consciousness,' we might distinguish between merely phanerons (sensations due to incoming sound waves and light waves), experience (sensations paired with non-propositional semiotic objects), and perception (sensations paired with semiotic objects. And ditto, regarding behavior, we might distinguish between mere movement, purposeful action, and intentional action.
15. This typology only focuses on intentional roles (as signs) and intentional statuses (as objects), ignoring intentional attitudes (as interpretants).
16. And finally, in the realm of relatively non-emblematic roles, it should be stressed that *any mode of comportment* (i.e., heeding an affordance, wielding an instrument, undertaking an action, performing a role, or filling an identity) may follow from an intentional status as a consequent sign event (or lead to an intentional status as an antecedent sign event), and hence constitute an intentional role. For example, the action of walking across a rotting bridge may index a belief that it will hold one's weight, whereas tiptoeing across it may index a fear that it won't. Roles and identities index beliefs, desires, 'structures of feeling,' and so forth. Roles index knowledge: being a lawyer, a doctor, a dressmaker, a wine taster, and so forth. Many 'emotions' are inferred by another's heeding of affordances in non-canonical ways (interpreting alleys as hiding places), or wielding instruments in non-canonical ways (holding a knife upside down — as if to stab rather than slice). These signs are maximally metonymic: they primarily index other objects (instruments index functions, actions index purposes, roles index statuses, etc.), but they come to index intentional statuses by being in frequent contiguity with them — precisely by being one of the fruits of that intentional status as an embodied sign. The key point, then, is that the fruits of embodied signs — the consequent sign events — are often the best signs, and hence intentional roles, of that embodied sign, or intentional status.
17. Here the proposition is given a mental interpretation (as maximally subjective); and the state of affairs is given a worldly interpretation (maximally objective).
18. Brandom calls these *doxastic* commitments.
19. These need not be lexicalized in any language because they already have the most ubiquitous signs: declarative sentences, directions of attention, and controlled behaviors.

20. There is of course non-licensed attribution, and non-attributed undertakings: we attribute intentional statuses to people who did not do something that would license it; and we undertake intentional statuses that people fail to attribute. All this depends on local understandings of what counts as good evidence for an intentional status. The DSM IV, for example is one expert account of what licenses a psychiatrist to attribute an intentional status — depression, anxiety, and so forth. And, of course, being attributed such an intentional status, especially if the attributor is an expert, often leads to acknowledging it.
21. As intimated, if there are intentional statuses and intentional roles, then there must be intentional attitudes — or others' interpretants of one's intentional status which arise because of one's intentional role. In particular, most intentional attitudes are just ultimate (representational) interpretants of others' or one's own intentional status: treating others or oneself as if epistemically, empirically, or practically committed to some proposition, and sanctioning behavior accordingly. That is, intentional statuses, like objects more generally, are primarily instituted by others' attitudes towards them, as evinced by the sanctioning practices of a community, and as embodied in the dispositions of its members.
22. Epistemic, empirical, and practical commitments are inferentially articulated: if one is epistemically, empirically, or practically committed to a proposition, one is epistemically, empirically, or practically committed to any other propositions which may be logically derived from it. Brandom (1994: 168–170) characterizes inferential articulation in terms of inheritance of commitments and entitlements. *Committive* inference is being committed to one proposition as a consequence of being committed to another proposition. *Permissive* inference is being entitled to one proposition as a consequence of being entitled to another proposition. And *incompatible* inference is having one's entitlement to a proposition be precluded as a consequence of being committed to another proposition.
23. Sellars (1963) referred to actions as 'language-exit' moves (where position within language game responded to via nonlinguistic situation), and to observations as 'language-entry' moves (where nonlinguistic situation responded to be adoption of position within language game), and to assertions or claims as 'intra-language' moves (where position in language game responded to be adoption of another position in language game).
24. This is Sellar's interpretation of Kant's maxim that percepts without concepts are blind.
25. Loosely speaking, having an epistemic commitment caused by a state of affairs is the rationalist version of Piageian accommodation (or Austin's appropriateness); and having a practical commitment cause a state of affairs is the rationalist version of Piagian assimilation (or Austin's effectiveness). That is, perceptions are causally appropriate and logically effective; intentions are logically appropriate and causally effective.
26. In Brandom's framework (1994: 261), intention is sometimes understood as an intentional status (practical commitment) and sometimes understood as an intentional attitude (acknowledgment of practical commitment). When they are understood as attitudes, intentions are causes: for in a properly trained agent acknowledgment of practical commitment reliable causally elicits performances. This then is inferentialism's answer to the question of how mind affects body.
27. In the tradition of Anscombe (1957), Davidson (1980) argues that a performance (or controlled behavior) is an action (under any description) if it is intentional under some description. He argues that it is intentional under some description if that description figures as the conclusion of a piece of practical reasoning that exhibits the agent's

reasons for doing it. And he offers an account of primary reasons (e.g., a 'belief' plus a pro-attitude) to explain what it is for a reason to rationalize a controlled behavior according to a practical inference. Phrasing this in the idiom introduced here, a controlled behavior is intentional (under some description) and an action (under any description) insofar as it is the acknowledgment or self-attribution of a practical commitment. And an intentional action is rational insofar as it stands as the conclusion of an inference turning on an epistemic commitment and a pro-attitude (Brandom 1994: 233, 255).

28. Even Freud was an attempt to use desire to rationalize (unintentional) action. That is, just as (saited) desire may be used to rationalize intentional actions, (frustrated) desires may be used to rationalize unintentional actions.
29. To make this point explicit, note the following example: to attribute to an individual a preference for staying dry is just to take inferences of this form (only remaining in the car will keep me dry, so I will remain in the car), as entitlement preserving; and is to license pattern of inferences. And to endorse such a pattern is to implicitly attribute preference to individual that could be explicitly attributed by undertaking commitment to ascriptional claim: *A wants to stay dry* (Brandom 1994: 248).
30. Crucially, Davidson (1980) thinks reasons are causes: primary reasons rationalize actions, first by providing reasons for them and second by serving to bring them about. In contrast, Brandom thinks Davidson conflated commitment and entitlement to that commitment: one can act intentionally without having reasons to do so; and one may have a reason to act, and have an intention to act, but not act. For Brandom, the causal nature of statuses happens because of attitudes towards statues insofar as statuses determine what roles are proper. In this way, the only access statuses have to the causal order is through the attitudes of signers (1994: 260). What observable states of affairs causally elicits in perception, is attitudes — acknowledgments of empirical commitments; and what attitudes (acknowledgment of practical commitments) causally elicits in action is the production of performance. This is what it means to say that a performance must not only be caused by an intention, but be caused by it 'in the right way.'
31. In sum, exhibiting a bit of practical reasoning rationalizes practical commitment; accepting a practical inference as entitling someone to practical commitment requires endorsing inference as permissively good (but can be defeased by incompatible commitments), but doesn't require that scorekeeper endorse premise (which would pick out objective entitlement or unconditional ought) (Brandom 1994: 253).
32. In general, there can be failures of presupposition (regarding the existence of a referent) and failures of foci (regarding the applicability of predicate to a referent).
33. As Brandom notes, 'Thought of in this way, the distinction between *de dicto* and *de re* should not be understood to distinguish two kinds of *belief* or even belief-contents, but two kinds of *ascription* — in particular two different *styles* in which the *content* of the commitment ascribed can be *specified*' (1994: 503).
34. In certain cases — say, via reported speech — this can happen: 'she said "ouch!"'
35. As Brandom puts it, 'The introduction of a sentential operator that functions as "S believes that . . ." or "S is committed to the claim that . . ." does in English make it possible not merely implicitly or in practice to *take* someone to be committed to a claim, but explicitly to *say* that someone is committed to a claim, and to which claim. The explicit is the claimable, what can be given as a reason and have reasons demanded for it; ascriptional locutions make implicit attributions explicit as the contents of claims' (1994: 498).
36. Finally, we might ask what are some of the key topics, questions, stakes, theories, methodologies, methods, epistemic practices, and ethical practices of an episteme, and

what have they been in its past? These questions can, of course, be asked of any episteme; and part of knowing the history and culture of an episteme is knowing how the answers to these questions, normatively speaking, change or remain the same over its lifetime. Indeed, just as a large part of doing convincing research is knowing which of these norms to adhere to, a large part of doing creative research is knowing which of these norms to break.

37. Though, it may also be related to Wittgenstein's *form of life*, Kuhn's *paradigms*, Canguilhem's history of epistemology, and latter-day science studies scholars who are immersed in and reacting to these ideas: Latour, Simon, Shaffin, Woolgar, and so forth. This would involve related ideas such as the historical ontology of Hacking (2002); though Hacking tends to focus on 'theory' and 'intervention' (see, for example, his 1983 monograph entitled *Representing and Intervening*).
38. Experiments with American and European middle- and upper-class children has offered a fairly consistent model of 'Western folk psychology.' For example, there are systematic taxonomic and partonomic interrelations among various mental states (D'Andrade 1995; Rips and Conrad 1989; and Wellman 1990). There is a notion of the mind as distinct from the body, yet held in the brain and equivalent to the self (Johnson 1987). There is a notion of the privateness of mental states, and their representational capacity (D'Andrade 1995; Wellman 1990). There is a notion of real entities able to be distinguished from mental entities on the basis of sensory evidence, public existence, and temporal consistency (Wellman and Estes 1986). Some studies show that there is a tendency to personify the mind, such that children move towards a conception of the mind as an independent entity (Wellman and Hickling 1994). And studies show that subjects think that people can and should know the mental states of others. These studies accord with the number of mental state terms in English — there are over 200 word devoted to the emotions alone (Wallace and Carson 1973) — and with the propensity to use such terms in describing the behavior of others (Friestad and Wright 1995).
39. It should be stressed that one cannot account for emotions without simultaneously offering an account of selfhood and agency — the former, as what is at stake in an interpretation; and the second as determining emotions as those mental entities over which one has relatively little agency, as the western ethnotheory often has it.)
40. Indeed, most sophisticated accounts of emotions do not see them as 'internal states,' but as the relatively systematic bundling of some combination of the following components: eliciting situation; physiological change; reflexive signal; relatively controlled response; subjective feeling; and second-order interpretations of this ensemble of components as relatively uncontrollable, subjective, and natural. As may be seen with this example, 'The semiotic stance' naturally incorporates these components, and goes far beyond them. Notice how the attempt to include 'appraisals' in understandings of emotion is usually theorized as a way of bring concepts, or 'cognition,' back into our understanding of affective phenomena. Notice that only representational interpretants require *concepts* per se; yet all interpretants require meaningfulness.
41. Natural kinds are 'categories that supposedly correspond to some real distinctions in nature and around which theories are constructed' (Griffiths 1997: 171).
42. Note that while affect programs may be cross-culturally shared, in different cultures they may nonetheless have distinct behavioral entailments, co-occurring signs, modes of interpretation, and classes of eliciting objects. In sum, while affect programs themselves may very well be natural kinds, they at best serve as a cross-culturally distributed set of stereotypic physiological responses that individual cultures may experience, elaborate, and interpret in their own locally specific ways. To paraphrase what Sahlins

(1977) said regarding Berlin and Kay's (1969) seminal work on basic color terms, such programs are not the imperatives of culture, but its implements.

43. Though perhaps for the purposes of local reasoning, a point not considered by such authors.

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