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A Linguistics of Communicative Activity

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*'A definition of language is always, implicitly or explicitly,
a definition of human beings in the world.'* Raymond Williams (1977: 21)

Introduction¹

To admittedly essentialize the complex field of modern linguistics as it developed over the 20th century, we can speak of two basic approaches to language, a formalist tradition concerned with language-as-system, and a relational-contextual tradition that has focused on issues of meaning, communication, and the co-weaving of language, cognition, person, and the world. For a specific camp of language-as-system theorists, language acquisition involves the triggering of genetically available *a priori* principles of grammar (e.g., Chomsky, 2000; Pinker, 1991). From a distinctly different vantage point, the Hallidayan tradition attempts to unite systematicity with usage by invoking a non-dualistic two-perspective framework. Language seen as a system describes the meaning-making potential of a set of social-semiotic resources while instantiation refers to specific inscriptions of that system in concrete communicative practice. The metaphor used by Halliday and Matthiesen is that of the relation between climate and weather – they are not two different phenomena:

rather, they are the same phenomenon seen from different standpoints of the observer. What we call 'climate' is weather seen from a greater depth of time – it is what is instantiated in the form of weather. ... The climate is the *theory* of the weather. ... Similarly with the system of language: this is language as a virtual thing; it is not the sum of all possible texts but a theoretical entity to which we can

¹ Portions of this text were inspired by prior texts on Vygotskian cultural historical theory and second language development by Lantolf and Thorne (2006) and Thorne (forthcoming).

assign certain properties and which we can invest with considerable explanatory power (2004:26-7, italics in the original).

Yet other orientations to language research have focused on the performance of human communicative activity. From this latter vantage point, communicative practice (both speech and writing) is construed as recurrent patterns of functional-pragmatic units that are understood to be “shaped by interactional considerations” (Schegloff, 1996:55; see also Becker, 1982). The anthropological linguist William Hanks (1996) notes that linguistic analysis has always been beset by contradictions; that language can be seen as both an abstract system and an aspect of everyday practice, a generalizable form and a temporally local action, a social fact as well as an individual’s utterance. Inarguably, human language has radically systematic features, but we will to argue that these features are “locked into the kinds of activities that speakers carry out with speech” (Hanks, 1996: 9).

This chapter describes an approach we are calling a linguistics of communicative activity (LCA). LCA is rooted in, and attempts also to augment, the Vygotskian cultural-historical tradition. The motivation for developing the LCA framework is to disinvent language understood as an object and to reinvent language as *activity*, where the term activity describes a specific form of human societal existence that consists of purposeful changes to, and transformations of, natural, social, and mental realities (Davydov, 1999: 39). Language use and development are at the core of this characterization of activity and span from local interaction (i.e., interpersonal communication) to that of society and the modern nation state in arenas such as language policies, language ideologies, and public education as mass social intervention. This perspective implies that human languaging activity structures, and is structured by, enduring conceptual properties of the social, political, and material world.

The contribution of cultural-historical approaches, broadly construed, to the theorization of language has been significant (e.g., Bakhtin, 1986; Vygotsky, 1986; Wells, 2002) and in some cases has explicitly articulated Marxian criticality (e.g., Bakhurst, 1997; Collins, 1999; Jones, 1999; Thorne, 2005; Vološinov, 1973). However, Vygotsky-inspired cultural-historical psychology does not currently draw upon the

philosophical, linguistic, and communication theory research that could significantly contribute to its power as an analytic and activist framework. The purpose of this chapter, therefore, is two-fold: the first is to briefly describe the historical antecedents that strongly shaped what we interpret to be a debilitating and on-going construction of language as a natural object independent of lived communicative activity (e.g., Saussure, Bloomfield, Chomsky); the second purpose is to provide a synoptic exegesis of models of language that provide usage-based and meaning-centered characterizations of linguistically mediated human activity – what we are terming the LCA framework. The latter effort, comprising the majority of the chapter, attempts to selectively recover key insights from earlier work by Peirce (1955), Wittgenstein (1953), Whorf (1956), and Garfinkel (1967), and bring them into contact with current scholarship by linguists and communication theorists such as Rommetveit (1974, 1992), Hopper (1998), Hanks (1996), and Tomasello (2003), among others. We will begin by providing a selective overview of problematic consequences of the development of certain linguistic theories over the 20th century. The discussion then moves toward outlining the LCA framework, beginning with philosophy of communication and then narrowing to address precise questions about the nature of language structure and processes of language development. The concluding sections integrate the LCA framework with Vygotskian developmental theory.

PROBLEMS WITH PRIVILEGING STRUCTURE

It has become something of a truism, at least across the social sciences and humanities, that the specificities of a discipline's methods, object(s) of study, and gate-keeping mechanisms are built from historically developed ideologies, professional cultures, and philosophical traditions (Latour, 1999; Bourdieu, 1988; Foucault, 1972). History is a defining element in cultural-historical approaches (e.g., Scribner, 1985) that both affords the “ratcheting up” of human performance through the inheritance of accumulated knowledge (Tomasello, 1999) while at the same time producing an accepted and naturalized arena of habitual activity, of epistemology and disciplinary particularity, that

is difficult to challenge and see beyond.² In particular, the construction of dominant paradigms and sub-fields of linguistic inquiry, as described by Joseph, Love, and Taylor, have shown extremes of “disciplinary territoriality” that in many cases have become “inseparable from the inquiry itself” (2001: viii; see also Joseph & Taylor, 1990). That is, theoretical frameworks have shown a tendency to become treated as co-equivalent with the phenomena they attempt to document and explain. Makoni and Pennycook (2005; this volume) describe the highly consequential implications of this confusion of static model with living cultural-communicative practices and argue that so-called languages are epiphenomena of “invention”, a term that describes the historical and political processes that reify mutable, local, and contingent communicative repertoires into categorical linguistic varieties. As Vološinov describes it, language as a system of normative forms is a scientific abstraction (1973: 98); it is “solely through the utterance [or use] that language makes contact with communication, is imbued with its vital power, and becomes a reality” (1973: 123). A number of the paradigms developed within twentieth century linguists have supported the invention of language as an object that is independent of human communicative activity and meaning making (important exceptions include Boas (1983/1911) and the Sapir-Whorf tradition of linguistic anthropology (see Bright, 1990).

Fauconnier and Turner (2002: 3) remark that “we live in an age of the triumph of form” in which knowledge has been reduced to “a matter of essential formal structures and their transformation.” Arguably, the two scholars most responsible for the triumph of form in linguistics, and with it the ostensible conversion of linguistics into a scientific discipline, are Ferdinand de Saussure and Leonard Bloomfield (Agar, 1994). Saussure succeeded in constructing language as a scientific object by first distinguishing language (*langue*) from speech (*parole*) and subsequently arguing that because speech is “many-sided and heterogeneous” and belongs simultaneously to “the individual and to society”,

² In a recent book examining technologies as they are used in everyday human activity, Bonnie Nardi and Vicky O’Day address the elusiveness of perception. The example they discuss references research on “inattention blindness” (Mack & Rock, 1998), a claim made by visual perception researchers which suggests that processing visual information is a conscious act that requires focused attention to the visual field. Routine and repeated activities are susceptible to inattention blindness, and inattention blindness may also occur when or if one is unready to pay attention to certain objects in the visual field (Nardi & O’Day, 1999:15).

it cannot be “put into any category of human facts”; in contrast, language (*langue*) “is a self-contained whole and a principle of classification ... [a]s soon as we give *langue* first place among the facts of language, we introduce a natural order into a mass that lends itself to no other classification” (Saussure, 1959: 9; see Timpanaro, 1975, for discussion). As Agar (1994: 37) succinctly puts it, “speech is a mess” (see also Becker, 1982). As a consequence of Saussure’s distinction between language and speech, considerable linguistic analysis and theory building over the 20th century focused on *langue* and the search for a governing system of rules that could plausibly underlie the variable speech activity of everyday communication.

The problem confronting Saussure (1959) (and a similar problem presented itself to Wihlem Wundt as he tried to formulate a scientific psychology; see Cole, 1996) was how to build linguistics into a legitimate science on a par with other of the physical sciences. To do this, he had to find a way to conceive of language as a natural, *a priori* and immutable object that could then be subjected to the rigors of scientific analysis. He achieved this by making two critical moves: the first was to background the importance of time (i.e. history) and the second was to assign language the ontological status of stable thing rather than mutable process (Crowley, 1996: 18). Once language was thus reified, it could be studied through the lens of the scientific method; at the same time, however, the centrality of human communicative activity in shaping language was removed from the interest of linguistics and in the extreme, as in the case of performance in Chomsky’s theory, was assigned the status of “mystery” and thus not open to scientific investigation (Chomsky, 1992). Another consequence of Saussure’s move was to preserve the Cartesian mind-body (*langue/parole*, competence/performance) dualism, which effectively took human meaning-making activity out of the picture, resulting in the belief that meaning resides within language – that is, meaning is transparently encoded and transmitted in linguistic signs themselves rather than in concrete material human activity. As Saussure described it, “language presupposes the exclusion of everything that is outside its organism or system – in a word, of everything known as ‘external linguistics’” (Saussure, 1959: 22). In essence Saussure drew a circle around language (Agar, 1994: 41) and proposed that linguistic science be restricted to the study of form and “the part of meaning that can be characterized formally and truth-conditionally”

(Fauconnier & Turner, 2002: 15). Bloomfield drew the Saussurian circle yet tighter and to a large extent even dictionary meaning was expunged, pushing his influential variety of linguistic inquiry toward the exclusive study of “the sound system and the grammar” (Agar, 1994: 55).

As the structuralist perspective became entrenched, linguists and soon anthropologists (e.g., Levi-Strauss 1979, 1987) began to assert that abstract structural relationships regulated phenomena as diverse as grammar, kinship patterns, myth, and economics (see Timpanaro, 1975: 135-220). Across disciplines, the dominance of the structuralist tradition throughout the 1950s and 60s produced a counter-productive consequence in the form of the “gradual megalomania of the signifier” (Anderson, 1984:45), where language and its structure formed the lens through which other phenomena were described and understood. Marxian theorist Perry Anderson critiques this impulse to posit underlying structure to all human activity as an antihumanist enterprise, and further that it is a failed intellectual enterprise, for as he states, “if structures alone obtain in a world beyond all subjects, what secures their objectivity?” (Anderson, 1984:52). Put another way, when the focus of inquiry is exclusively on signs and their relations, where is communication? Where is intent? Where is meaning and the motive driving the communicative activity in question? In essence, where is social action and where are people?

Structuralist, and in particular specific nativist arguments (e.g., Chomsky, 2002), suffer from the disconnect between lived communicative activity and the purported underlying mechanisms that are posited to account for it (see, for example, corpus based research that problematizes UG principles and parameters, e.g., Carter & McCarthy, 1995). These traditions have yielded contentious if interesting findings, but they have come at the significant cost of furthering the anti-humanist enterprise of a focus that only includes language form and structure. The gist of language from a user’s perspective is far removed from such concerns (see van Lier, 2004). As Vološinov has remarked, what is “important for the speaker about a linguistic form is not that it is stable and always self-equivalent signal, but that it is an always changeable and adaptable sign. That is the speaker’s point of view” (Vološinov, 1973: 68). The LCA framework we describe below

addresses the historical-contextual dynamics of the adaptability of the sign as it mediates communication, meaning, and thinking.

RUSSIAN PSYCHOLINGUISTICS AND CULTURAL-HISTORICAL PSYCHOLOGY

Working within the framework of Vygotsky-inspired cultural-historical psychology, Soviet psycholinguist A. A. Leontiev (1981) described the field of psycholinguistics as having three stages since its inception in the 1950s. The first generation, based on descriptive linguistics and behaviorist psychology, had as its goal to understand how individuals acquire and master discrete linguistic elements. The problem with the assumptions of the first generation, according to Leontiev, is that “it is a speech theory about the behaviour of the individual, isolated not only from society but also from any real process of communication, as such communication is reduced to the most elementary model of information transfer from speaker to listener” (1981: 92). The second generation, represented in the research of Noam Chomsky (1957, 1965) and George Miller (1951, 1962), overcame the atomism of the first generation in its claim that what is acquired and what underlies linguistic performance is a system of rules. In Leontiev’s view, however, the second generation maintains the individualism of the first generation and described the social environment as serving only to trigger innately specified linguistic principles (1981:93). Moreover, the second generation is primarily linguistic rather than psychological in scope, despite claims to the contrary (e.g., Chomsky, 2002); that is, psychological processes are reduced “to mere speech manifestation of linguistic structures” using a unit of analysis – the sentence – that has no concrete reality outside of graphical literacy (Leontiev, 1981: 93).

Leontiev argues that the emerging third generation of psycholinguistics is characterized by its concern with the complex relationships linking participation in semiotically-mediated communicative activity and psychological processes. This effort is informed by the Vygotskian cultural-historical lineage and seeks to forge explicit linkages between an individual’s ontogenesis and the social-material conditions of their everyday practice (e.g., Engeström, 1999; Chaiklin, 2001; Stetsenko & Arievitch, 2004a; Vygotsky, 1997; in second language research, Lantolf, 2000; Lantolf & Thorne, 2006;

Swain, 2000; Thorne, 2000a, 2005; van Lier, 2004). Innate, biological endowments certainly exist and serve an indispensable function in human cognition (see Luria, 1976), but emphasis is placed on the historical and societal constitution of higher order thinking. In this respect, Vygotsky was influenced by the Marxist arguments for the primacy of economic and social structures, over and above human biology, as the generative catalysts for the development of human societies and cultures (Timpanaro, 1975: 29-54). Hence for Vygotsky, higher order cognitive functions, including intentional memory, planning, voluntary attention, interpretive strategies, and rationality, were understood to develop out of participation in social practices such as schooling, interaction with care givers, the learning and use of a wide array of semiotic systems such as spoken languages, textual and digital literacies, mathematics, and music. Within this framework, development involves gaining voluntary control of thinking and behavior through the use of cultural artifacts that mediate, and allow humans to regulate, their biological and behavioral activity (Frawley, 1997). Vygotsky made his position clear in the following comment:

Lower or elementary functions, being processes that are ... earlier, simpler, and independent of concepts in genetic, functional, and structural relations, are reconstructed on a new basis when influenced by thinking in concepts ... they are included as component parts, as subordinate stages, into new, complex combinations created by thinking on the basis of concepts, and finally under the influence of thinking, foundations of the personality and world view ... are laid down (Vygotsky, 1998: 81).

This view is evocative of the Sapir-Whorf hypothesis of linguistic relativity (e.g., Gumperz & Levinson, 1996; Gentner & Goldin-Meadow, 2003; Whorf, 1956). That the obligatory semantic distinctions of a linguistic variety correspond to habitual forms of thought has been robustly documented (e.g., for spatial cognition, see Levinson, 2003; Bowerman & Choi, 2003). This suggests that the organization of communicative activity at the levels of grammaticization and lexicalization form a primary carrier of historically developed systems of meaning – what can be termed more simply as culture – into the process ontology of unfolding activity (for a review, see Lucy, 1996). Levinson (2003:

41-42) sums up the cognition-language-culture connections of this position as follows: “(1) languages vary in their semantics just as they do in their form, (2) semantic differences are bound to engender cognitive differences, (3) these cognitive correlates of semantic differences can be empirically found on a widespread basis.” From within the cultural-historical tradition, Vološinov makes a parallel formulation concerning the relationship between signs and consciousness: “Consciousness takes shape and being in the material of signs created by an organized group in the process of its social intercourse. The individual consciousness is nurtured on signs; it derives growth from them; it reflects their logic and laws. The logic of consciousness is the logic of ideological communication, of the semiotic interaction of a social group” (1973: 13).

The third generation of Vygotskian psycholinguistics, to which our efforts to develop a LCA framework contributes, investigates the linguistic means people deploy in the service of specific real-world activity, whether oriented toward the negotiation of collective action or to regulate one’s own cognitive activity. The third generation eschews interest in the psycholinguistics of the sentence and focuses instead on the functional elements of communication, where the appropriate unit of analysis is often meaningfully described as the utterance or repertoire (Hopper, 1998), or as Carter and McCarthy (2004) term it, units that are simply “pragmatically adequate” for the action at hand. Language from this perspective is not about rule-governed a priori grammar systems that must be acquired before people can engage in communication, but is instead about communicative resources that are formed and reformed in the very activity in which they are used – concrete linguistically mediated communicative and cognitive activity.

As this variety of psycholinguistic theory brings communicative activity to center stage, it requires a theory of language that is concerned with human communication rather than with more formal theories of language structure divorced from such activity. As we have described, formalist theories of language from Saussure to Chomsky have generally assumed a “dichotomy between language and the extralinguistic world to which language refers” (Hanks, 1996: 118). The stance we argue for is one that calls into question both “the ontological distinction between language and the world and the epistemological one between knowledge of language and knowledge of the world”

(Hanks, 1996: 119). However, we recognize that this aspiration has not been fully realized within the cultural-historical tradition itself and in the sections to follow, we describe a critical (re)conception of language and communication that draws upon a wide range of historical and contemporary work.

SLAB, INTERSUBJECTIVITY, PROLEPSIS, AND THE INTERPRETANT

In his 1953 text *Philosophical Investigations*, Ludwig Wittgenstein introduced the idea of *language game* to underscore that language is “inextricably bound up with the non-linguistic behaviour which constitutes its natural environment” (McGinn, 1997: 43). This is in opposition to “the idea of language as a system of meaningful signs that can be considered in abstraction from its actual employment. Instead of approaching language as a system of signs with meaning, we are prompted to think about it *in situ*, embedded in the lives of those who speak it” (McGinn, 1997: 44). For Wittgenstein, in theoretical abstractions “we turn our backs on everything that is essential to the actual functioning of language” and in doing this we turn language from something living into something dead. Our inability to explain how language is able to represent the world results precisely from the linguist’s refusal to “look at it where it actually functions” (ibid). Wittgenstein recognizes the biological substrate on which human consciousness is built, but like Vygotsky, he insists that human life is fundamentally cultural and as such is mediated by agreements (i.e., language-games) that are implicated in the non-linguistic activities of human agents (see also Malinowski, 1923).

To illustrate the idea of language game, we use Wittgenstein’s frequently cited example of a stone mason and his assistant building a wall. The mason calls out to his assistant the utterance “Slab!” To which the assistant responds by picking up the appropriate stone and passing it to the mason. At issue is how is it that the assistant knows precisely how to respond to the mason’s utterance. In a linguistics of *a priori* meanings and forms, a likely explanation would be that both the mason and his assistant understand the utterance “Slab” to mean “Bring me a slab”; hence, the single word utterance represents a reduction of the full underlying imperative sentence. Wittgenstein then asks how is it that when the stone mason produces “Slab” he really means “Bring me

a slab”? Does the speaker say to himself the full sentence before uttering the shortened version and does the assistant then expand the single-word utterance into the full imperative before fetching an appropriate piece of stone? For Wittgenstein, the answer to both questions is decidedly no. Furthermore, he asks, why can't things be the other way around – when someone says “Bring me a slab” the person really means the shortened form of the sentence “Slab?” Wittgenstein writes: “Even if such an explanation [i.e., a full sentence underlying the single-word utterance] rather tempts us, we need only think for a moment of what actually happens in order to see that we are going astray here. We say that we use the command in contrast with other sentences because *our language* contains the possibility of these other sentences” (Wittgenstein, 1953, paragraph 20). But none of these other sentences, allowed by the grammatical possibilities of the particular language at issue, is present inside the speaker's mind when he utters “Slab.” Thus, meaning is produced in the interplay between the utterance and the activity in which it plays a role. Similarly, if the mason produces the utterance “Five slabs”, says Wittgenstein, how does the assistant know to interpret this as a command to fetch five pieces of stone and not as a report on some state-of-affairs in the work site? For Wittgenstein, meaning does not reside in some abstract underlying sentence in the mind of the speaker and the listener but in the activity transpiring in the work site – that is, “in the pattern of activity within which the use of language is embedded” (McGinn, 1997: 57). Meaning, in this sense, involves a process of “attunement to the attunement of the other” (Rommetveit, 1992, see also Barwise & Perry, 1983), a formulation that is also supported and extended within ethnomethodology and conversation analysis. Heritage (1984), for example, makes the following observation, “[w]ith respect to the production of normatively appropriate conduct, all that is required is that the actors have, and attribute to one another, a reflexive awareness of the normative accountability of their actions” where “normative accountability is the ‘grid’ by reference to which *whatever* is done will become visible and accessible” (italics in the original, 1984:117).

Harold Garfinkel, the father of ethnomethodology, develops a characterization of communication that is heavily influenced by Wittgenstein. For Garfinkel, language is not to be regarded as a matter of ‘cracking the code’ which contains a set of pre-established descriptive terms combined, by the rules of grammar, to

yield sentence meanings which express propositions about the world.

Understanding language is not, in the first instance, a matter of understanding sentences but of understanding *actions* – utterances – which are constructively interpreted in relation to their contexts. This involves viewing an utterance against a background of *who* said it, *where* and *when*, *what* was being accomplished by saying it and in the light of what possible *considerations* and in virtue of what *motives* it was said. An utterance is thus the starting point for a complicated process of interpretive inference rather than something which can be treated as self-subsistently intelligible (italics in original, Heritage, 1984:139-40).

Garfinkel developed and supported this view with data from a creative series of “breaching experiments” that were developed to illustrate that social scientific formulations of objectively rational action fall apart under local conditions. These experiments involved a researcher intentionally flouting the explicit rules of a game (chess or tic tac toe) or the implicit norms of everyday conversation. The breaching experiments demonstrated that breakdowns in normative social action illustrate the mechanisms of social cohesion and trust that enable communicative interaction (see Garfinkel, 1967).

There is a certain irony in the view that argues for universal and prespecified meaning to reside in language. As the research of Rommetveit (1974), Vološinov (1973), Linell (1998), and Vygotsky (1987) shows, the greater the shared knowledge between interactants, the more likely they are to speak in fragments, leaving out meanings that would be redundant if explicitly expressed. Yet, the idealized “view of common knowledge undergirds a theory of grammar based on full sentences” (Hanks, 1996: 147). If people did in fact share “the identical homunculi of formalism, their language would surely be organized around incompleteness, not fully specified forms” (ibid, 147-148). Understanding in concrete communicative activity does not rely on hitting on the correct underlying representation. There is no underlying sentence. There are only people engaged in the activity of communicating in concrete material circumstances with specific intentions. This, according to a linguistics of communicative activity, is how meaning is produced. Hence, as described by McCarthy (personal communication, Feb. 9,

2004), possible ‘underlying sentences’ would only ever be likely to occur in ‘displaced’ communications such as writing – a poster advertising a product or offer, TV ad-speak, or the analysis of a formal linguist. There is certainly room for the study of ‘displaced’ communications, but it is odd that so much of the edifice that is formal linguistics should have been built on intuitions of underlying form and grammaticality rather than evidence from non-displaced communicative events (see Tomasello, 2003).

Ragnar Rommetveit has directly challenged the conventional relations between ellipsis and presumed underlying representations in language, stating that “we may thus reverse the traditional linguistic approach to ellipsis: *ellipsis*, we may claim, *appears to be the prototype of verbal communication under ideal conditions of complete complementarity in an intersubjectively established, temporarily shared social world*” (1974: 29 (italics in the original)). Intersubjective states are created and draw agents together toward a common focus, activity, process or goal (Rommetveit, 1974; Habermas, 1984). The dialogic exchange of ellipses and indexicals in both face-to-face and written exchanges makes possible participation frameworks which build socially distributed perceptions that are, so described by Goodwin, “situated, context dependent, ... and intensely local” (1996: 398). Rommetveit extends the uses of ellipsis beyond those of economy or the reduction of redundancy through the notion of prolepsis. Prolepsis describes what might be termed strategic social inclusion that might occur when one speaker underspecifies information that her or his interlocutor would not be presumed to know. The hearer is “invited to step into an enlarged common space, and shared background knowledge is thereby created, rather than assumed” (van Lier, 1996: 161). Rommetveit describes prolepsis via the disclosure of a personal letter he received from his friend, Willem Hofstee, who originally proposed the term:

“... Today I walked with one of the psychologists here past the Mayflower cinema in Eugene, where Bergman’s latest film movie is being shown. He asked me whether I had seen it. I said no, and asked if he had. He said yes, he had. I asked him how he liked it, and he said ‘I liked it very much, but Mary Ann did not’; without ever explicitly having ‘made known’ to me that he is married and that his wife’s name is Mary Ann, that they went to see the film together, and a lot of other things—and (if I am correct) without assuming that I knew all this. His

utterance was proleptic in that it triggered a search on my part for a shared social reality which in turn would provide a basis for understanding the sentence. Incidentally, it would have been barbaric and pedantic to say, ‘Oh, Mary Ann is your wife’. To be precise, prolepsis here served to establish a relationship between his wife and me as persons who should at some time get together. My comment would have been a crude rejection of that implication.” (in Rommetveit 1974:87-88).

As this example makes clear, minimally referencing presupposed knowledge is proleptic “precisely because that expanded social reality is taken for granted rather than explicitly spelled out. ... What is said serves on such occasions to induce presuppositions and trigger anticipatory comprehension, and what is made known will necessarily transcend what is said” (Rommetveit, 1974: 88). In this sense, prolepsis can be seen as not only pragmatically adequate, but as pragmatically advantageous, by providing the interlocutor with the resources through which to imagine a shared referent.³

We find the semiotic philosophy of Charles Sanders Peirce to also contribute to this discussion, particularly his notion of the ‘interpretant.’ Peirce (1955) elaborated relations between signs and grounds in the form of a speculative grammar, but not in the sense of syntax, rather toward the relations between sign and world (object) and sign and ideology. This latter relation, of linguistic sign to ideology, is the realm of the interpretant. In Peirce’s model, interlocutors do not merely receive and interpret signs from one another. Rather, a sign is always met by a sign, meaning that understanding is constructed through the production of a sign by the receiver – the interpretant. In Peirce’s model, the interpretant is evoked by the initial sign and may be more elaborate, or semantically differentiated from the catalyst sign. While the interpretant is not a copy of the original sign, it is semantically and pragmatically constrained by what Rommetveit, as we discussed earlier, has termed “the attunement to the attunement of the other” (1992). This discussion has described numerous theorizations based on situated, real-time

³ Other language theorists have described related concepts, such as Roland Barthe’s readerly (a text that stabilizes the reader through meeting expectations) versus more connotative writerly texts (requiring interpretation from the recipient, destabilizing expectations) (see Barthe, 1975, *The Pleasure of the Text*).

communicative activity. Their gist, taken together, is that ‘ellipsis’ is a deficiency-oriented construct that logically requires the existence of underlying representations.

We propose, building on Wittgenstein, Rommetveit, and Peirce, that underlying representations are unnecessary in an account of the syntax of communicative interaction and its role in meaning making. Further, we suggest that a wide array of what are viewed as deficient language fragments, ellipsis, and under-specification, are in fact pragmatically appropriate or even advantageous or necessary under conditions of everyday communicative activity.

EMERGENT GRAMMAR

At this point the reader may be thinking -- pragmatics and language-in-use is all well and good, but what is ‘language’ really? To address this question, we turn to the work of Paul Hopper (1998, 2002), who, like Vološinov, has argued that grammar is a consequence of communication, not a precondition. Of course systematicity of language use exists, but grammatical rules, such as they are, are argued to sediment out of the everyday activity of socially organized communication. That is, grammar describes categories of observable repetition in discourse, no more and no less (see also Bybee & Hopper, 2002; MacWhinney, 2001). From this perspective, grammatical functions and units develop in the primordial, temporal environment of moment-to-moment verbal activity. Hopper proposes the concept of Emergent Grammar which he describes thus:

Emergent Grammar “proposes to bypass the problem of a fixed, prediscourse adult grammar, with its attendant problems of necessarily ‘degenerate’ input for both child acquisition and adult maintenance of language, by relocating structure, that is, ‘grammar’, from the center to the periphery of linguistic communication. Grammar, in this view, is not the source of understanding and communication but a by-product of it. Grammar is, in other words, epiphenomenal.” (Hopper, 1998: 156)

Clarifying the often confused terms “emerging” and “emergent”, Hopper notes that “emerging ... means ‘in the course of development toward completion’; “emergent” by contrast suggests a perpetual process in which movement toward a complete structure of some kind is constant but completion is always deferred. Linguistic structure is intrinsically incomplete, a work in progress, a site under construction” (2002: 6). Emergent Grammar offers a counterpoint to the “fixed code” approach that argues for a stable linguistic system of form to meaning relations (for another critique of fixed code theory, see Harris, 1996). “A language is not a painting-by-the-numbers canvas with a scheme laid out in advance ... rather it is put together fragment by fragment in scenes of social interaction, starting in infancy” (2002: 6). Communicative repertoires like human language are “shared by speakers to the extent that speakers have common cultural experiences of communication, experiences that include not just speech but also the types of social action – the “scenes”—in which particular kinds of utterances figure” (2002: 6).

Using corpus linguistic methodology, Hopper illustrates language as an ‘interactive phenomenon’ through an analysis of pseudocleft utterances – sentences that begin with a WHAT word + (NP/subject if the WH is not the subject) + Verb + is/was + NP/object.

- What happened was that ...
- What they’ve done is ...
- What it is is that ...

Hopper shows that in the great majority of pseudoclefts occurring in spoken language corpora, only a small number of formulas are found. The verbs in the WH clause are predominantly ‘do’ and ‘happen’, or ‘say’ (less frequent), or another verb that is part of a fixed phrase such as “what I suppose is” or “what I mean is”, etc. (2002:9). It is pertinent that vernacular spoken pseudoclefts are “fragmentary and—importantly—more formulaic” than the broad range of usages found in written discourse.

Using pseudoclefts as an example, Hopper describes the management of discourse, the ability to “project future segments of talk and control the pace of delivery”, as having two features:

1. Listener-centered: creating a frame of reference for the upcoming portion of talk as action (using the verb do – “what they’ve done is ...”) or event (with the verb happen -- “what happened was that ...”)
2. Speaker-centered: using the pseudocleft as “discourse junk” to gain a few seconds to organize the spate of talk to come. In such cases, attitudinal verbs can be used to accentuate affective stances.⁴ Hopper illustrates other speaker-centered functions of the pseudocleft, such as using this repertoire to hold the floor while recasting ones argument (“what we’re gonna do is, or what I’d like to do, I think, is to ...”) or to make one’s comment seem authoritative (such as “what you should do, though, is ...”)

So-called “grammar” and the lexicon are bound up with one another as many corpus and non corpus-based studies have indicated.⁵ Grammar, such as it is, is contingent upon, and in constant interplay with, its lexical environment. In this sense, “grammar rules are only provisionally valid” (Hopper, 2002: 16) in that the greater the volume of language data analyzed, the fewer are the grammatical rules that hold up without recourse to hedge-categories such as exceptions, aberrations, and special cases. Grammar is temporal and shifts from situation to situation, from generation to generation, and from modality to modality (see Thorne, 2000b, 2003, for a discussion of the variability of language use in Internet-mediated environments). In essence, “grammar contracts as texts expand” (Hopper, 1998:164).

Hopper concludes his 1998 article arguing that “[w]hat adults know, and what children learn, is not an abstract system of units with meanings and rules for combining them, but ... integrated normative modes of interactive behavior and the accompanying social use of corporeal signs such as words and gestures, to which concepts like language and grammar are almost entirely secondary” (1998: 173). This discussion raises a critical question – if grammar isn’t preexisting, how is language learned? In response, we bring in recent work describing a usage-based model of language acquisition (Tomasello, 2003)

⁴ For example, ‘what worries me is that ...’, ‘what he is concerned about is that ...’, ‘what scares her is that ...’, what amazes me is that ...’, and like.

⁵ For a pedagogical example of corpus-based approaches to grammar, see Carter, Hughes, and McCarthy 2000.

that proposes mechanisms to account for the many important questions that Hopper's work, which is largely descriptive, leaves unaddressed.

USAGE-BASED LANGUAGE DEVELOPMENT

Tomasello's theory is based on the same understanding of language as a functional system that underlies the thinking of Hopper on emergent grammar and Rommetveit and Vološinov on language use. In this model, "children begin to acquire language when they do because the learning process depends crucially on the more fundamental skills of joint attention, intention-reading, and cultural learning – which emerge near the end of the first year of life" (2003: 21). From this perspective, language is seen as a special and complex type of "joint attentional skill" that people employ "to influence and manipulate one another's attention" (ibid; see also Clark, 1996, for a discussion of language as joint action). Thus, "using linguistic symbols in utterances is a social act, and when this act is internalized in Vygotskian fashion the product is a unique kind of cognitive representation that is not only intersubjective (involving both self and other), but also perspectival in the sense that the child understands that the same referent could have been indicated in some other way – the speaker could have chosen another linguistic symbol to indicate a different aspect of this entity" (Tomasello, 2003: 28).

Although Tomasello's theory assigns a central role to culture, broadly construed, in the acquisition process, he does not overlook the importance of biological factors. However, Tomasello illustrates with examples from morphology, the lexicon, syntax and discourse that the representational innateness stance of Chomsky "is a very unlikely theory" of language acquisition; for one thing, there has been no satisfactory way for this particular theory to account for the uneven and gradual nature of language development documented in children (Tomasello, 2003: 284). Thus for Tomasello, humans are "biologically prepared for language," but it does not follow that this requires "specific linguistic structures" (2003: 285). He calls into serious question the standard arguments put forth to support representational innateness, including claims about a critical period,

poverty of stimulus, a grammar gene and the ability of linguistic savants, all of which have been used to bolster the organ of language position proposed by generativists.⁶

Making reference to the research of Langacker, Hopper and others working within cognitive linguistics, Tomasello points out that categories such as ‘nouns’ and ‘verbs’, for instance, do not refer to specific kinds of things “but rather invite the listener to construe something in a particular way in a particular communicative context” (2003: 170). The difference between *an explosion* and something *exploding* can be understood as construing (i.e. bringing into discourse) the same experience either as a ‘bounded entity’ or as a process (ibid.). This is supported in the case of nouns by features such as determiners, which help listeners to “locate a referent in actual or conceptual space” and for verbs by tense markers “whose primary function is to help the listener to locate a process in actual or conceptual time” (2003: 170-71). According to Tomasello, it seems clear that understanding the communicative function of words in utterances is crucial in determining such things as “dual-category words” (e.g., *bite, kiss, drink, brush*, etc.). Importantly, although communicative function plays a central role in determining syntactic function and morphological processes, the attainment of the two types of knowledge is a piecemeal and locally constrained phenomenon. Some children figure out morphological processes such as plural formation before they figure out syntactic function and for other children this developmental sequence is reversed (see Gopnik & Meltzoff, 1993; Thorne, 2000a, for a discussion of variability in linguistic environments and their effects on conceptual development). Children gradually develop from a local understanding of language to a more global and abstract level where what were once piecemeal bits of knowledge come together, but not in a full grammar in the sense understood in generative linguistics, but as a “structured inventory of symbolic units” (2003: 105; see also Halliday & Matthiessen, 2004). This system, similar in characteristics to Hopper’s emergent grammar, contains “multi-morphemic fluent units of speech that the child controls as single units.” This suggests that for both children and adults, competence incorporates not just individual words and morphemes but also

⁶ Tomasello proposes four psycholinguistic processes in his model of language acquisition: 1) *intention-reading* and *cultural learning*, 2) *schematization* and *analogy*, 3) *entrenchment* and *preemption*, and 4) *functionally based distributional analysis*. We will not discuss these in detail here, but interested readers can consult his 2003 volume.

“larger chunks of language with relatively complex internal structures” that can be manipulated according to their communicative intentions (Tomasello, 2003: 105).

Summarizing his own work, Tomasello highlights these key points of his usage-based theory of language acquisition. The model is thoroughly functionalist and “based explicitly in the expression and comprehension of communicative intentions (intention-reading)” (2003: 325). Language is used primarily to “direct people’s attention to events and entities in the current joint attentional frame” (ibid). The model is construction-based with a focus on whole utterances, not isolated words and morphemes, for utterances are “the primary reality of language from a communicative point of view because they are the most direct embodiment of a speaker’s communicative intentions” (2003: 325-6). Tomasello emphasizes that “language structure emerges from language use, both historically and ontogenetically” (2003: 327). In conclusion, Tomasello argues that for language acquisition to advance, research should adopt “a view of human linguistic competence based less on an analogy to formal languages and more on empirical research in the cognitive sciences. ... How children become competent users of a natural language is not a logical problem but an empirical problem” (2003: 328).

LINGUISTICS OF COMMUNICATIVE ACTIVITY AND VYGOTSKIAN THEORIES OF DEVELOPMENT

For Vygotsky (1978), the key that links thinking to communicative activity resides in the double function of the sign, which simultaneously points in two directions—outwardly, “as a unit of social interaction (i.e. a unit of *behavior*)”, and inwardly, “as a unit of thinking (i.e. as a unit of *mind*)” (Prawat, 1999: 268, italics in original). In this sense, signs, or more appropriately put, the significance and value of signs, possess reversibility in that they “can act upon the agent in the same way they act upon the environment or others” (Lee, 1985: 81). Similar to Vološinov/Bakhtin, Rommetveit, Hanks, Wittgenstein, and others we have drawn upon to construct the LCA framework, Vygotsky realized that the Saussurian sign, as a unit of communication and thinking, was too inflexible to the extent that it assumes stable meanings for all members of a speech community. In his later writings, Vygotsky argued for a dialectical tension

between the stable meaning of linguistic signs, and an unstable, precarious element (Prawat, 1999: 269) that emerges as people engage in concrete, goal-directed communicative and psychological activity. Vygotsky characterized this distinction in a way that is similar to Rommetveit's notion of meaning potential: "the word considered in isolation and in the lexicon has only one meaning. But this meaning is nothing more than a potential that is realized in living speech. In living speech this meaning is only a stone in the edifice of sense" (Vygotsky, 1987: 303). Later in the same text, Vygotsky remarks that "in spoken language as a rule we go from the most stable and permanent element ... from its most constant zone, that is, the meaning of the word, to its more fluctuating zones, to its sense" (pp. 304–5). Vygotsky refers to the stable element of a sign as its meaning and to its emergent and contextually contingent element as its sense. This dual view of semiotic values – stable marco-cultural meaning and locally inscribed sense – was prescient in its time (more than 80 years ago). The works that we have reviewed here provide yet greater power for the project of understanding communicative processes as inherently cognitive processes, and cognitive processes as indivisible from humanistic issues of agency and construal of self and world.

DISINVENTING LANGUAGE

The premise that unites much of this volume is that inherited linguistic typologies that arose under particular colonial and post-colonial conditions continue to invent language-culture taxonomies that may not provide a participant-relevant "direction of fit" between words and the world (to borrow from Searle (1983)). Indeed, Makoni has noted that there exist a large number of 'languages', constructed under conditions of colonial and post-colonial power-knowledge formations (often with good intentions, e.g., the South African constitution), that are de facto mere political-academic entities "in search of speakers" (Makoni & Meinhof, 2003). According to Searle, what is special about culture, here seen as matrixes of power-knowledge, is "the collective assignment of functions to phenomena where the function cannot be performed solely by virtue of the sheer physical features of the phenomena. From dollar bills to cathedrals, football games to nation states, we are constantly encountering new social facts where the facts exceed the physical features of

the underlying physical reality” (Searle, 1995:228). This is emphatically the case with the historical invention of language and language taxonomies (and by extension, to models of language structure, use, and development).

In conclusion, we wish to make a linkage to ideological and categorical problems that might be re-addressed through the disinvention lens and to connect the LCA framework to critical issues of meaning and disciplinary power. While cultural-historical approaches to language and development share a foundation with Marx with other traditions of critical scholarship, this element is sometimes missing in Vygotskian developmental research (for explicit treatments of this issue, see Sawchuk, Duarte, & Elhammoumi, 2005; Stetsenko & Arievitch, 2004a, 2004b; Thorne, 2005). A legitimate question is whether, and how, Vygotskian theorizing might substantively contribute to the critical apparatus suggested by the disinvention theme.

We and others working within the tradition of cultural-historical activity theory argue that participation in the process ontology of everyday life is mediated by, and constrained by, symbolic and material artifacts that carry with them historically sedimented patterns of usage. Mediation in this sense involves explicit and implicit ideologies, folk beliefs, normative and expected conduct, as well as the institutionalization of dimensions of everyday practice that include the mundane (driving a motor vehicle), the divine (participation in religious services and rituals), and participation in work and learning environments that are governed by strictures such as accountability and epistemological prescriptivism. While this ‘grid of discipline’ (to paraphrase Foucault (1979)) is inherently porous and unstable in many respects – we would emphasize the importance of seeing human agency as the culturally mediated capacity to act (Ahearn, 2001). This capacity is both enabled and constrained, on the one hand, by cultural-institutional factors developed over time, and, on the other hand, by the dynamic of a particular interaction happening at a given moment in time. And this is precisely the point at which cultural-historical activity theory can make a difference as it does not separate understanding (research) from transformation (concrete action). Modern activity theory in particular, though also used descriptively and analytically as a diagnostic framework, is fundamentally an applied methodology. That is, it encourages engaged critical inquiry wherein an investigation would lead to the development of

material and symbolic-conceptual tools capable of enacting positive interventions. Engeström (1999) expresses this potential through the idea of ‘radical localism,’ the notion that the capacity for change is alive in the details of everyday practices which, *en masse*, make up society. Sharing a common intellectual and activist lineage that also informs critical pedagogy and structurationist sociology, the hope is to collaboratively develop an increasingly critical research and activist apparatus for use in developmentally focused research. From this perspective, cultural-historical and poststructuralist approaches share aspirations for political engagement, while also offering distinctive contributions to the project of critical scholarship.

In summary, with this chapter, we have tried to show some of the attributes of erasing the Saussurian-Bloomfieldian circle around language with the goal of recovering the organic connection between language, communicative activity, cognition, culture, and the consequential nature of theoretical formulations. In application to language representations, the imposition of language as a “natural object” entails the relegation of speakers to mere instances of bio-physical categories of reference (Foucault, 2003). Our counter-narrative, or disinventing *tactic* (per de Certeau, 1984), is to put forward a linguistics of communicative activity that is based on a view of language as a historically contingent emergent system, one that provides a repertoire of semiotic devices that people can use to realize their communicative intentions, to interpret the communicative intentions of others, and perhaps most importantly, to foster the conditions of possibility for transforming self and community. Thus, the fundamental challenge for progressive language theorists does not involve language in the abstract, but rather the semiotic inscription of communicative practice and its rendering into visible representations that are ecologically inclusive of speaker-relevant points of view and actionable as resources for personal and societal transformation.

REFERENCES

- Agar, M. 1994. *Language shock: Understanding the culture of conversation*. New York: Quill.
- Ahearn, L. 2001. Language and agency. *Annual Review of Anthropology* 30: 109–37.
- Anderson, P. 1984. *In the tracks of historical materialism*. Chicago: University of Chicago Press.
- Bakhtin, M. 1986. *Speech Genres and Other Late Essays*. M. Holquist (ed.) and C. Emerson (translator). Austin: University of Texas Press.
- Bakhurst, D. 1997. Activity, consciousness, and communication. In M. Cole, Y. Engeström, and O. Vasquez (eds.), *Mind, Culture, and Activity: Seminal Papers from the Laboratory of Comparative Human Cognition*. Cambridge: Cambridge University Press.
- Barthe, R. 1975. *The pleasure of texts*. New York: Hill and Wang.
- Barwise, J., and J. Perry. 1983. *Situations and attitudes*. Cambridge: MIT Press.
- Becker, A. L. 1982. Beyond translation: Esthetics and language description. In H. Byrnes (ed.), *Contemporary perceptions of language: Interdisciplinary dimensions*. Georgetown Roundtable on Languages and Linguistics. Washington, DC: Georgetown University Press.
- Bourdieu, P. 1988. *Homo academicus*. Stanford: Stanford University Press.
- Bowerman, M., and S. Choi. 2003. Space under construction: Language-specific spatial categorization in first language acquisition. In D. Gentner & S. Goldin-Meadow (eds.), *Language in mind* (p. 387-428). Cambridge, MA.: The MIT Press.

- Boas, F. 1983/1911. *The mind of primitive man: Revised edition*. Westport, CT: Greenwood Press.
- Bright, W. (ed). 1990. *The collected works of Edward Sapir*. Berlin: Mouton de Gruyter, 1990.
- Bybee, J. and P. Hopper. 2002. Introduction to frequency and emergence in linguistic structure. In J. Bybee & P. Hopper (eds.), *Frequency and emergence in linguistic structure*. Philadelphia: John Benjamins.
- Carter, R. and M. McCarthy. 1995. Grammar and the spoken language. *Applied Linguistics* 16(2):141-58.
- Carter, R., R. Hughes, and M. McCarthy. 2000. *Exploring grammar in context*. Cambridge: Cambridge University Press.
- Carter, R. and M. McCarthy. 2004. "There's millions of them": Hyperbole in everyday conversation. *Journal of Pragmatics* 36(2): 149-184.
- Chaiklin, S. 2001. The institutionalization of cultural-historical psychology as a multinational practice. In S. Chaiklin (ed), *The theory and practice of cultural-historical psychology*. Aarhus: Aarhus University Press, pp. 15-34.
- Chomsky, N. 1957. *Syntactic structures*. The Hague: Mouton.
- Chomsky, N. 1965. *Cartesian linguistics*. New York: Harper and Row.
- Chomsky, N. 1992. *Knowledge of language: Its nature, origin, and use*. New York: Praeger.
- Chomsky, N. 2000. *New horizons in the study of language and mind*. Cambridge: Cambridge University Press.

Chomsky, N. 2002. *On nature and language*. Cambridge: Cambridge University Press.

Clark, H. 1996. *Using language*. Cambridge: Cambridge University Press.

Cole, M. 1996. *Cultural psychology: A once and future discipline*. Cambridge, MA: Belknap Press.

Collins, C. 1999. *Discourse, social change, and the CHAT tradition*. Aldershot: Ashgate.

Crowley, T. 1996. *Language in History. Theories and Texts*. London: Routledge.

Davydov, V. 1999. The content and unsolved problems of activity theory. In Y Engeström (ed.), *Perspectives on activity theory* (pp. 39-52). Cambridge: Cambridge University Press.

de Certeau, M. 1984. *The practice of everyday life*. Berkeley: University of California Press.

Engeström, Y. (ed) 1999. *Perspectives on activity theory*. Cambridge: Cambridge University Press.

Foucault, M. 1972. *Archaeology of knowledge & the discourse on language*. New York: Pantheon Books.

Foucault, M. 1979. *Discipline and punish: The birth of prisons*. New York: Vintage Books.

Foucault, M. 2003. *Society must be defended: Lectures at the College de France, 1975-1976* (trans. David Macey). New York: Picador.

- Fauconnier, G. and M. Turner. 2002. *The way we think: Conceptual blending and the mind's hidden complexities*. New York: Basic Books.
- Frawley, W. 1997. *Vygotsky and cognitive science: Language and the unification of the social and computational mind*. Cambridge: Harvard University Press.
- Garfinkel, H. 1967. *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice Hall.
- Gentner, D., & Goldin-Meadow, S. (eds.) 2003. *Language in mind*. Cambridge, MA.: MIT Press.
- Goodwin, C. 1996. Transparent vision. In E. Ochs, E. Schegloff, S. Thomas (eds.), *Interaction and grammar*. Cambridge: Cambridge University Press.
- Gopnik, A., and A. N. Meltzoff. 1993. Words and thoughts in infancy: *The specificity hypothesis and the development of categorization and naming*. In C. Rovee-Collier & L. P. Lipsett (eds), *Advances in infancy research*, Vol. 8. (pp. 217-249). New Jersey: Ablex.
- Gumperz, J., & Levinson, S. 1996. *Rethinking linguistic relativity*. Cambridge: Cambridge University Press.
- Habermas, J. 1984. *The theory of communicative action*, Vol.1. Boston: Beacon Press.
- Halliday, M. A. K., and C. Matthiesen. 2004. *An introduction to functional grammar*. London: Arnold.
- Hanks, W. 1996. *Language and communicative practice*. Boulder, Co.: Westview Press.
- Harris, R. 1996. *The language connection: Philosophy and linguistics*. Bristol, U.K.: Thoemmes.

- Heritage, J. 1984. *Garfinkel and ethnomethodology*. Cambridge: Polity Press.
- Hopper, P. 1998. Emergent Grammar. In M. Tomasello (ed), *The new psychology of language: Cognitive and functional approaches to language study*. London: Lawrence Erlbaum Associates, Publishers.
- Hopper, P. 2002. *Emergent Grammar: Gathering together the fragments*. Paper delivered as the Plenary Address, delivered July 10th, 2002, The Pennsylvania State University Summer Institute of Applied Linguistics.
- Jones, P. 1999. The ideal in cultural-historical activity theory: Issues and perspectives. In S. Chaiklin (ed.), *The theory and practice of cultural-historical psychology*. Aarhus: Aarhus University Press.
- Joseph, J., and T. Taylor. (eds.) 1990. *Ideologies of language*. London: Routledge.
- Joseph, J., N. Love, and T. Taylor. 2001. *Landmarks in linguistic thought II: The western tradition in the twentieth century*. New York: Routledge.
- Langacker, R. 1987. *Foundations of cognitive grammar* (Volume 1). Stanford, CA.: Stanford University Press.
- Lantolf, J. P. 2000. Second language learning as a mediated process. *Language Teaching* 33: 79-96.
- Lantolf, J., and S. L. Thorne. 2006. *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press.
- Latour, B. 1999. *Pandora's hope. Essays on the reality of science studies*. Cambridge, MA: Harvard University Press.

- Lee, B. 1985. Intellectual origins of Vygotsky's semiotic analysis. In J. V. Wertsch (ed.), *Culture, Communication, and Cognition*. Vygotskian Perspectives. Cambridge: Cambridge University Press.
- Leontiev, A. A. 1981. *Psychology and the Language Learning Process*. London: Pergamon.
- Levinson, S. 2003. *Space in language and cognition*. New York: Cambridge.
- Levinson, S. 2003. Language and mind. In D. Gentner & S. Goldin-Meadow (eds.), *Language in mind* (p. 25-46). Cambridge, MA.: The MIT Press.
- Lévi-Strauss, C. 1979. *Myth and meaning*. New York: Schocken Books.
- Lévi-Strauss, C. 1987. *Anthropology and myth*. New York: Blackwell.
- Linell, P. 1998. *Approaching dialogue: Talk, interaction and contexts in dialogical perspectives*. Amsterdam: John Benjamins.
- Lucy, J. A. 1996. The scope of linguistic relativity: An analysis and review of empirical research. In J. Gumperz & S. Levinson (eds.), *Rethinking linguistic relativity* (p. 37-69). New York: Cambridge.
- Luria, A. R. 1976. *Cognitive development*. Cambridge, MA: Harvard University Press.
- Mack, A., and Rock, I. 1998. *Inattentional blindness*. Cambridge, MA: MIT Press.
- MacWhinney, B. 2001. Emergentist approaches to language, in J. Bybee & P. Hopper (eds.), *Frequency and emergence in linguistic structure*. Philadelphia: John Benjamins (pp. 449-470).

- Makoni, S., and U. Meinhof. (2003). Introducing applied linguistics in Africa. *Africa and Applied Linguistics. AILA Review* 16/1-13.
- Makoni, S., and Pennycook, A. 2005. Disinventing and (re)constituting languages. *Critical Inquiry in Language Studies: An International Journal*, 2/3: 137-156.
- Malinowski, B. 1923. *Argonauts of the western pacific: An account of native enterprise and adventure in the archipelagoes of Melanesian New Guinea*. Prospect Heights, Ill.: Waveland Press.
- McGinn, M. 1997. *Wittgenstein and the philosophical investigations*. London: Routledge.
- Miller, G. A. 1951. *Language and communication*. New York: McGraw Hill.
- Miller, G. A. 1962. Some psychological studies of grammar. *American Psychologist* 17: 748-62.
- Nardi, B., and V. O'Day. 1999. *Information ecologies: Using technology with heart*. Cambridge, MA: MIT Press.
- Peirce, C. S. 1955. *Philosophical writings of Peirce* (edited by Justus Buchler). New York: Dover Publications.
- Pinker, S. 1991. Rules of language. *Science* 253: 530-535.
- Prawat, R. S. 1999. Social constructivism and the process-content distinction as viewed by Vygotsky and the pragmatists. *Mind, Culture, and Activity: An International Journal* 6: 255-73.
- Rommetveit, R. 1974. *On Message Structure. A Framework for the Study of Language and Communication*. London: John Wiley & Sons.

- Rommetveit, R. 1992. Outlines of a dialogically based social-cognitive approach to human cognition and communication. In A. H. Wold (ed.), *The Dialogical Alternative. Towards a Theory of Language and Mind*. Oslo: Scandinavian University Press.
- Saussure, F. de. 1959. *Course in general linguistics*. New York: McGraw Hill.
- Sawchuk, P., N. Duarte, and M. Elhammoumi. In press. *Critical perspectives on activity*. New York: Cambridge.
- Schegloff, E. 1996. Turn organization: one intersection of grammar and interaction. In E. Ochs, E. Schegloff, and S. Thomas (eds), *Interaction and grammar*. Cambridge: Cambridge University Press.
- Scribner, S. 1985. Vygotsky's uses of history. In J. V. Wertsch (ed.). *Culture, communication, and cognition. Vygotskian perspectives*. Cambridge: Cambridge University Press.
- Searle, J. 1983. *Intentionality: An essay in the philosophy of mind*. Cambridge: Cambridge University Press.
- Searle, J. 1995. *The construction of social reality*. New York: Free Press.
- Stetsenko, A., and I. M. Arievitch. 2004a. The self in cultural-historical activity theory: Reclaiming the unity of social and individual dimensions of human development. *Theory & Psychology* 14/4: 475-503.
- Stetsenko, A., and I. M. Arievitch. 2004b. Vygotskian collaborative project of social transformation: History, politics, and practice in knowledge construction. *Critical Psychology* 12.

- Swain, M. 2000. The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (ed), *Sociocultural theory and second language acquisition*. Oxford: Oxford University Press (pp. 97-114).
- Thorne, S. L. 2000a. Second language acquisition and the truths about relativity. In J. Lantolf (ed), *Sociocultural theory and second language acquisition*. Oxford: Oxford University Press (pp. 219-244).
- Thorne, S. L. 2000b. Beyond bounded activity systems: Heterogeneous cultures in instructional uses of persistent conversation. *Proceedings of the Thirty-Third Annual Hawaii International Conference on System Sciences*, IEEE Computer Society, Los Alamitos, CA.
- Thorne, S. L. 2003. Artifacts and cultures-of-use in intercultural communication. *Language Learning & Technology*, 7/2: 38-67.
- Thorne, S. L. 2005. Epistemology, politics, and ethics in sociocultural theory. *Modern Language Journal*, 89: 393-409.
- Thorne, S. L. under revision. Fragments and repertoires as language development: From Nativism(s) to cultural historical mediation. Submitted to *Applied Linguistics*.
- Timpanaro, S. 1975. *On materialism*. London: Verso.
- Tomasello, M. 1999. *The cultural origins of human cognition*. Cambridge: Harvard University Press.
- Tomasello, M. 2003. *Constructing a language: A usage-based theory of language acquisition*. Harvard University Press: Cambridge.

- van Lier, L. 1996. *Interaction in the language curriculum: Awareness, Autonomy, & Authenticity*. New York: Longman.
- van Lier, L. 2004. *The ecology and semiotics of language learning: A sociocultural perspective*. New York: Kluwer.
- Vološinov, V. N. 1973. *Marxism and the philosophy of language*. New York: Seminar Press.
- Vygotsky, L. S. 1978. *Mind in society: The development of higher psychological processes* (ed. by M. Cole, V. John-Steiner, S. Scribner, and E. Souberman). Cambridge, Mass.: Harvard University Press.
- Vygotsky, L. S. 1986. *Thought and language*. Cambridge, MA: The M.I.T. Press.
- Vygotsky, L. S. 1987. *The Collected Works of L. S. Vygotsky, Volume 1. Problems of General Psychology. Including the Volume Thinking and Speech*. R. W. Reiber & A. S. Carton (eds). New York: Plenum Press.
- Vygotsky, L. S. 1997. *The collected works of L. S. Vygotsky, Volume 4: The history of the development of higher mental functions*. New York: Plenum.
- Vygotsky, L. S. 1998. *The collected works of L. S. Vygotsky, Volume 5: Child psychology*. New York: Plenum.
- Wells, G. 2002. The role of dialogue in activity theory. *Mind, Culture, and Activity: An International Journal* 9: 43–66.
- Whorf, B. 1956. The relation of habitual thought and behavior to language. In J. B. Carroll (ed.), *Language, thought and reality: Selected writings of Benjamin Lee Whorf* (p. 134-59). Cambridge, MA: MIT Press.

Williams, R. 1977. *Marxism and literature*. New York: Oxford University Press.

Wittgenstein, L. 1953. *Philosophical investigations*. New York: Macmillan.