Language acquisition is always contextualized between a child and other persons. Even in the world according to MIT, where research driven by adult linguistic theory tends to be decontextualized and disembodied, no one believes that children learn language in a vacuum. At the most trivial level, children obviously have to experience a language in order to learn it. But in more psychologically driven theories, such as represented on this symposium panel, the social context carries considerably more weight and, as the title of the symposium indicates, is considered foundational. Appreciation for the social foundations of language emerged in the last generation along with the broader movement in psychology towards social explanations of behavior and development, inspired largely by the Russian-Cultural-Historical school. Most notably, Vygotsky (1962, 1978) stressed the importance of what a child first does only with guidance from other persons. The importance of interpersonal context and, in particular, Bruner's concept of scaffolding (1983; Ninio & Bruner, 1978), were readily appropriated for discourse-based theories of word learning and language acquisition more generally.

Not surprisingly, the major emphasis in social theories of language development is on the part adults play in constructing and guiding the interpersonal context. Children are ordinarily taken into account to the extent they influence what a caregiver does. Bruner proposed that caregivers construct a supporting structure--a scaffold--by creating linguistic routines and formats that set up, frame, and guide interactions with young children. Learning language is thought to depend on these scaffolded interactions, and, in particular, on the leading role adults take in such formats. More recent concepts of interpersonal learning have acknowledged and also stressed that even though children are less knowledgeable and less competent, they have considerable influence on the adult in an interaction. Rogoff (1990, 1993), in particular, emphasized the active part children play in their own development, but she nevertheless portrayed the child as "guided" and "directed" by a more mature and capable partner.

The goal of my contribution to this symposium, however, is to present a model of language development that shifts this balance of influence, from the adult to the child, for the social dynamics of their interaction. To be sure, the child is the novice--the child is the apprentice to the adult in language learning. But I suggest that fact cannot obscure the essential agency of the child, and the child's strong impetus to act, including acts of expression and interpretation. It is the child's agenda that creates the language-learning scenario, more often than not, and that sets the pace for language learning in everyday interactions. The
model builds on the young child's *intentionality* and the considerable contribution children make to their social interactions by expressing their intentional states. Intentional states are contents of mind under psychological attitudes of belief, desire, and feeling, as described, for example, in the philosophy of (Danto (1973, 1983), Searle (1983), and Taylor (1979, 1985), and Brentano (1930/1966) before them. They are dynamically constructed from moment-to-moment in that part of the mind ordinarily referred to as consciousness (or working memory), and they are crucial to acquiring all forms of human behavior. Intentionality in this larger sense includes, but is not limited to, the narrow sense of goal-directed 'intentions to act' or 'the intent to communicate' that are the focus of social, pragmatically based theories of language as a tool to get things done in the world. Language *can* influence the actions of other persons and get things done, but that can happen only because our words have the power to influence what others are thinking--their beliefs, feelings, and desires.

In the model I've proposed (Bloom, 1991, 1993, 1994, 1997), the driving force for language development comes from a child's strong impetus for expression and interpretation. Other persons and the social context are essential to the model, because children learn a language in order to make the private and hidden contents of mind public so they can be known and shared by other persons. Expression and interpretation are *required* for continuing and extending the intersubjectivity with others that has sustained the child's emotional and social life since infancy. And expression is *required* for achieving a sense of efficacy and control in interacting with the world.

The intentionality model is consistent, therefore, with an extensive literature in developmental psychology documenting the powerful importance to development of the infant and young child's sense of control, efficacy, and agency in interacting with the world. Harter (1985) cited Cooley's (1902) observation that one's "self-feeling" is intimately connected to the exercise of power and sense of causal agency, with efforts beginning in early infancy to control movements of the limbs, objects in the immediate context, and the actions of other people. Acts of expression and interpretation promote feelings of control and efficacy, as children endeavor to create and negotiate the circumstances of their lives. In the intentionality model, social interaction for language acquisition is a matter of striving to share contents of mind rather than a matter of participating in formats, routines, and games in order to learn particular language forms.

The intentionality model makes certain predictions about the structure of early spontaneous interactions and the kinds of contributions children and adults make to them. In particular, children would be expected to initiate more of their exchanges, and their mothers would be expected to respond more often to a child's opening turn than to take the first turn. Evidence from our recent studies of early conversations between mothers and children in the second year of life confirmed these predictions. We studied 12 children and their mothers longitudinally, seeing them every month from 9 months until they were over 2 years old. This was the period that encompassed the beginning of word learning, acquisition of early vocabulary, and their transition to phrases and simple sentences. On the basis of their growth in vocabulary from one month to the next, we identified two early reference points in their language development: first words and a vocabulary spurt. We then used these reference
points, rather than chronological age, to compare other aspects of their cognitive, emotional, and social development with their developments in word learning in the second year (Bloom, 1993). The children's mean ages were about 13 months at first words and about 19 months at the vocabulary spurt.

In our study of early conversations, we looked at the timing of the contingency between mother and child speech and compared a mother's speech around the moments when her child said something with the mother's baseline rate of speaking overall (Bloom, Margulis, Tinker, & Fujita, 1996). Given that a child said something, and using the mother's individual baseline rate of talking for comparison, we found that mothers were most likely to talk immediately after their children (S in Figure 1, which summarizes the data from the 12 children at VS). And the complementary result was that given a mother said something, her child was more likely than expected from the child's baseline to be talking immediately before the mother spoke (S in Figure 2). Moreover, only about a third of all the children's speech occurred in response to something their mothers said. Thus, the children initiated more conversations than their mothers did, and this result is consistent with several other studies of early conversation in the literature.

The results for conversation were echoed in the pattern of mothers' speech around their children’s spontaneous constructing activities in play: Mothers' speech was above their baseline levels in the moments immediately after a child put two objects together to form a thematic relationship between them. When we looked at what mothers were saying in those moments immediately before a target construction (at P in Figure 3), they were more likely to be talking about something a child said, or about a previous construction, than to be talking about the target construction. Thus, mothers' speech before these episodes in play was not serving to set up or scaffold the child's activity (Bloom, Tinker, & Beckwith, 1997). Thus, both early conversations and spontaneous play were more often generated by the child and did not depend on adult-scaffolded routines and formats.

Moreover, when mothers responded, they were most likely to simply repeat the child ("Hmm, car") or acknowledge ("Pig, yeah, that's right") or attempt to clarify what a child had said ("Up? Did you 'up'?") (Figure 4). They were taking a turn to keep the conversation going, letting the child know they got the message or wanted to get the message, and their speech often 'expanded' on the child's word as the above examples indicate. But they were less likely to provide a description or assessment, or to otherwise encourage the child to say something more in response. Statements were more frequent than questions in mothers' responses, and the "turnarounds" described by Kaye and Charney (1980), where mothers build on what a child says and attempt to elicit something more on the same topic, were relatively rare. We concluded that mothers were more interested in keeping up their end of a conversation than in providing language models for their children to learn.

A significant contribution from the scaffolding model, in research by Bruner and Tomasello, in particular, is the insight into the importance of communication occurring between child and caregiver in the context of their "joint attention" to objects. Indeed, if there is one aspect of language development that everyone agrees on by now, this is probably it. However, studies of joint attention between child and caregiver have also revealed the
Mother Speech around Child Speech in Standard Deviation Units, at VS

![Graph showing mother speech around child speech with a significant F < .001.](from Bloom, Margulis, Tinker, & Fujita, 1996)

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Child Speech around Mother Speech in Standard Deviation Units, at VS

![Graph showing child speech around mother speech with a significant F < .001.](from Bloom, Margulis, Tinker, & Fujita, 1996)
Mother Speech around Child Play in Standard Deviation Units, at VS

$F < .001$

Figure 3 (from Bloom, Tinker, & Beckwith, 1997)
Function of Mothers' Discourse Responses

Figure 4

From Bloom, Margulis, Tinker, & Fujita, 1996
considerable part children play in establishing the focus in joint attention episodes, and the role mothers play in responding to a child's initiative, which is consistent with results of our studies of early conversation and play. Nevertheless, this pattern of child initiating and mother responding in episodes of shared attention was described as a scaffold by Tomasello (1988), even though it is the child's action that opens the structure of the exchange more often than not. He proposed that "joint attentional focus scaffolds the child into language." Going further, he suggested that the language learned in these exchanges "becomes one more device at the child's disposal for initiating and maintaining joint attention, and this, regardless of whether it is supported linguistically or nonlinguistically, scaffolds still further language growth" (p. 75, emphasis added).

One might ask whether joint attention that is initiated by the child, "regardless of whether it is supported linguistically or nonlinguistically," is properly called 'scaffolding.' If mothers' setting up formats and routines is scaffolding, and then mothers' responding to a child's focus of attention is scaffolding, and, finally, children using the language learned in these exchanges in their further efforts to establish joint attention is also scaffolding--in short, if everything is scaffolding--then it is not clear just what the theory of scaffolding explains. In any event, scaffolds have their counterparts in bootstraps--both are external devices and inherently mechanistic. Still missing is the internal component, the child's contents of mind that kindle and fuel the interaction to begin with. So far, the significance of joint focus of attention on objects and actions has been attributed to the opportunity it creates for learning the names of the objects and actions--the traditional notion of reference and word-to-world mapping. But when one considers that the word names the mental element--not the object in the world--the emphasis shifts from the relationship between word and object, to the representation the child has in mind that mediates the relationship between them --a mind-to-world mapping (see Figure 5).

In short, accounts of joint attentional focus and scaffolding have so far overlooked the mental objects in intentional states that language articulates, in an act of expression, and that language sets up, in an act of interpretation. It is the elements in these representations in consciousness that refer to objects and events in the world. When a child looks at the clock on the wall and says "ticktock," the act of reference depends on an element in mind and the child's psychological attitude toward it. It is the elements in intentional states, what Fauconnier called "mental spaces," that are directed at objects in the world and that refer to those objects (1985, p.2). Children learn the words that name the mental elements, and adults are responsible for providing the words that connect a child's mind to the social and physical world. Shifting the emphasis in interactions to the internal, mental component changes the dynamics of joint attention and the nature of social cognition for language development.

The essential thesis of the intentionality model is that development depends on a process of transaction between internal representations in intentional states and the external social and physical world. This process is governed by several generalizations I have called the principles of relevance, discrepancy, and elaboration (Bloom, 1993). According to the principle of relevance, development is enhanced when events in the context bear upon and are pertinent to what the child has in mind. The relevance of adult behavior is assured when
The child's intentional state is what the child has in mind at any moment in time: representations of objects, roles, and relationships. Words mediate mind/world transactions, going from mind to world for EXPRESSION --the words a child says articulate what the child has in mind, and from world to mind for INTERPRETATION --the words a child hears change what the child has in mind to set up new representations.
adults take what the child has in mind into account for their own behavior. Relevance, therefore, is the foundation for a shared focus of attention. Cues to relevance are in the ostensive signals that pass between child and caregiver--a glance, a gaze, a point, a smile, a frown, and the like--and, according to Sperber and Wilson (1986), relevance is guaranteed by such ostensive communication. Tomasello (1988; & Akhtar, 1995) and Baldwin (1993a,b), in particular, have shown how ostensive signals in the context of joint attention influence what the child has in mind, by providing cues to what is relevant in the context for learning the meanings of words --thereby making appeals to word learning constraints, biases, or lexical principles unnecessary.

According to the principle of discrepancy, development is enhanced when the child acts to resolve a mismatch between contents of mind and things already evident in the context. As infants remember past events and anticipate new events, their contents of mind differ from what is perceptible to others. They have beliefs, desires, and feelings about things which are not yet known to other persons in the here-and-now. Children will have to acquire a language, because what they have in mind must be expressed if it is to be known and shared by others who cannot exploit clues from the context for understanding. Thus, development from first words to a vocabulary spurt in the 2nd year is not simply learning more words. The children we studied learned more words but, consistent with the principle of discrepancy, they learned more words to talk about things they anticipated--desires that were imminent, and not yet already evident to other persons in the situation (Bloom, 1994; Bloom, Beckwith, Capatides, & Hafitz, 1988).

And finally, according to the principle of elaboration, children will have to learn more words and, eventually, procedures for sentences, if they are to express and articulate the increasingly elaborated contents of mind made possible by other developments in cognition and social and emotional understanding. Consistent with the principle of elaboration, the children we studied also talked more about anticipated actions relative to state events. Actions are more elaborated, than simple states, having more elements, roles, and relations between them.

To conclude, language learning depends on the mind of the young child and its development. What then is the role of intentionality for the social foundations of language development? A child's intentionality has at least these three influences on the social dynamics of language learning. First, other persons and the social context are essential, because the motivation for learning a language, in the first place, is to express and interpret intentional states, and thereby sustain and promote intersubjectivity with other persons beyond infancy. Second, as intentional states become increasingly elaborated and discrepant from what can be known and shared between the child and other persons, more of the language will have to be learned if child and other are to 'keep in touch' with what each is thinking and feeling. Language not only expresses, it also articulates the abstract and intricate elements, roles, and relationships in intentional states made possible by development. And third, because children's expressions--their affect, actions, and, eventually, speech--embody their intentional states and make them manifest and public, caregivers and others can respond to
them, and thereby promote the child's efficacy and assure the child's participation in a social world.

References


