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# The Semiotics of Cooperation

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## Keywords

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## Abstract

In this article, we suggest that in starting from dialogical, interactive studies of human discourse, we can uncover properties of cooperation that have otherwise been missed or have remained underappreciated by scholars trying to account for cooperation from an evolutionary point of view or from the point of view of its mental representation (i.e., by means of collective intentions or goals). Before uncovering these properties, we argue that a distinction must be drawn between intersubjectivity, understood as an ever-present empathic sensitivity to others, and intersubjective attunement, the process of adjusting one's actions to the ever-changing contextual conditions of interaction. It is by attending to intersubjective attunement that cooperative activities are shown to be inherently vulnerable to breach, failure, and all kinds of interactional glitches, while also being open to modifications, e.g., repairs, that allow for their successful completion. Unpacking these conditions for cooperation allows us to reveal five general properties that guide its semiotic constitution, namely, sensorial access, distributed intentionality, fluctuation of attention, improvisation, and negotiable role ascription. Attention to the semiotics of cooperation across communities and within particular activities can add a sixth general property, namely, variability in how and the extent to which cooperation is acknowledged. We introduce the term cryptocooperation to describe joint activities where the cooperative role by certain participants is underrecognized and thereby remains hidden.

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## INTRODUCTION

Over the last four decades, there has been renewed interest in cooperation, especially among biological anthropologists trying to account for its motivation in human evolution and among analytic philosophers interested in extending their theory of action from individuals to groups. Within both bodies of literature generated by such interests, there has been a tendency to either ignore or give a secondary role to communication, leaving unanswered the question of how cooperative activities are realized on the ground, especially in face-to-face communication. In this article, we counter this historical minimization of communication in the study of cooperation by going in the opposite direction, that is, by reviewing a number of studies originally designed to capture the dialogic dimensions of language or human discourse broadly defined. Some of these studies can be shown to have produced analyses and theoretical insights that are either directly or indirectly relevant to understanding some fundamental aspects of cooperation that had gone undetected in other approaches.

Cooperation has long been of interest to students of human evolution, wherein researchers have been asking the question of why individuals should act against their own self-interest in the service of others. Although Charles Darwin (1871, pp. 164–67) had mentioned that acting or failing to act in the service of others elicits praise and blame "expressed by [others'] gestures and language" (p. 86), by the 1970s evolutionary research had come to focus exclusively on individual self-interest. Cooperation could be counted, ultimately, as self-interested inasmuch as altruistic individuals could expect a return on their investment and could punish nonreciprocators (Boyd et al. 2010), apportioning altruistic behavior "nonrandomly by regarding the altruistic tendencies of possible recipients" (Trivers 1971, p. 36, see also Fessler & Haley 2003). That is, semiotic activity is the product of others' altruism or cooperativeness rather than, as we argue below, what makes it possible.

Within analytic philosophy, in the 1960s H.P. Grice (1989) introduced cooperation as a key notion for making sense of the "logic of conversation," that is, of what is being tacitly understood between people conversing. In a series of lectures that became popular among linguists who were interested in expanding Noam Chomsky's (1965) concept of competence to include what came to be known as the pragmatics of language (e.g., Lakoff 1973, Levinson 1983), Grice defined cooperation as an implicit agreement between individuals that is necessary to communicate reasonably. According to Grice's (1989) so-called "cooperative principle," interlocutors are expected to reasonably assume that the communicative contribution of each of them is truthful, informative, relevant to the ongoing interaction, and relatively clear. The apparent violation of one or more of these rational maxims activates a search for its possible causes, starting from the immediate context of interaction. For example, the uttering of partial sentences (e.g., "on Friday" as an answer to "When did you arrive?") would trigger the search for the missing information in the immediately prior discourse. A speaker may also violate some or all of Grice's maxims by not following the cooperative principle, as in the "nonsensical rambling" Jacquemet (2020, p. 128) identifies as "bullshitting." Whereas in some cases anything other than clear and direct reference may be read as outright antagonism (La Mattina 2022), in other cases it might be interpreted as the type of indirectness that signals politeness (Brown & Levinson 1987). For Grice, then, semiosis is used to measure the degree to which interlocutors are being rationally cooperative in conversing, but it does not itself contribute to constituting cooperation.

Communication plays an even more subordinate role in the literature on so-called "shared intentionality" (also called "we-intentionality" or "collective intentionality"), a concept proposed by analytic philosophers (e.g., Tuomela & Miller 1985, 1988; Searle 1990) and cognitive scientists interested in assessing the mental state that makes possible and defines what Bratman (2009) has

more recently called "modest sociality," that is, a type of joint activity involving two or more people but not very large groups, companies, or institutions. In this model, a cooperative attitude is first and foremost a mental disposition, which does imply, for Searle (1990, p. 414), a "sense of the other" (in the "Background") but with no recourse to semiotic activity. In this respect, cooperative and noncooperative activities may not be distinguishable in terms of their external manifestation (for a critique of this point, see Duranti 2015, chapter 10).

Starting in the 1960s, a new approach emerges among a number of authors, who, motivated by different theoretical interests and using a variety of methods, converged to propose a new understanding of language (broadly conceived) as a fundamentally dialogic, interactionally achieved affair. We interpret these studies as demonstrating that joint or cooperative activity (*a*) relies on semiosis—the production and interpretation of signs, linguistic or otherwise—as more than a means to an end; (*b*) unfolds across time, space, and participants; and (*c*) receives differential recognition for their cooperative qualities within and across communities (e.g., by official or unofficial partners, helpers, bystanders). In reviewing this body of literature, we encountered a use of the notion of intersubjectivity that, in our view, needs to be revised. Our amendment is a distinction between intersubjectivity as an ever-present empathic sensitivity to others and intersubjective attunement, a process of adjustment that recognizes the exposure of any cooperative activity to breach, failure, or inadequate completion, resulting in its incrementally fluid and glitchy quality. Our critical review of the literature concludes with a proposal for six general properties that guide the semiotic constitution of cooperation.

## SEMIOSIS AS COOPERATION

The discovery of the interactive, dialogic, and fundamentally cooperative quality of human communication, whether verbal or otherwise, happened in a variety of fields within a few decades. Key contributions were made by the sociologists who developed what came to be known as conversation analysis, by the Russian linguists and literary critics who are identified with dialogism, and by a number of linguistic anthropologists who integrated either one (or both) of those two approaches with their own ethnographic studies of various kinds of communicative events.

Conversation analysts undertaking the empirical study of spontaneous conversation approached interactional coordination as a collaborative achievement rather than simply "as the product of compliance with shared norms of conduct" (Goodwin & Heritage 1990, p. 284). By attending to the temporal unfolding of actual interactions, conversation analysis recognized conversation as a joint activity where each participant builds their own turn-at-talk in response to a prior turn and in anticipation of the next one. In his 1965 lectures, for instance, Harvey Sacks (1992, pp. I, 144–47) already gave considerable attention to how speakers "collaboratively" produce a single sentence across different turns and speakers (see also Lerner 1991, 2004), and shortly thereafter Emmanuel Schegloff (1968) observed that there must be some "interactional procedure" through which, within a two-party activity, one of the parties can show to the other that they are "available to collaborate" (p. 1089). This observation has at least two implications for the semiotics of cooperation. The first implication is that interlocutors collaborate in turn-taking: The possibility of changing speakers at a transition relevance place in a turn is semiotically constituted through prosodic, grammatical, or other pragmatic means (Sacks et al. 1974, Ford & Thompson 1996). The second and more basic implication is that the turn-taking organization of conversational interaction provides a framework for constituting collaboration simply by participating in it, that is, conversationalists do not have to explicitly agree or renew their agreement to participate at each step of the interaction in order to be de facto participants. Schegloff (1968, 1972), for instance, cast "relevance" (see above) in terms of sequence organization (e.g., initiating an

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exchange with a question makes relevant an answer as the next move). In recent work by Stivers (2008, 2022; Stivers & Robinson 2006), one way that interlocutors enact cooperation is by supporting the progress of the interaction—understood as alignment; for example, simply responding to a question with an answer constitutes structural-level cooperation. In this respect, cooperation is achieved in interactional real time, constituted through semiotic procedures in the turn-taking system of conversational exchanges where a participant's actions are subject to being augmented, adjusted, or corrected by the talk and embodied actions of other participants (Goodwin & Goodwin 2004). As shown by Goodwin (1979, 1981), for example, when they do not get the attention of a given recipient, speakers may shift the direction of their eye gaze and body orientation to find an alternative recipient, a move that can affect the syntax and content of the utterance that is ultimately produced. A further development of this body of work is represented by Goodwin's (2018) notion of co-operation, which he used to characterize the routine and creative recycling, with some transformations, of semiotic material (e.g., linguistic expressions) made available in the actions of others.

In the 1970s, some linguistic anthropologists, partly influenced by conversation analysts, began describing collaborative productions as cooperative achievements. Much like Sacks's discussion of collaboratively produced utterances across multiple turns and speakers, Watson-Gegeo (1975) described how, during her fieldwork, Hawai'ian children "cooperatively produced" oral narratives through contrapuntal, rhythmic routines. This perspective was later taken up by Lein & Brenneis (1978), who analyzed children's disputes and found that "overtly competitive as they are, arguments are also cooperative performances; children build arguments together" (p. 308); this cooperative dimension is not restricted to sequential speaking, but also includes, for instance, taking others' rights into consideration. Subsequent studies of the cooperative underpinnings of argumentative or competitive activities have confirmed that children cooperate in sustaining and resolving conflictual or debate-like verbal routines (Katriel 1985, Corsaro & Rizzo 1988); similarly, in *Contrasti*—a genre of verbal duels performed by pairs of artists in Central Italy—Pagliai (2010) shows how competitor-poets "finely attune" in the narrative and rhyming design of their insults. The focus on conversation and dialogue resulted in an expansion of the contextual factors seen as affecting the syntax of sentences (Keenan & Schieffelin 1976, Duranti & Ochs 1979) and encouraged students of child language acquisition and classroom interaction to abandon models of language based on individual sentences or speech acts as units of analysis in favor of interactional units (Keenan 1977, Ochs et al. 1979, Streeck 1980).

An important event in the recognition of semiosis itself as an inherently cooperative activity between speaker and hearer was the international diffusion of the works of Vološinov (1973) and Bakhtin (1981, 1986), made possible by translations into several European languages, including English. The availability of Bakhtin's and Vološinov's writings in Western Europe and the Americas introduced to a wider audience of scholars an approach to language that came to be known as dialogism, wherein meaning-making is recognized as the product of a dialogue and, thus, comes to be acknowledged as a joint achievement (e.g., Duranti 1984, 1988; Bauman 1986; Hill 1986, 1996; Hanks 1987; Briggs 1988; Briggs & Bauman 1992; Jacoby & Ochs 1995). Importantly, as Bakhtin (1986) recognized, the addressivity of utterances draws attention to the role of others in meaning as "not that of passive listeners, but of active participants in speech communication" with whom utterances are co-constructed (pp. 94–95). Bakhtin's and Vološinov's dialogic perspectives were, not by accident, consonant with the sociohistorical approach to human development promoted in the 1920s and 1930s by psychologist Lev Vygotsky (1978) and his collaborators, who identified the individual's higher psychological processes (e.g., symbolic mediation) as originating in social interaction and, so, as a product of cooperation between two parties, say, a mother and a child or a novice and an expert (Cole 1985, Ochs 1996). In all these contributions and many other



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ones of the same period, a new sense of authorship was developed: Within linguistic anthropology and related fields, hearers were no longer seen as passive appendages to speakers' monologues; instead, hearers were recognized as playing an important role in the constitution of meaning. It is in this sense that the audience was reconceptualized as coauthor (Duranti & Brenneis 1986, Streeck 1994), though not universally, given that intervening metasemiotic construals of task accomplishment, as considered below, may obfuscate coauthors' contributions. As we now proceed to discuss more fully, the confluence of these insights—namely, dialogic co-constitution and sequential collaboration—came to corroborate an approach that understands semiotically constituted cooperation as rooted in intersubjectivity and fashioned by temporality.

## INTERSUBJECTIVITY AS A CONDITION FOR HUMAN COOPERATION

Starting from the empirical observation that the successful completion of the most simple joint activities should not be taken for granted, requiring "work" by the parties involved, some conversation analysts and ethnomethodologists have chosen to think of intersubjectivity as a state of affairs that needs to be achieved and maintained in and through interaction (Schegloff 1992, p. 1299). This interpretation makes sense if we start from Alfred Schutz's proposal to use "mutual understanding" as a synonym for intersubjectivity and the associated "problem" of explaining how such mutual understanding can be reached in interaction (Heritage 1984, pp. 54–74). The solution originally proposed by Schutz is a routine recourse to a "stock of knowledge" acquired through socialization and accessed through idealizations (Heritage 1984, p. 55). Conversation analysts reduced the reliance on socialization for managing social exchanges because socialization was considered too "distant" from the moment-by-moment contingencies of particular interactions and thus was somewhat arbitrary; they emphasize instead the availability of mechanisms such as "repair" routines, which can help avoid a misunderstanding, thereby overcoming any "breakdown in intersubjectivity" (Schegloff 1992, p. 1301). This interpretation of intersubjectivity as an interactional problem to be attended to in the context of conversational interaction is consistent with the methods and findings of conversation analysis as previously described but creates another problem, namely, what to call—and how to conceptualize—the state of affairs that precedes the achievement of mutual understanding and makes the latter identifiable as a problem in the first place.

If intersubjectivity is truly, to quote Schutz himself, "the fundamental ontological category of human existence in the world" (Schutz 1966, p. 82), it must be more general than "mutual understanding," a term that is indeed offered in many translations of Schutz's writings as a synonym of intersubjectivity but is narrower than Husserl's original discussion of intersubjectivity (Duranti 2010). One could argue that in its more general and foundational sense, intersubjectivity does not need to be achieved for the simple reason that there is no world without it. Intersubjectivity, thus, is not brought about, initiated, or born, so to speak, because it is always already there. Without it, there would be no foundations for sharing particular information, correcting an earlier interpretation, or achieving semiosis and, hence, meaning more generally. There cannot, therefore, be imperfect intersubjectivity, breakdowns in intersubjectivity, or states of preintersubjectivity for the simple reason that intersubjectivity is needed to achieve any kind of further, revised, or better understanding between human agents. Intersubjectivity is an a priori universal condition of our being in the world with visible and invisible others, regardless of the level of achieved or achievable mutual understanding (see Husserl 1989, p. 208). It is made manifest in manifold ways, regardless of whether we understand what others are saying and really mean. Whether we can voice it, theorize it, or be aware of it, our belonging to a world always shared with others is routinely evoked by myriad phenomena, including our use of tools that carry with them the inventiveness

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of others and, in Husserl's ideal and optimistic universality, "the experiential sense of thereness-for-everyone" (Husserl 1960, p. 92). This more foundational kind of intersubjectivity may not be a strictly human affair. In addition to human beings who are part of our everyday environment, memory, and planned or imagined actions, there are others from different species with whom we also share a social world, as, for example, the domestic animals that some of us consider as equal partners. There might also be intersubjectivity with the beings who live in a parallel or liminal world and might be talked to in prayers, seen in dreams, or heard as "voices in the rain forest" (Feld 1982, 1996; see also Hallowell 1969).

Adopting a much more general interpretation of intersubjectivity leaves us with a problem, however, namely, how to capture that dynamic, achieved quality of human interaction that motivated the narrower interpretation of the term by conversation analysts (as discussed above). To this end, we adopt here the notion of intersubjective attunement, a term that has been used by Bråten (1998b) and Rommetveit (1998) to talk about the ontogeny of infants' engagement with the actions, emotions, and wants of others (for an example of the socialization of such attunement, see Galatolo & Caronia 2018). To introduce the notion of attunement, one must first realize that, as conversation analysts have shown, even the acts of speaking that appear to be the most ritualized and routine, such as starting a telephone conversation (Schegloff 1986), cannot simply be taken for granted because each act of speaking involves negotiations and cooperation toward a working order. In fact, even in the most carefully planned and choreographed public events, such as the televised public meeting of two heads of state, the realization of certain joint tasks might go wrong despite their best ("shared" or "collective") intentions (Throop & Duranti 2015, Duranti 2022). In joint activities, then, it is not intersubjectivity per se but intersubjective attunement that is always in progress: Participants adjust, moment by moment, to interactional demands, fluidly finding and refinding solutions that work. Cooperation involves a dynamic shaping or reshaping of interactional configurations among social agents. So, the reverse side of the intersubjective basis of semiosis is the use of semiosis to achieve intersubjective attunement. In the following section, we turn to consider the ethnographic and interactional literature that has developed and enriched this approach to cooperation, i.e., as a matter of intersubjective attunement achieved (or not) through its temporally unfolding semiotic constitution.

## SEMIOTIC CONSTITUTION OF COOPERATION: FIVE GENERAL PROPERTIES

As described above, a semiotic perspective on cooperation minimally presupposes, on the one hand, a sensitivity to others as a condition of meaning and, on the other hand, that the constitution of meaning is a temporally unfolded affair. Empirically speaking, then, to say that meaning is a cooperative achievement involves the documentation of coauthorship and improvisation as achieved and manifested through semiosis. There are a number of related consequences for this conceptualization of cooperation, which we turn to in this section. To begin, we contend that the semiotics of cooperation problematizes approaches to cooperation as a presemiotic, epistemological affair or state of mind. In contrast, for instance, to the view that for there to be cooperation group members must internalize a notion of the group (Tuomela & Miller 1985, 1988), we suggest that internalization as the main criterion for defining a joint endeavor is problematic because, to the extent that cooperation requires coordination, it is something that intrinsically needs to be externalized: Semiotic activity and the cooperation constituted in and through it are fundamentally external. Additionally, however, the external quality of cooperative activities is not necessarily built on a prior and shared understanding or representation of what the goal or content of the cooperation is or should be. The temporal flow of human interaction—including semiotic production



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and consumption—does not exclusively go from an active and controlling mind as a source of actions to a receiving and plastic body as an instrument of such actions (for critique and an alternative perspective, see Streeck 2015). Above all, it is the fundamentally temporal quality of human interaction—to which intersubjective attunement is conceptually addressed—that is often missed in the existing literature on cooperation. The temporal condition is so pervasive that it cannot be simply captured by claiming that participants need to agree or communicate ahead of time what they are going to do (Gilbert 1987, 2007) because they do not always do so.

In this section, we take moving-together as an example of semiotically constituted cooperation in joint action, exemplified by interactional mobility research (McIlvenny et al. 2014). According to the approach taken by Gilbert (1990, p. 7), walking together is the manifestation of a presemiotic willingness to "join forces"—i.e., to walk as a "we"—and the role of semiosis is to express this willingness. However, in their classic paper on the subject, Ryave & Schenkein (1974) argue that walking-together is semiotically constituted as recognizably distinct from walking-alone, over the course of walking, through the effortful and ongoing production of such signs as "pace, direction, spatial proximity, physical contact, talking, greetings and partings, head direction, etc." (p. 271). That is, participants signal to each other and to onlookers that they are walking together, and such togetherness or intersubjective attunement is constituted in and through this very signaling between participants and regardless of their internal intentional states. If intentionality is to be evoked, and we could agree on some definition of it, rather than characterized by a single shared goal ratified by each walker, then we may say that a group intentionality is distributed among walkers, in terms of not just possible subgoals or as a division of labor, but as an active balance, such as the one described by Stépanoff (2012) between the reindeer and their Siberian Tozhu riders. As an achievement of ongoing, sequential coordination (Mondada 2014), moving-together involves a dynamic, improvised mobile formation responsive to obstacles and disruptions (McIlvenny 2014), in which participants and possible interactants are sensorially accessible and related to in a relatively on-the-spot manner (see, e.g., De Stefani & Mondada 2018).

Semiosis as constitutive of cooperation thus leads us to observe five general properties of cooperation: sensorial access, distributed intentionality, fluctuations of attention, improvisation, and negotiable role ascription.

## Sensorial Access

Sensorial access to other participants (as well as to objects, movements, speech, sounds, and other aspects of the situation) is a condition of joint activity, although such access might not be equally distributed in time and space. It is important to clarify, however, that neither sensorial accessibility nor availability to interact (Goffman 1963, pp. 104 ff.) is simply a measure of cooperation or even "phatic communion" (Malinowski 1923), since semiotic processes operating on availability might, for instance, pull us into connection with others in practices of harassment, such as jeering, that distract from a task (Zuckerman 2016). Foregrounding sensorial access in the analysis of cooperative action draws attention to the importance of semiotic processes occurring between rather than within cooperators. As such, the point is not to reduce cooperation to face-to-face interactions; rather, sensorial access may be mediated by technology, as in real-time musical performances involving performer and audience avatars in virtual spaces (Harvey 2014), livestreaming events with simultaneous text chatting (Choe 2019), and video-mediated parent–child intimacy (Gan 2021b). Availability is semiotically constituted and negotiated, whether through proxemics and activity prefaces (Fatigante et al. 2010), shamanic intermediaries (Chaumeil 2010), or the attenuation of copresent exposure (Russell 2020). As Edwards (2015, 2018) demonstrates in her discussion of reciprocal tactile accessibility among DeafBlind signers in Seattle and the process she terms "deictic

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integration," the semiotic constitution and coordination of intersensorial access is accomplished through intersubjective attunement.

## Distributed Intentionality

The second general property of cooperation we identify here, distributed intentionality, partly follows from the first because the unfolding and negotiated temporal and spatial organization of an activity is neither fully predictable nor equally known in advance by each participant. Some scholars have argued, for instance, that the condition of mutual knowledge implicit in the notions of we-intentionality or shared intentionality is, in fact, too restrictive because young children involved in pretend play can be said to be cooperating even though they might not have the shared knowledge of each other's goals or a full understanding of the other's availability to coordinate around such a shared goal (see Peacocke 2005; Rakoczy 2006, p. 125). The interpretation and execution of actions and joint activities are semiotically distributed between coengaged participants, from relatively balanced distributions, e.g., musicians' foot tapping as the embodiment of the band's steady tempo (Duranti 2015, pp. 223–28), to relatively unbalanced distributions, e.g., the gestural negotiation of meaning between a man with aphasia and his family, discussed by Goodwin (2003). Differences in terms of expertise and memory of past experiences are to be expected, with participants engaging in tasks at hand not straightforwardly as a consequence of a shared mental representation of the task, but rather in and through adjustments to the task responsive to the remembering, interpreting, fantasizing, anticipating, etc. made possible and sustained by artifacts and actions. Interactants draw on and creatively adapt artifacts and actions to craft and sustain cooperation, as when they ratify symbolic labels (e.g., that, for the purposes of illustrating a route, a nearby book is seen as a house) and employ gestures relative to a cooperatively constructed diagrammatic icon (such as a "chained map"; Barber 2005) or when they adjust their gestural comportment to attune to the perspective of another (e.g., in giving route directions; Kataoka 2013). Consider, for instance, Arnold's (2012a) discussion of volunteer mechanics who employ teaching gestures—the embodiment of their professional knowledge—and customers, whose intersubjective attunement is constituted, in the course of hands-on repairs at a Californian bike shop, through what Arnold dubs "dialogic embodied action," i.e., the instrumental reproduction of the experts' gestures.

## Fluctuations of Attention

Fluctuations of attention occur over the span of cooperative coengagement: As events that unfold sometimes over a very short interval and other times over a much longer time period, joint activities require, and participants maintain, varying degrees of attention to specific aspects of the task at hand. Idealized descriptions of collaborative routines often either pick out prototypical examples, in which all participants are singly, maximally, and uninterruptedly coengaged, or else abstract from the exigencies of attention and involvement, with their peaks and valleys. Chomsky (1965) famously called for linguistics to be concerned with "an ideal speaker-hearer" who participates in linguistic exchanges in a manner unaffected by "distractions, shifts of attention and interest, and errors (random or characteristic)" (p. 1). But the ideal speaker-hearer is more likely one who can manage concurrent involvement in multiple activities and competing attentional pulls, such as shifting attention from listening to a story to ladling out hot soup (Goodwin 1984) or from a class's official task to the beckoning of student peers (Streeck 1983). Of course, in some contexts there are sanctions against causing or falling prey to distractions (Klein & Goodwin 2013). Consider, for instance, children and their caregivers' negotiation of attention described by Gan (2021a), in which children achieve disengagement from video-mediated communication through silence, withheld



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gaze, and visible efforts to get away from the adult who attempts to coordinate their attention. Furthermore, certain participants, moves, and objects of various kinds may naturally or culturally have a stronger "attentional pull" (Throop & Duranti 2015, Pedersen et al. 2021).

## Improvisation

The temporal unfolding of cooperation calls for improvised adjustments to only partly predictable actions (and to "errors"). These recurring adjustments indicate that intersubjective attunement is both general, as a property of human coexistence, and activity-specific, as made possible by habituation and professional training. Sensorial access to the context of the activity gives participants the indexical ground to adjust their actions progressively and incrementally in ways that are only partly predictable or rehearsed. Improvisation is a human endowment that Bourdieu (1977) identified as a fundamental property of practice and others have since posited as constitutive of social life, including conversational interaction and other kinds of group activities among children (Sawyer 1995, Duranti & Black 2012) as well as among adults (Sawyer 1996, 2001, 2003; Hallam & Ingold 2007). Likewise, Graeber & Wengrow (2021) emphasize the foundational importance of "tinkering" and "experimenting" to the history of human sociality, the flexibility to creatively intervene in social structure. Adjustment requires and calls for improvisation because we cannot know ahead of time what will go wrong and how we could fix it, even though, of course, with experience, we may anticipate difficulties or be prepared to intervene and correct with routine moves. Over the last several decades, the role of improvisation has been recognized by researchers in a wider range of disciplines. Researchers in organizational studies, for example, have been addressing the role of improvisation in organizational routines (Feldman 2000), as when otherwise routine naval maneuvers go wrong and crew members collaboratively adapt to the ensuing crises (Hutchins 1991) or when personnel respond to resource shortages by improvising less collaborative workarounds (Morrison 2015). In the domain of trans-species cooperation, Stépanoff and his colleagues argue that herders and reindeer attune to each other in the adjustments and negotiations that are productive of relatively stable nomadic routes (Stépanoff 2017, Stépanoff et al. 2017), involving, for instance, both herders' concerns over land rights and reindeers' assessment of pasture quality. Some cases requiring adjustments take the form of standard "corrections," which can be captured by the notion of "repair" introduced by conversation analysts (Schegloff et al. 1977; Schegloff 1979, 1992). The successful performance of a joint activity, from participating in a toast to playing music in a band, crucially requires participants to perform all kinds of adjustments to contingencies that could not have been fully anticipated and therefore must be carried out on the spot, that is, improvised (Sawyer 2001).

## Negotiable Role Ascription

Negotiable role ascription refers to the flexible and negotiable organization of cooperative coengagement. Even in ritualized routines such as greetings, there is room for maneuvering, e.g., the role of honorific discourse in avoiding obligations associated with relatively higher status (Irvine 1974) or focalizing such obligations by referring to a participant's relevant social persona (Duranti 1992). Some activities may call for certain participants to occupy socially recognizable roles such as "wedding speaker," for instance constituted through the use of referent honorifics (Dunn 2005), whereas other activities may occasion explicit negotiation and even rejection of certain activity roles, such as in the case of young girls' competition over roles in a game of "house" documented by Goodwin (1988); in such cases, the roles are partly (or entirely) constituted through rights to or the performance of associated speech acts, styles, and registers. Indeed, participants may take on, be given, or be entitled to have a guiding or leading role in the activity, or in some parts of it, in a relatively on-the-spot manner, through the semiotic entailments of familiar verbal routines

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or bodily orientations, as in the case of Russian girls' play described by Griswold (2007), as well as other activities such as toasting, walking down the street together, making a sauce, pushing a car, or moving a piano. Such roles, with their attendant authority, obligations, expected contribution, or leadership in joint activities, are semiotically constituted and interactionally achieved. Consider, for example, the Thai children's play groups described by Howard (2007), which she defined as largely status-neutral, that is, until some hierarchic relation becomes relevant, when children assume (kinterm-denoted) kin roles to solicit assistance or compliance. Recent work by conversation analysts attending to the sequential organization of immediate (i.e., not deferred) cooperation divides participants into "recruiters" and "recruitees," with the former (recruiter) referring to someone who says or does something sensorially accessible to the latter (recruitee) who is, in turn, "recruited" to do something for or with the former in the form of, e.g., assisting with, collaborating in, or more broadly contributing to some activity or task (Floyd et al. 2020). Such work recognizes the role of semiosis in soliciting and negotiating such cooperative contributions (see Enfield 2014). Owing to the achieved nature of roles in joint activity, the organization of cooperation temporally unfolds and is thus prone to glitches and failure, as in the case described by Simmons-Mackie & Damico (1999) of a speech-therapy patient challenging her therapist's treatment plan and rejecting her respondent role in a manner that the therapist interprets as structurally aligned frustration. As we show in the following section, interpretative construals such as this also figure in the semiotic mediation of cooperation.

## LOCAL THEORIES OF TASK ACCOMPLISHMENT

Semiosis as mediative of cooperation highlights the relevance of local theories of task accomplishment to construals and regimentations of joint activities. That is, while the semiotic constitution of cooperation is a temporally unfolded, coauthorial achievement (as discussed above), cooperation is regimented by metasemiotic construals of cooperative activity (e.g., signaling participation, responsibility, accomplishment, tasks at hand, etc.). The documentation of such construals suggests a sixth general property of cooperation, i.e., its dependence on variable local understandings of activities along a continuum of individual-collective or singular-plural accomplishment.

Local theories of task accomplishment stipulate that participants be treated as variously authorial, agentive, and accountable and their cooperative contributions to be hypo- or hypercognized. Consider, for instance, the presuppositions of idioms such as "I cut my hair," when, in fact, the hairdresser did the cutting, or "I repainted the living room," when we actually paid someone else to do it. Statements such as "I cut my hair," which background the hairdresser's labor, are only provisionally appropriate, e.g., if the haircut was considered inadequate, the speaker can focalize the hairdresser's labor as accountable. Such observations are not intended to gloss over the temporal and achieved nature of cooperation, for, as Lyon (2011) noted about the labor of members of a Maya coffee cooperative, cooperation is hard work, regardless of whether prevailing theories of task accomplishment recognize participants' contributions, since "cooperation is," Lyon makes clear, "an ongoing process of negotiation and conflict resolution" (p. 83). Nevertheless, variation in how cooperation is conceptualized accounts for construals and evaluations of one-and-the-same task as individually accomplished in the one case and cooperatively accomplished in another. To capture this (meta)semiotic mediation of cooperative activity, Duranti & Ochs (1986; see Duranti 1993, p. 26) referred to theories of task accomplishment. Several examples can be found in the more recent literature. In her discussion of Indian tea brokerage, for instance, Besky (2016) draws attention to how proponents of digital auctioning opposed the outcry brokers because they viewed the cooperative, "communicative infrastructure" of the latter as an obstacle to the (summative) individual realization of "natural price." On the basis of her ethnographic



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observations at a Californian bike shop, Arnold (2012b) has proposed to understand such processes as "ideologies of participation" to account for the bike shop's perspective that customers should themselves (cooperatively) contribute to the repair process. Likewise, Jones et al. (2015) argue that software design competitions known as hackathons evince a "technoliberal" participation ideology of individual merit and instrumental collaboration, with provisional commitment to one team over another semiotically constituted, e.g., through humor, gesture, and hedging strategies.

In Samoa, the expansive interpretation of the role of others in many kinds of actions is verbalized in two ways, with a label and a dyadic exchange (in the form of an adjacency pair). The label used is the word *tāpua'i*, roughly translatable as 'supporter' or 'sympathizer,' and the dyadic exchange is what Duranti & Ochs (1986, p. 221) called the "*mālō* exchange," where *mālō* is understood as meaning 'well done' or 'congratulations.' In this exchange, one person acknowledges that someone has just done something worthy of notice and the other responds by acknowledging the role of the other as *tāpua'i*. In addition to the introduction of an egalitarian ethos in the midst of an otherwise highly stratified social system (Tcherkézoff 2003, chapter 5), the *mālō* exchange also reveals a local appreciation of all kinds of accomplishments, including some that elsewhere in the world might go unnoticed. Example 1 below is between a passenger and a driver, which utilizes the honorific verb *silasila* 'see' instead of the ordinary word *va'ai* (Milner 1961), followed by another one, in Example 2, which is routinely exchanged between representatives of a group of people who have just returned from a journey and representatives of a group of people who stayed home.

| | | |
|---|---|---|
| (1) | Passenger: | *mālō le silasila!* |
| | | 'well done the (careful) seeing!' |
| | Driver: | *mālō le tapua'i!* |
| | | 'well done the supporting!' |
| (2) | Party at home: | *mālō le malaga!* |
| | | 'well done the traveling!' |
| | Travelers: | *mālō le fa'amuli!* |
| | | 'well done the staying back!' |

Example 2 exemplifies how the *mālō* exchange imposes, to use Whorf's (1956, p. 58) term, a different metaphysics of task accomplishment, one in which cooperation is foregrounded by being given a name and a verbal routine for its recognition and celebration. Even the people who stayed back home, and, thus, from the perspective of a different theory of task accomplishment might be seen as not having done something, are instead acknowledged as doers. It was, in fact, their staying back (*fa'amuli*) that made the traveling possible both practically (the travelers could be reassured that things were being taken care of while they were gone) and emotionally (the people at home were empathizing with the perils of traveling and longing for their return).

We offer the term cryptocooperation to refer to cooperative contributions in a given activity that are not officially recognized and, thus, are invisibilized in metasemiotic construals of the activity (e.g., in praising or in assigning responsibility). Foster (2007, 2005) has proposed to understand consumption as a form of labor, wherein consumers invest products with affective connotations through consuming them or using them with others, and it is this cooperative labor that corporations appropriate when they fashion their brands as signs of these connotations. Cooperative labor that is invisibilized may in fact be essential for the accomplishment of a task, even if recognition of such cooperation clashes with dominant theories of task accomplishment. Consider, for instance, the negative reactions that followed President Barack Obama's statement during his 2012 campaign that "[i]f you were successful, somebody along the line gave you some help. . . . Somebody invested in roads and bridges. If you've got a business, you didn't build that. Somebody else made

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that happen" (Blake 2012). In this case, the resistance to accepting a cooperative reading of the actions that led to success was interpreted by journalists such as Aaron Blake in *The Washington Post* as a rejection of the need for "big government." But another lesson from that incident is that many people in the United States think in terms of a one-person- or one-party-at-a-time model of social action and ignore or hide the role of others who might be participating in that action by making it possible, helping it, or visibly doing it for us. This tendency has been documented in language socialization studies: Ochs & Schieffelin (1984, p. 287) noted that when a white middle-class adult, e.g., a mother, "cooperates in a task with a child," she ends up treating "that task as an accomplishment of the child." Ochs (1992, p. 353) used the label "invisible" for the mothers in the United States who engage in this behavior "by directing praises at the child such as 'Good' or 'Look at the beautiful castle you made!,' with no mention of the mother's role nor any expectation that the child should praise the mother for her part in accomplishing the task at hand." Ultimately, Ochs claims, this strategy of making oneself invisible is one of the reasons for the role of mothering being underrated or ignored in many societies (Ortner & Whitehead 1981). Similarly, Duranti & Ochs (1986) examined how, during their fieldwork in (then Western) Samoa, over the course of literacy socialization, the cooperative contribution of educators, e.g., in scaffolding and aiding, was invisibilized through their metasemiotic construals of the activity as students' individual achievements (e.g., through practices of praising that, unlike the *mālō* exchange described above, do not occasion mutual recognition).

## CONCLUSION

This article opened with the observation that the study of cooperation, which has been a major focus of speculation among scholars in a number of fields, including biological anthropology and analytic philosophy, could benefit from insights emerged from dialogical, interactive studies of human discourse. By reviewing two bodies of literature, one based on the analysis of conversation developed by a few pioneering sociologists in the 1960s and the other inspired by the dialogic approach proposed by an even smaller number of innovative Russian literary critics and language theorists, we have highlighted the close connection between semiosis and cooperation, whether or not the term was mentioned. In so doing, we have aimed to dispel a misunderstanding about the phenomenological notion of intersubjectivity, which we distinguished from the obviously related but different notion of intersubjective attunement, and stressed the inherent vulnerability that human interactions, including highly cooperative activities, have to breach, failure, or inadequate completion. The unpacking of these aspects of cooperation has allowed us to reveal six related general properties that guide its semiotic constitution, including a variability in the manifestation and semiotic recognition of cooperation in tasks. We introduce the term cryptocooperation to describe one end of the continuum of such variably recognized cooperation.

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**Theme I: Kinship**



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