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Good prospects: ecological and social perspectives on conforming, creating, and caring in conversation

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Abstract

Ecological approaches (e.g. [Gibson, J.J., 1979. *The Ecological Approach to Visual Perception*. Houghton-Mifflin, Boston]) to psychology and language are selectively reviewed, focusing on social learning. Is social learning (e.g., acquiring language) a matter of conformity [Tomasello, M., 2006. *Acquiring linguistic constructions*. In: D. Kuhn, R.S. Siegler, W. Damon, R.M. Lerner (Eds.), *Handbook of Child Psychology, Cognition, Perception, and Language*, sixth ed., vol. 2., Wiley, Hoboken, NJ, pp. 255–298], creativity [Chomsky, N. 1965. *Aspects of the Theory of Syntax*. MIT Press, Cambridge, MA], or something else? Ecological approaches [Reed, E.S., 1996. *Encountering the World: Toward an Ecological Psychology*. Oxford University Press, Oxford; Hodges, B.H., Baron, R.M. 1992. Values as constraints on affordances: perceiving and acting properly. *Journal for the Theory of Social Behaviour* 22, 263–294] put the focus on values. Reed's account highlights the collective appropriation of affordances, the precocious perception and enactment of "unfilled meanings," and children's becoming persons through the active structuring of their environment (e.g., gestural games, story-telling). Hodges and Baron's account of values as multiple, heterarchical, dynamical, and legitimating constraints on actions is applied to cases of pragmatic rule violations, particularly Hodges and Geyer's [Hodges, B.H., Geyer, A.L., 2006. A nonconformist account of the Asch experiments: Values, pragmatics, and moral dilemmas. *Personality and Social Psychology Review* 10, 2–19] reinterpretation of Asch's [Asch, S.E., 1956. *Studies of independence and conformity: I. A minority of one against a unanimous majority*. *Psychological Monographs* 70, (9) (Whole No. 416)] influential experiments on social influence and perception. These ecological, social, and values-realizing accounts suggest that conversations are about seeking good prospects, caring for others and self, and inviting responsible action. The possibility of language as a perceptual system

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[Gibson, J.J., 1966. *The Senses Considered as Perceptual Systems*. Houghton-Mifflin, Boston] for exploring dialogical arrays, and an action system [Reed, E.S., 1982. An outline of a theory of action systems. *Journal of Motor Behavior* 14, 97–134] for coordinating diverse space–time scales is considered.

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1. Introduction

In his chapter on “acquiring linguistic constructions” Tomasello (2006) puts social learning at the center: “the most fundamental process of language acquisition is the ability to do things the way that other people do them” (p. 286). This suggests that learning to talk with others is primarily a matter of conformity. Tomasello’s view provides an interesting contrast to Chomsky’s (1965) claim that creativity (i.e., the ability to comprehend and produce novel sentences) is at the heart of language. To explore this and related issues in linguistic studies, I will use two unusual vantage points. The first is Gibson’s (1966, 1979) ecological approach to psychology; the second is the social psychology of Asch’s (1956) studies on disagreeing with a unanimous majority. The view that emerges is that realizing values is central to language, and neither creativity nor conformity, as usually understood, adequately captures the dynamics involved.

To begin, I will provide a brief introduction to Gibson’s ecological approach, followed by an overview of ecologically oriented approaches to language, focusing on the contribution of Reed (1995, 1996). Then I will describe more fully the centrality of values to an ecological account, including the relation of values to laws and rules (Hodges and Baron, 1992). Pragmatic rule violations are used to illustrate this values-realizing ecological approach. Finally, possibilities for how ecological studies of language might proceed are considered, and related to various issues presented in this special issue.

2. Gibson, social learning, and values

Although known as a perceptual psychologist, James Gibson was deeply interested in social psychology (Reed, 1988). In a little noticed chapter, he (Gibson, 1950) made the following remarkable statements.

The social sciences are badly in need of a theory of human learning. They look to social psychology for the formulation of such a theory. However difficult the task may be, no other discipline is in a better position to undertake it (p. 149). [S]ocial learning is inevitably moral . . . and it is probably a mistake first to construct a behavior theory without reference to social interaction, and then to attach it only at the end (p. 155).

Gibson’s statements are intriguing because social psychologists (like me) have not taken it as part of their task to explain human learning. Furthermore, they rarely highlight the moral dimension of their phenomena (Asch (1990) complained they often resist it). And finally, they regularly construct theories “without reference to social interaction”. The

gap between Gibson's vision and social psychology's practice will be illustrated in the interpretation of Asch's (1951, 1956) findings. The experiments are usually treated as a powerful demonstration of conformity, but they might be better understood in terms of conversation, creativity, and cooperation.

Thus far I have introduced two surprises, Gibson as a social psychologist and Asch's experiments as showing more about creativity than conformity. Now I will introduce a third and more central surprise. The ecological psychology that finally emerged from Gibson's (1966, 1979) work on perception, particularly vision, has values at its heart. In an interview shortly before his death, Gibson provided the following characterization of his life's work: "I have been moving toward a psychology of values instead of a psychology of stimulus" (Locker, 1980; cited in (Reed, 1988, p. 296). Gibson's ecological theory of perception still gets described as a stimulus theory (e.g., Zebrowitz, 1990), yet this is what he saw himself as opposing. Consider, for example, Gibson's (1979) characterization of visual perception:

The visual system hunts for comprehension and clarity. . . . Exploring and optimizing seem to be the functions of the system (p. 219). Knowledge of the environment, surely, develops as perception develops (p. 253). Perceiving gets wider and finer and longer and richer and fuller as the observer explores the environment (p. 255). A perception, in fact, does not have an end. Perceiving goes on (p. 253). A perceiver can keep on noticing facts about the world she lives in to the end of her life without ever reaching a limit (p. 243).

The value terms Gibson uses, such as *clarity* and *fuller*, are not goals that are achieved. "Rather, perceiving is a life-long commitment that has no fixed end, specifiable in advance, but is always seeking to become 'wider, finer, and richer' " (Hodges and Baron, 1992, p. 267). Thus, Gibson's mature theory of perception is deeply developmental. Even though we do not think of Gibson as a developmental or a social psychologist, his ecological perceptual theory was a partial answer to his earlier call for a "theory of human learning".

Gibson also noted that social learning is "inevitably moral". How does his ecological perceptual theory pertain to the moral dimension of living and learning? It appears at the center of his theory, in the theoretical concept he invented to describe what it is that we perceive when we look, listen, sniff, or handle. Against the whole of the Western tradition Gibson (1979) claims what we perceive directly are the "values and meanings of things" (p. 127). His invented term for these meanings and values was *affordances*, which he defined as "what it [the environment] offers the animal, what it provides or furnishes, either for good or ill" (1979, p. 127). Gibson expended most of his efforts on developing a theory of visual perception. His intellectual descendants have focused mostly on action and perception. Linguistic activity, though, has garnered relatively little attention, but what if we were to view such activity in terms of values?

2.1. Ecological perspectives on language

An ecological approach to language tends to move away from syntactic and semantic idealizations that have dominated cognitive theories of language toward the boundary conditions that make language viable and useful. One direction to be explored is the production and perception of articulatory actions in auditory and visual information from

voice, face, and hands (Fowler, 2003; Rosenblum, 2005). The other movement is in a more social direction, toward the physicality of two or more contextually situated bodies conversing with each other (Chambers et al., 2004; Shockley et al., 2003; Verbrugge, 1985). These two seemingly opposite directions—toward the phonological-gestural and toward the social-pragmatic—come together in treating language as a social, situated, embodied activity. Thus, Fowler (2003) makes the critical observation that linguistic laboratory tasks are nearly always done in ways that divorce the production or perception of phonemes from their being embedded within the cooperative social discourse that is their normal environment.

Perhaps the ecological psychologist who worked hardest to develop an ecological approach to cognition and language, particularly its social dimensions, was Edward Reed (1995, 1996). I will not systematically summarize his views, but will provide a sampling to illustrate an ecological approach and to prepare for my later discussion of values, pragmatics, and the functions of language.

Ecological science is the study of various animals' motivated attempts to realize values. These "efforts after meaning and value" (Reed, 1996) are psychologically basic and often include modifications of the environment. In its focus on meaning and value, ecological science stands in sharp contrast to the mind-body dualism of behaviorism and cognitivism, both of which tend to reduce motivation to one or a few desires or drives. Motivation, though, is diverse and complex. Human efforts after meaning and value are distinctive because they "collectivize motivation" (p. 103), that is, the actions of any given individual have effects on subsequent efforts by others. Over time and across various people, systematic biases emerge in the directions that activities take. This developmental and social biasing leads to humans creating affordances, as well as discovering them.

This biasing process is apparent in the "active structuring of infant environments" (Reed, 1996, p. 126) that is universally observed. Central to the child's surroundings are other people: "The traditional Western view of the infant as first learning about things and then coming to understand people is almost completely backward" (p. 128). Caretakers bring children into socially patterned fields of influence where certain activities and affordances are promoted and others not. Children, however, are not passive recipients of guidance by adults; rather, children's actions increasingly scaffold the activities of caretakers. By nine months, if not sooner, children are babbling, taking a major role in games, resisting the influence of adults, and to some extent setting their own agendas, making known "their disagreements with the course of events" (p. 136).

Reed offers three important characteristics of cognitive development that set the stage for the development of children's abilities to listen and talk to others. First, children assume environmental patterns are meaningful—they recognize the worth of some activity (event, place) before they are actually capable of entering into the activity (e.g., they recognize the value of books and reading before they can read). Second, children do things before they can do them in a satisfactory or complete way; they act, trusting that others will scaffold, complete, and repair their actions so that disasters do not occur. Reed refers to these characteristics of cognition as the "precocious" perception and action of "unfilled meanings" and suggests it is one of the leading causes of cognitive development. These precocious acts occur because children are completely enmeshed in organized systems of meaning and value. Reed's claim draws attention to the fact that children perceive their caregivers as just that: They perceive quite clearly that these people are meant to care for them, and they trust that they will give them what they need.

An intriguing extension of Reed's ideas is explored by Okada and Goan (2005). They are using a robot, Muu, to interact with young children to explore how verbal exchanges begin. Social interactions begin, they believe, by one party making a verbal offering to the other that is "indeterminate" and "entrusting". Indeterminacy, they propose, is the driving force in social interactions, but it invites a "responsible" other to complete what has been begun, moving it in a more determinate direction. What enables these indeterminacy/trusting/prospective-completion cycles to become "grounded" is that both the child and the robot attune themselves to the larger physical context, including the actions of the other (cf., Cangelosi, this issue). Utterances that begin as inarticulate become more articulate and meaningful in the physical context within which the verbal cycles take place.

Reed suggests that a crucial ontological shift in development occurs with the mobility of the infant, since it provides multiple perspectives and paths of observation (i.e., literally different points of views). Gibson (1979) argued that one of the most basic facts of perception is occlusion, the fact that particular surfaces and objects come into and go out of view with movement. This mobility allows the child to realize more clearly that he or she is exploring a common, shared environment. It also increases the child's sensitivity to why people in different positions might disagree.

The role of diversity and conflict in language development plays a crucial role in Reed's account.

Children learn language only under specific conditions of conflicting information . . . [They] require a *non-uniform* environment, in which places differ from one another and in which events vary. Far from being 'noise' which creates a problem for language learners, both the linguistic variations and non-linguistic variations (contexts, gestures, games) in the use of language provide crucial information . . . about the way language is structured (Reed, 1995, p. 6).

This contrasts sharply with cognitivist accounts of language. Chomsky (1986) states that is "absurd" to claim that language is learned "under conditions of diversity and conflicting evidence" (p. 17). Reed's view is that, rather than being confronted by fragmentary and degraded input to a cognitive system charged with playing the role of a hypothesis-testing linguist, children are faced with the task of how to enter actively into the highly structured and complex activities of a listening and speaking community. The child's problem is not under-specification or ambiguity, but "an overabundance of structure wherever she attends" (Reed, 1995, p. 8). What is required is not an innate universal grammar that is parameterized, but an environment in which one can act to explore its action-perception possibilities, along with a community inhabiting that environment whose members are happy to speak and listen to its newest members. Linguistic and developmental studies have frequently and falsely assumed that children were passive and alone, rather than "sophisticated dialectical interactors" embedded in richly structured contexts within which they can discover complex patterns of co-variation.

Reed's account of human cognition and language yields other distinctive claims. First, he (Reed, 1995) proposes that children begin speaking as a form of action: they indicate their interests or intentions. Later, the instability and inflexibility of indicational activities leads them to begin generating predicates as a way of negotiating conflicts among various people's perspectives and goals. Speaking and listening emerge as a way of thinking, which Reed (1996) describes at the "collective appropriation of affordances" (p. 140). "It is

groups of humans, not individuals, that most typically embody the cognitive processes” (p. 169).

Second, “language is not a means of transmitting ideas or representations; it is a means of making information available to others” (Reed, 1996, p. 155), italics deleted). Language emerges from signaling: Our utterances point to something in the environment, particularly upcoming events, that others should be aware of. What is uttered is ambient and public; everyone nearby hears what is said and can use it to regulate their own activity. Reed suggests that language is particularly useful in assisting collectivized prospective control (i.e., shared directed activity), and may involve references to possible, hypothetical, or fictitious scenarios (see discussion of stories below).

A third and telling way of distinguishing an ecological view from cognitive views regards the function of our speaking. According to Reed, “One could argue that the primary function of language is for concealing thoughts, distracting others away from knowing what one is thinking” (1996, p. 157). He goes on to say:

The simplemindedness of mainstream cognitive psychology about the nature and function of human communication is breathtaking. The tacit assumption by cognitivists that concealment of thought is bad and something to be done away with by development, is naive, to say the least. Many caregivers have ardently wished that they could teach their children the art of concealing their thoughts. (Reed, 1996, p. 157)

Finally, Reed (1996) suggests that a fundamental affordance of language is the hearing and telling of stories. Suggesting that it is “second only to perception” as a way of synthesizing experience, Reed takes stories to be a creative means for weaving together cognitive (reality oriented) and non-cognitive (fiction oriented) modes of thinking (p. 174). The weaving of fictions and truths indicates the “experience is alive and always open to growth” (p. 175). What is now true may become not so, if we act to change the existing relationships; and, what is now only a fiction may become a reality as we adapt and create new affordances. As Reed observes, “Humans do not think solely instrumentally about themselves, others, or the world around them; they necessarily think in terms of standards, norms, and even taboos. Indeed, many humans seem quite capable of thinking in terms of two or more set [sic] of proprieties, even when the norms they embody may be inconsistent with each other” (p. 183).

To explore what it means to be story-telling animals that “necessarily think in terms of standards,” it is necessary to return to the nature of values and their role in action and cognition.

3. Values, violations, and social pragmatics

Before considering how ecological models of linguistic activity might be developed and applied to various social situations, I want to clarify the larger context of values in which I earlier placed Gibson’s work. After considering values I will turn to one aspect of language—pragmatic rule-violations—and the social and moral functions of language they reveal. The central case to be considered is the experimental dilemma created by Asch (1956). This and other cases may provide some purchase on issues such as whether language is special (Ross, 2004), digital (Love, 2004), conformist (Carr, this issue), creative (Thibault, 2005), dialogical (Linell, this issue), and goal-seeking (Tomasello et al., 2005).

3.1. *Realizing values in ecological perspective*

Hodges and Baron (1992) proposed an ecological account of values that attempted to develop Gibson's intuitions, but that differs from Reed's (1996) account in certain respects. Rather than locate values as objective properties of particular objects and events (as Reed does) that afford certain goal-seeking activities, Hodges and Baron proposed that values are the boundary constraints on ecosystems that define their dynamics and the directedness of organisms' activities within them. In their formulation, values underwrite the self-organizing constitution of niches (i.e., ways of life) that guide the selection, coordination, and revision of goals and affordances. In short, values have priority over goals, rather than being means for their realization. However, both accounts treat values as ontological realities that are fundamental, not reducible to biological processes, social conventions, or personal preferences.

Hodges and Baron differentiated their account of values from scientific accounts framed only in terms of laws and/or rules. Claims of linguistic universals (e.g., Hauser et al., 2002; Pinker and Jackendoff, 2005) illustrate attempts to provide law-governed scientific accounts, while accounts that stress the conventional, arbitrary, and local stabilities of phonology, syntax, or semantics illustrate rule-following accounts. The difficulty with law-ful and rule-following accounts of action and cognition is that they are incomplete, inconsistent, or enigmatic (e.g., Harré and Secord, 1972; Martin and Kleindorfer, 1991; Kugler et al., 1991). Hodges and Baron proposed that laws and rules are better understood if they are nested within values-realizing dynamics, arguing that values themselves cannot be treated as a species of laws or rules.

Values are multiple, heterarchical, dynamic, and legitimating constraints on actions. Each of these aspects of values will be considered briefly. First, any action—reaching for a glass, driving a car, asking a question of a friend—is necessarily guided by multiple values. This fact is easily overlooked (Hodges, *in press*). Consider, for example, what constitutes good driving. Accuracy is a criterion that many researchers have studied (e.g., how precise is the perception of time-to-arrival of another vehicle?), but without considering other relevant values. This has led to enigmatic findings. For example, researchers were surprised to learn that drivers were not as accurate as time-to-arrival laws suggested they should be. Actions, such as braking, tended to occur “too soon” (e.g., McCleod and Ross, 1983; Caird and Hancock, 1994; Hesketh and Godley, 2002). What appears to be an error turns out to be the operation of other values, notably safety. Stopping sooner rather than later is nearly always the right thing to do. The ecosystem of good driving is defined by many values—accuracy, safety, efficiency (e.g., speed), and kindness (i.e., tolerance for others), among them. Isolating one value from others treats the value as if it were a goal, subverting its own realization (Hodges and Baron, 1992). Research suggests that driving and other skills are values-realizing, rather than (only) goal-oriented (Hodges, *in press*).

Second, what makes the relationships among these various values all the more interesting is that they are in tension with each other. The closer the car comes to other vehicles, the more accurate the driving, but the less tolerant and safe it is. Good driving works to maximize all the values, not just one or a few of them. This may lead to tradeoffs, but they are temporary and reversible. Hodges and Baron (1992) referred to this as the heterarchical relation of values to contrast it with a fixed hierarchy or a simple equality. In driving, sometimes safety takes the lead and other values follow, while speed or kindness might predominate in other situations (Hodges, *in press*).

Third, values have an intrinsic developmental dimension that is both directed and open-ended. Any given value is itself revealed over time through attempts at realizing it. We become clearer about what clarity is through our attempts at realizing it. The mutually constraining, heterarchical relations among values are intrinsically dynamic, motivating continuing developmental change. For example, what it means to be a good driver is something that changes over time. While first learning to drive, accuracy of steering and stopping increases, as well as the ability to coordinate multiple activities at once (comprehensiveness). As drivers mature and age, continued adjustments are necessary to realize values: As reflexes become slower and eyesight dimmer, drivers may decrease accuracy (e.g., leaving larger gaps between themselves and other vehicles) and comprehensiveness (e.g., driving only in daylight). Similarly, various values that constrain linguistic utterances—being clear, being brief, being newsworthy, being interesting (Slobin, 1979)—lead to the evolution of languages over time and the variation of an individual's utterances across situations. The open-ended, developing character of values is sometimes seen as a weakness by researchers who prize specificity, fixity, and determinate goals and rules. However, the play in values is what allows action to function intentionally and adaptively. This play is a kind of juggling, an activity which has been found to be best “on the edge” of law-governed cycles of activity (Beek et al., 1992). Perhaps, as Bakhtin (1984) has suggested, skilled human activity is “all and always on the boundary” (p. 287).

Finally, values are essential to legitimate the epistemic, aesthetic, and ethical activities of humans. Accounts of human activities framed only in terms of laws and rules are inadequate (Hodges and Baron, 1992; Shanon, 1993). For example, humans not only have a need to talk and a desire to speak articulately, grammatically, and meaningfully, but an obligation to say something of worth. Values, the criteria of worth, have often been ignored by psychologists or treated as needs (i.e., laws) or desires (i.e., rules). For example, language studies have paid far more attention to phonology, syntax, and semantics than to pragmatics, and even researchers in pragmatics have often treated values (e.g., clarity, coherence) as non-moral and rule-following (e.g., Mey, 1993).

The claims I have made about values are not meant to undermine the existence or importance of laws and rules, but to put them in a larger context, if action is to be coordinated, directed, and worthwhile. Stabilities are necessary but insufficient; without a set of dynamics within which they can operate, laws and rules would be inadequate.

3.2. *Delicate situations and rule violations*

The particular aspect of language I want to consider in terms of values and affordances is the violation of rules, or, more generally, pragmatic anomalies. Although language is frequently described as rule-governed, utterances and understandings move toward realizing values, which sometimes leads to rule-violations. Let me begin with two personal examples.

Some years ago my son, then 13, and I stood in our kitchen. A few months earlier his mother had died of cancer and his older sister had moved from home to take a job in Boston. As we prepared supper, my son was speaking longingly of the days when there were more of us and things were done differently. Looking tenderly at him, I said with determination, “Well, it's just us two bachelors now; we'll have to make the best of it”. Without missing a beat, he glanced over at the male cat I had gotten for him a few days after his mother's death, and said, “You forgot the cat; there are three of us bachelors”. We both laughed and went back to “making the best of it”.

My use of the term *bachelor* violated semantic rules—in truth, neither of us were proper bachelors—but my son took my hyperbolic extension and extended it to even more absurd lengths. Instead of provoking confusion, our linguistic movements clarified our situation. “Our violations of the meaning of bachelor expressed poignantly the violation (i.e., the loss) we both felt, the wishing-and-woe that is associated with bachelors, and the hopeful humor (extended to an other—in this case, the cat) that, with the help of others, we would yet be successful in our search for joy” (Hodges, in press).

The second snippet of conversation involved my daughter when she was about four. When I pointed out something to her as we were driving, she stated, “I’ve sawn that before”. Even though I knew it was deemed pointless by many linguists to correct such a statement, I found myself saying, “You mean, I’ve seen that before”. To which she replied (with some irritation and emphasis), “OK, I’ve seed that before!” Her response acknowledged my concern without conforming; rather, she created another possible, appropriate form (i.e., another possible rule). It demonstrated both her social solidarity with her linguistic community and her independence; she had cleverly acknowledged my (linguistic) authority and “put me in my place”.

Other examples of pragmatic rule-violations come from research on social development. Surprisingly often, parents say things to their children that are quite strange. For example, a mother confronting her son about his failure to make his bed, a task he knows he is expected to do, says, “I’m sorry Robbie, but we had to let all the servants go last week”. Similarly, a father might say to his daughter who is asking for money, and frequently does so, “I’m not an ATM [automated teller machine], you know”. Goodnow (1988, 1990; Goodnow & Warton, 1991) observed numerous examples of these sorts of statements in her studies of how parents and children interact around household tasks that have been assigned to the children. The strangeness of the statements occurs at several levels. One is that such statements were made when the child had little or no experience with servants or ATM’s. Developmental psychologists have generally assumed that good parents will provide clear guidelines and sensible explanations in guiding their children’s actions. Why offer metaphor, irony, hyperbole, and ambiguity instead?

A second level of strangeness is that parents appeared less concerned about what actually happened (e.g., whether money was given, or the bed was made) than with how it was done. Parents indicated that their greatest concern lay in whether their children showed evidence of caring about the relationship, and learning to take responsibility in it. Nevertheless, Goodnow noted, parents rarely spoke directly to their children about being responsible or gracious. What is going on? One possibility, suggested by a values-realizing, pragmatic perspective, is that the strangeness of the parent’s utterance invites (teases?) the child to notice the parent and to work to determine what the parent meant. To the extent the child accepts this invitation, it encourages the child to begin to enact exactly what it is that the parent wants the child to learn; it draws the child into treating the parent and the task at hand in a responsible, gracious, and caring way. If this is what is going on, it illustrates how parents create opportunities that afford the precociousness that Reed claimed was central to learning language.

3.3. Conformity or creativity? Speaking subtly in a digital dilemma

A final example of an ecological, values-realizing approach to pragmatics is provided in Asch’s (1951, 1956) experiments on majority influence, as reinterpreted by Hodges and

Geyer (2006). Asch's studies are among the most famous in social psychology and are usually treated as a particularly dramatic demonstration of humans' tendency to conform to others. The actual experimental situation Asch invented was to ask a small group of individuals to look at three parallel lines of differing length and choose the one (A, B, or C) that was equal to a fourth line that served as a standard. The lengths were carefully chosen so that, if one looked carefully, the correct choice was obvious. Going right to left, the experimenter asked each individual looking at the lines to answer as accurately as possible. This procedure was followed for 18 trials using different sets of lines. On the first couple of trials everyone gave the correct answer. However, on 12 of the remaining 16 trials all of the individuals except one gave an incorrect answer. That individual was, unknowingly, the only real participant in the experiment (the others were confederates), and was always sitting in the position that was next to last. What did those naive participants say when confronted by a simple, clear perception of the lines and an equally compelling perception of a social consensus that was erroneous?

Results of Asch's original study were complex. One-quarter of all participants never agreed with erroneous majorities; another quarter agreed on half or more of the critical trials; and the remaining half fell somewhere in between these extremes. The median was three agreements and nine disagreements. Although Asch described agreements as "errors," interviews (done after the judging was completed) revealed that participants generally did not believe the majority answers were correct (Allen, 1965).

What should be made of these results? Asch was shocked: He believed that in such a clear situation, people would say what they saw without regard to what others said. Despite his surprise and consternation, he tried to provide a careful, balanced portrait of his findings. However, social psychologists over succeeding decades have increasingly tended to stereotype the findings, focusing on the one-third of all answers that were agreements and the 75% of participants who agreed at least once with the majority (Friend et al., 1990). The experiments are frequently portrayed as "one of the most dramatic illustrations of conformity, of blindly going along with the group, even when the individual realizes that by doing so he turns his back on reality and truth" (Moscovici, 1985, p. 349). The most common explanations, offered to account for Asch's findings, focus on people's fear of being humiliated or ostracized by group members if they disagree, and/or on people's desire to use others as a source of information for deciding their own views. In short, Asch's participants are portrayed as cowardly or gullible.

Hodges and Geyer (2006) argued that interpreting Asch's findings only in terms of conformity is not only factually misleading—after all, most people most of the time did not agree with the majority—but it has led researchers to overlook a number of important aspects of the situation Asch created. They explored a number of these aspects in developing a non-conformist account of Asch-type dilemmas, several of which pertain to the ecological, values-realizing, and pragmatic aspects of language under discussion.

First, they suggested that the Asch dilemma might be viewed as a problem in conversational pragmatics. The experimenter asks a question and each person in the group answers in turn, with the true participant going next to last. Should the participant answer the experimenter's question as he would have if no one else were in the room and had spoken, or should he take their answers into account in giving his own. Asch's own analysis focuses entirely on the relation between the experimenter and the participant: He argues that the participant has obligated himself, by agreeing to be in the experiment, to speak truthfully to the experimenter. In fact, Asch thinks it is immoral for the participant to

do otherwise. Hodges and Geyer (2006) argue that Asch's analysis of the social and moral dynamics of the conversational situation is simplistic. In particular, they claim that Asch's account is insensitive to participants' obligations to their peers. On what moral and pragmatic grounds is it appropriate to ignore repeatedly what others are saying, or to contradict them at every turn? Viewed pragmatically, participants have to say whatever they want to say to their incorrect peers in the same utterance that answers the experimenter's question. What does one say in a strange, even tense, situation, marked by incredulity and disagreement? Hodges and Geyer (2006) suggest that it is too simple to claim that agreement with incorrect answers merely reveals a loss of courage or a lack of commitment to the truth. Instead they suggest the dilemma is better understood as follows: How can participants speak the truth about their situation in a way that honors all the parties in the conversation and their relation to each other and to the environmental setting they are in? How can participants maintain the integrity of their own perceptions and the integrity of their relation to their peers and to the experimenter?

Second, Hodges and Geyer argued that the epistemological and moral ecology of Asch's dilemma requires that multiple values be realized. Not only is there an obligation to express accurately one's own view (i.e., truth), but there is also an obligation to take others' views seriously (i.e., trust), and to integrate one's views with those of others (i.e., social solidarity). It is, after all, a basic fact of social epistemology that we depend on others, that much of what we believe to be true is based on what others have told us (Campbell, 1990). If participants in Asch-type dilemmas were to dismiss or deny all claims by their (apparently) competent peers, it might satisfy Enlightenment scruples about independence of thought and action, but it would have little to recommend it as an ecological, values-realizing, or pragmatic strategy. It would be impolite at best, and irresponsible at worst (Brown and Levinson, 1987).

Third, Hodges and Geyer's account suggests that many, or even most participants in Asch's situation may have been neither the independent truth-tellers that Asch was expecting, nor the cowardly conformists that most social psychologists have portrayed. Rather they were ecologically sensitive, pragmatically astute individuals who were trying to realize multiple values in a complex and delicate situation. In support of this possibility Hodges and Geyer observed that previous discussions of Asch's results had ignored the middle 50% of participants (i.e., the average participants usually highlighted in scientific analyses). These participants (on average) disagreed with their peers 75% of the time on critical trials. It is difficult to see how this can be construed as fear of ostracism or a casual disregard for the truth. However, if participants care about truth and are willing to break ranks with their peers, why do they agree with erroneous others on some trials? Hodges and Geyer hypothesized that participants might be following a tacit, pragmatic strategy of varying their answers over trials to send a more nuanced message than any given trial allows. By agreeing occasionally and disagreeing mostly, they signal that they have clearly and respectfully heard the consensus of their peers, and that they dissent from that consensus. In short, they were willing to make local errors in an attempt to express a larger truth, namely, that they are in an awkward, frustrating situation in which there are tensions among multiple obligations. By mostly disagreeing they clearly communicate their concern for truth and their concern for their peers who need to be aware of and acknowledge this truth as well. On the other hand, by occasionally agreeing, participants make it clear that they care for the views of their peers, and do not think them crazy or irrelevant to their own judgments and statements. If all participants in

Asch-type dilemmas did nothing but dissent, which Asch thought was their moral obligation, it would be possible—likely, in fact—for peers to perceive their truth-telling as dismissive and arrogant.

If Hodges and Geyer's account is correct, then the pragmatic concern of participants is to give their own views honestly and forthrightly, but in a way that keeps them in conversation with their disagreeing peers. Even Asch (1952, p. 131) recognized that for dissent to work, the dissenter had to share with the majority a “deeper lying unity,” (i.e., a common commitment to working together to discern truth and error). Thus, instead of seeing agreeing answers as “errors” (i.e., culpable dishonesty or cowardice), one can see them as a refusal by participants to be trapped by a digital dilemma. By creatively complexifying their behavior, Asch's participants indicated that they cared for truth, for others, and that others care about truth.

Before leaving the Asch-situation as an example of pragmatic values-realizing violation of rules, there are three phenomena of note that provide further illustration of the complexities of such matters. The first is the question of what would happen in an Asch-dilemma that was among friends rather than among strangers. While all conformity theories predict that friends would “conform” more than strangers, the Hodges and Geyer account predicts that friends would be less likely to agree with erroneous answers of friends than with strangers. Seen from a conformity perspective, friends exert more social pressure on each other, increasing agreement; however, from a values-pragmatics perspective, friends have already established trust and caring, allowing them to be bluntly honest in a way that strangers cannot (Heider, 1958). The results of existing studies, which surprised their authors (McKelvey and Kerr, 1988), support the values-pragmatics hypothesis.

A second complication of the pragmatics of Asch-type dilemmas is posed by cultures that are less individualistic than most Western ones. Hodges and Geyer (2006) briefly reviewed cross-cultural studies comparing the pragmatics of truth-telling by Chinese, German, and American speakers. Americans often view Chinese speakers as loose with the truth because they give priority to social solidarity (e.g., protecting family reputation) (Bond, 1990). But Chinese are similarly perplexed by the looseness of American's speaking because of their willingness to adopt an interlocutor's perspective on a topic rather than maintaining their own framework (Bloom, 1984). Yin (2002) indicates that Germans find Americans careless in their willingness to make public statements that are hypothetical explorations of a topic rather than reflecting a serious and studied conviction. Yin, however, goes on to note that in more intimate settings Germans, too, say things that reflect attempts at supporting the relationship more than expressing personal convictions. Hodges and Geyer claim that in each culture conversations must work to realize multiple values, and that the relationship among various values is heterarchical. Although one culture may tend to give the lead to truth over social solidarity, while another does the reverse, this relationship may reverse across situations within a culture. The upshot of these pragmatic complexities is that sometimes friends would be less blunt with each other than strangers (e.g., a dissenting family member in a collectivist culture speaking in a public context). Available evidence (Matsuda, 1985; Williams and Sogon, 1984) is limited but generally consistent with Hodges and Geyer's analysis.

Finally, Hodges and Geyer point out a paradox that helps to explain how values guide the use of goals and rules. What happens in an Asch dilemma if we heighten the importance of the task and being accurate? From a traditional goal-setting perspective, this

should lead to less agreement with erroneous majorities. However, from a pragmatic perspective, being asked to treat accuracy as a goal is likely to lead to enhanced sensitivity to the situation as a whole, especially the information contained in the views of others. Conversely, if one is working to achieve greater social solidarity or intimacy in a relationship, the more important truth and trust become. Goals (e.g., getting a pregnant wife to the hospital as quickly as possible) heighten sensitivity to other value constraints (e.g., safety and accuracy of driving). After all, the “reason” for driving to the hospital in the first place was to increase the safety of mother and child.

To summarize, Asch-type dilemmas illustrate pragmatic rule-violations in the service of realizing multiple values. Along with the *bachelor* and *seed* examples, and Goodnow’s studies of parents’ strange utterances to their children, it suggests that pragmatics is fundamental, and that it is concerned with values, not just conventionalized agreements of social propriety.

3.4. Does cooperating truthfully demand inconsistency?

One possible reaction to the discussion of Asch-type dilemmas is to see them as extraordinary (Ross et al., 1976), fascinating but rare. Strictly speaking, this may be true, however there are many quite ordinary situations that pose similar pragmatic and moral dilemmas.

Consider, for example, the extraordinarily common question asked by acquaintances passing each other during the day, “How are you doing?” Such a stereotyped question occasionally produces a great, rambling discourse on the person’s pains and problems, but usually not. “Fine,” the acquaintance replies. Which answer, if either, is appropriate? Is it true to tell all your aches and troubles, or is it truer to say “fine,” when asked how you are doing?

The Asch dilemma focuses on saying what is true, but as Hodges and Geyer (2006) reinterpreted it, it also poses a dilemma about whether to cooperate and how to do so. Truthfulness is one of Grice’s (1975) constraints on speaking, but it is interesting that those constraints *in toto* are often referred to as the cooperativeness principle.¹ Givón (1989) discusses the hermeneutical complexities of answering such simple questions. He notes that there are an uncountably large number of things that could be truthfully said about any given situation. What warrant can there be for choosing any particular one? One possibility is to say something that is cooperative as well as true.

My children when they were younger often answered my dinner-time queries, “What did you do today?” with the briefest of replies. “Nothin”. “Stuff”. Did they answer truthfully? Although it is possible to see the answers my children gave as truthful (i.e., “I did nothing that was special or unusual today”), what bothers us about such replies is that they do not make for good conversation. It does not give the other person much to work with; it lacks direction.

The question of truth then becomes enlarged from factual accuracy to one of direction. Has the answer given led in a good direction, one that invites the listener(s) into detecting and developing new affordances? The question of truth would become “How do we best

¹ Although Grice’s constraints are often treated as rules, or as laws (a communicative logic), I think they are better understood as instantiations of values (cf., Grice, 1991).

care for each other?” or “Will this utterance do some useful work?” Perhaps, speaking the truth needs to be judged less by factuality than by whether it moves the participants in the conversation toward activities of worth.

For example, if I am on my way to teach a class, late, and in something of a bad mood, and you ask me, “How are you doing?,” as we pass on the stairs, I might do better to keep it short and sweet. If I were to say, “Fine,” have I spoken falsely? By contrast, if you stop by my office, while I am grading exams, and ask me as your friend of many years, a simple “fine” may well be a faithless answer. Rules will not do the trick here. There are no rules that say that friends deserve long, blunt confessions of our momentary take on existence, while strangers should be spoken to briefly, delicately, and cautiously. Sometimes we might be more delicate in our speech with friends than strangers; sometimes we can speak less cautiously with a stranger than a friend.²

Being truthful in the sense of being faithful is about more than any one sentence. Most modern models of linguistics have simply assumed that the sentence is the proper unit of analysis. But Bakhtin counseled differently: Sentences are grammatical units (p. 74); only utterances (a “speech whole”) have ethical significance (p. 122ff). He argued that truth should be understood not as what is universal but what is unique; it is less about propositions to which I assent than to obligations I undertake, commitments for which I will be held accountable. Understood in this way, he claimed, truth is a kind of faithfulness, a being-true-to, “the way it is used in reference to love and marriage” (Bakhtin, 1993, p. 38).

Because pragmatics is about direction, it is about social learning and development. Thus, it is guided by values, not only by laws and rules. Truth is prospective and retrospective, rather than only being a matter of one’s current perspective. If one is pragmatic in the sense of being truthful in a faithful way, it almost invariably means that one will not be consistent. *This* particular time I may judge it right to say “fine” to your question about how I am doing, but I should not always do so. Most of the time, it may be that I should give your polite query a polite but uninformative response. Occasionally, perhaps something more expansive and precise would be best. It depends on whether moving the conversation in that direction seems promising. For example, if I am in a grumpy mood and am aware that I have a bad attitude, it might be wise to take some small opportunity—“Hi, Bert. How are you doing?”—to open up the possibility of some conversation that would redirect my concerns away from frustration and cynicism toward hope and gratitude. Hearing those small openings in others’ utterances is a crucial skill for a good conversationalist. With practice it becomes no less a perception-action skill than a rock-climber’s finding a good grip to hoist herself and her fellow climbers higher.

4. Good prospects: Creating new affordances for language and identity

How do ecological, values-realizing approaches illuminate studies of language, distributed cognition, identity, and other concerns addressed in this special issue? In talking with each other, humans create affordances, opportunities that invite the other into seeing and moving in certain directions that look promising. In this sense, conversations are always prospective: Conversations seek good prospects. They seek to provide affordances for

² For an interesting analysis of the “how are you doing” question from a social-cultural perspective, see (Akhimien, 2004).

going on—both in the conversation and in life more generally—in ways that will provide still more affordances, and richer ones.

4.1. *Poverty or riches?*

Many of the articles in this special issue explore whether there are richer affordances for language if it is studied as an embodied, distributed activity that is ecological, social, and dialogical. A criticism of such approaches raised by proponents of more formal, cognitive (internalist) models has been the “poverty of the stimulus” argument (Linell, *this issue*; Spurrett and Cowley, 2004; Tomasello, 2005). Not surprisingly, this is same argument that been made against Gibson’s (1979) ecological account of vision. In both cases the poverty lies in the unit of analysis chosen as “the stimulus”. For vision, the unit of stimulation chosen by cognitivists has been the retinal image; for language, the unit of stimulation has been the abstracted sentence. However, the intractable non-specificity of perceiving disappears rapidly in any real movement of agents through an optic array. Similarly, the non-specificity of sentences (or other semantic or syntactic units) disappears rapidly as listening-speaking agents explore what might be called the dialogical array. In both cases it is the ability of agents to act in ways that produce ordered variances that allow the invariants (i.e., stabilities) to be detected. Just as children learn what objects are moveable or not, and how so, they learn what aspects of utterances are moveable or not, and how so (Tomasello, 2006). In both cases they learn something of what those movements afford.

As Linell (*this issue*) observes, our relation to the environment is built on interaction, not representation. For this reason, images and sentences do not have to be decomposed, then reconstituted and supplemented with linguistic or visual grammars for us to engage in meaningful and appropriate action. The task of listeners is not to learn a lexicon and a grammar, but to “work out on the hoof” the “semiotic significance” (Love, *this issue*) of dialogical activity. It is this ability to act in coordinated, even cooperative, ways in ongoing interactions with others that makes it possible for signs to have a useful function, whether among humans, or among bonobos and humans (Cowley and Spurrett, 2003; Thibault, 2005).

4.2. *Conformity or creative sharing?*

Returning to the question raised at the beginning of this paper about Tomasello’s (2006) claim about social learning being central to language, what have we learned? The fundamental ecological task in acting and perceiving is to realize values. Social solidarity with those who speak to us and listen to us in caring ways is a crucial dimension of why and how we speak at all. As Hodges and Geyer’s reinterpretation of the Asch experiments reveals, agreement with others may be less an act of conformity than it is an act of coordinating multiple values and multiple relationships in creative ways. A values-realizing, ecological approach suggests that neither rule-governed creativity nor social conformity captures the heart of language.

The phenomena often described in terms of conformity (Carr, *this issue*) might better be conceptualized in terms of sharing. Tomasello et al. (2005) propose that what differentiates the social and linguistic interactions of humans and chimpanzees is sharing. Apes perceive the intentionality of others, but provide no evidence of wanting to share intentions with other apes or with humans. In light of Ross’s (Ross, *this issue*) arguments about

negotiation and codes, it is interesting to note that Kanzi, perhaps the most accomplished of the language-trained apes, “does not negotiate over meaning or support the other collaboratively in the communication process” (Tomasello et al., 2005, p. 686), citing Greenfield and Savage-Rumbaugh, 1991). They suggest that both apes and autistic children appear to lack “the motivation or capacity to share things psychologically with others” (p. 687). From an ecological perspective, the more basic issue may be that there is a lack of caring for the other and their well-being, which entails some larger sense of values (i.e., what is good for the other).

The creativity of conversation is less about generating new syntactic combinations than jointly acting to create new possibilities for action that are faithful to “old” responsibilities. Language is precocious and not just for children. Adults and children are always trying to say what they cannot yet formulate properly. Language is a means by which humans try to create the conditions that will make it possible for them to act better than they are. Human narratives yearn for change, not just constancy (cf. Ross, [this issue](#)).

5. Gauging the possibilities: Language as a perception-action system for caring

The invitation quality of language, its power to encourage humans to share and to care, leads to the hypothesis that language is a perceptual system in Gibson’s (1966) sense. Language is a fundamental means of probing what I earlier called dialogical arrays. Language uses gestures that are heard, seen, or felt by others (and the self) to explore the social environment as a means of ascertaining its directions and intentions. Also language explores vicariously the varying perspectives of others on the physical layout and its intentional possibilities (i.e., affordances). Language, as a perceptual system, helps us to explore (just as walking around and looking, or poking, sniffing, and handling do) where we are and where best to go next.

Why have we not thought of language as a mode of perception? One possible reason is that language appears to have no dedicated sensory anatomy. However, a central reason for Gibson’s (1966) positing of perceptual systems was to challenge the traditional assumption that perceiving was tied to specific anatomical structures. A visual system may include legs. Similarly, a linguistic perceptual system may make use of hands and eyes, as well as ears and vocal tracts, and not just those of one person. Other reasons for not thinking of language as perceptual are that it is viewed as a conveyance (Tomasello et al., 2005) and a code (Love, [this issue](#)). The former claim assumes that meaning is predetermined and equally available to all. The latter claim is that the meaning is secret and requires a special interpretive framework beyond the code (see (Love, [this issue](#))). However, from an ecological perspective, language is not merely public, nor merely private. It makes offerings (i.e., affordances) and those offerings can become gifts (i.e., useful), but only if the recipient engages in the requisite and complementary work entailed in dialogue.

What is the requisite and complementary work that is required? From an ecological perspective, language is physical, social, developmental, and moral. The origins of language lie in two or more physically situated animals interacting in order to act prospectively for some larger good that requires their joint attention. Speaking and listening thus demand an ongoing commitment to directing others and being directed by them to alter one’s attention and action, so that movement from lesser goods (i.e., one’s present position, achievement, or goal) to greater goods (i.e., values) is realized. If this is so, how might we characterize the function of language ecologically?

Learning to talk with each other is not about acquiring or activating some formal rule-system . . . [or] conforming our utterances to some local patterns of sound, syntax, and semantics. It is not, as Bertrand Russell (Givón, 1989) claimed, about asserting truths. Nor is it a matter of persuading others to match our expectations, as social psychologists usually treat it. It is more than coordination (Clark, 1996), or even cooperation (i.e., using language as a tool to achieve common goals). It is a way of caring for others, for our self, and for the world. In the context of that caring, all these other functions of language do occur –coordination, cooperation, conformity, truth-telling, etc. Ecologically, we might think of talking with each other as a form of *way-finding*. (Hodges, in press)

The work required in caring and way-finding often demands the kind of complexity and subtlety illustrated in Asch's dilemma. As Reed (1996) noted, language hides as well as reveals; it diverts as well as divulges. Caring for others, self, and world requires being careful, which leads to language often being indirect and multiply addressed. One could argue that one of the primary reasons for listening to others is to help us to be careful.

To speak of conversing as a form of caring and way-finding leads to another ecological hypothesis: Language is an action system in Reed's (1982) sense, where action system is contrasted with a motor system.³ Behavior (i.e., intentional action) is not a peripheral (motor) response to a central (efferent) command, nor a response triggered by environmental events. Rather, "actions are realizations of what the environment affords" (Reed, 1982, p. 101). Even a spinal frog's reflexive use of its legs to wipe irritating substances off its body is organized to deal with environmental space, not a local sign of skin stimulation (Reed, 1982). Similarly, a person's utterance is organized to deal with a physical, social, and historical space, rather than functioning as a local sign of semantic and syntactic stimulation. "Actions are composed of postures and movements, which are themselves relations and changes of relations between organism and environment . . . [They] are therefore as much 'in' the environment as 'in' the organism" (Reed, 1982, p. 125). Linguistic utterances are actions in this sense, and are located in a set of ecosystem relations, both local and distant. Bakhtin (1986, p. 121) noted that the words we use are borrowed—they have a history prior to a given conversation that must be respected—but they must also be sensitive to the particular person and situation being addressed. Often, of course, our utterances have multiple addressees (Bakhtin (1986, p. 125ff) thinks they always do), a fact Asch insufficiently appreciated in interpreting his experiments.

Understood as an ecological action system, language is forceful, and not just socially. One of the daunting tasks of an ecological psychology is to explain how informational dimensions of activities can have physically forceful effects, but without causal necessity or a physically "impressed" force (see Shaw, 2000, for a treatment of how optical information can "push" actions). Detecting an affordance while exploring an optic array does not cause an action, although it may invite it (Reed, 1996). Similarly, exploratory and performatory activities in a dialogical array may invite, or even demand, certain further actions, but it does not force them.

³ Reed (1982) proposes a variety of action systems, including a semantic system "to express meanings about the environmental situation" (p. 115). My discussion does not follow Reed in this regard, since he distinguishes a semantic system from investigatory, performatory, expressive, and play systems.

One way of trying to understand the paradox of unforced but forceful activities is to ask how language as an action system is coordinated with other action systems. It seems reasonable to propose that language functions at an intermediate scale between micro-neural processes and large-scale muscle movements on the one hand, and between the identity of an individual agent and the larger social-moral context in which that agent acts on the other hand. Thibault (2005) has noted, “lexicogrammar is a functional interface between an agent and its ecosocial environment” (p. 101). One difficulty of formal models (e.g., Hauser et al., 2002) is that they fail to show how the agent’s activity is “embedded in higher-scalar arrangements...that modulate and constrain its activity” (Thibault, 2005, p. 101–102).

Thibault (2005) goes on to suggest that we should see language “as multi-modal contextualizing activity which is embedded in an ecosocial semiotic environment and which integrates diverse space–time scales” (p. 123). The relation among these various scales and components is distributed, heterarchical, self-organizing, and non-linear (Thelen, 1995). Every utterance is unique, tuned both to the immediate situation and the system as a whole. Each component is both cause and product. What matters is not what is genetic and what is not, or what the speaker’s contribution is or the listener’s, or what is softly-assembled or what is not, but how various components and scales cooperate to produce stability and specificity, and to generate change and selectivity. What matters is the constitution and coordination of components to realize values. The values that ontologically define the ecosystem provide the large-scale constraints that make it possible for language to function at an intermediate scale to integrate macro-social processes with micro-neural processes.

Another intriguing, but more speculative, way of framing the paradox, that can only be hinted at, is in terms of gauge theory of modern particle physics (Schumm, 2004).⁴ A particle can carry a charge, and thus have existence as a particle, only if it participates in interactions. To be able to participate in an interaction it must conform itself to the internal symmetry space of the interaction (i.e., conform to the dynamics of the whole, but in a way that is constituted only in the local). The conformity of the particle to the dynamics of the particular interaction embodies its being constrained by the dynamics of the universe as a whole. This “subjugation” (Schumm, 2004, p. 280) of the particle to the whole is not causally forced, but is “like an invitation” (p. 279). On the other hand, the particle really only exists ontologically as it accepts this invitation and participates in interactions.

Gauge theory, thus, suggests that the physical character of the universe is fundamentally social. The part(icle)s are realized in the whole, and the universe as a whole is realized in the part(icle)s; thus, there is coordination across scales. Taken more metaphorically, gauge theory points to the possibility that individual human identity—like particle identity—can be realized only within interactions and within the symmetries that reflect the dynamics of the ecosystem as a whole. Humans may find their identity, partly at least, within the interactions we call linguistic. Perhaps language is metaphorically a kind of weak force that binds humans in ways that makes them effective causal agents in the physical world.

⁴ Without the influence of Robert Shaw (e.g., Shaw, 2001) it is unlikely that it would ever have occurred to me to consider language in terms of gauge theory. However, he is not responsible for the characterization offered here.

In conclusion, the view of language that emerges from ecological and social considerations suggests that speaking with each other is deeply embedded within a physical world understood as a social world. Conversations depend on action-perception systems operating in dialogical arrays to orient us to the ecosystem and to identify its goods, and the directions in which we might go to realize them. Language, thus rendered, is a values-realizing activity, one that allows us to engage in the moral tasks of caring for others, ourselves, and the ecosystem within which we all live.

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