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► **To cite this version:**

Edy Veneziano. Conversation and language acquisition: Unique properties and effects. Arnon, Inbal, Marisa Casillas, Chigusa Kurumada and Bruno Estigarribia. Language in interaction: Studies in honor of Eve V. Clark., John Benjamins Publishing Company, pp.83-100, 2014, TILAR, 10.1075/tilar.12.08ven . halshs-01048559

**HAL Id: halshs-01048559**

**<https://shs.hal.science/halshs-01048559v1>**

Submitted on 10 Jan 2015

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Unique properties and effects of conversation in acquisition

**Conversation and language acquisition: Unique properties and effects**

Edy Veneziano

Université Paris Descartes - MoDyCo, CNRS

**Corresponding information:**

[edy.veneziano@parisdescartes.fr](mailto:edy.veneziano@parisdescartes.fr)

## Abstract

We argue that conversational exchanges are a special case of input where converge unique properties that have a great potential for language acquisition, such as the motivation to communicate, the information about language meanings and structures, and the construction of new ways of expression. Results from the literature and from new data analyses, show that conversational exchanges have both immediate and long-term effects. Two properties are considered here to have a particularly great potential for learning. One is the facilitated access to unities of meaning underlying the successive transformations in utterance shapes, cognitively analogous to the discovery of physical and logico-mathematical invariances under the transformations of shape and configuration. The other is the co-construction of sequences that foreshadow behaviors still beyond the individual child's present capacities.

*Conversation provides the primary  
setting for language acquisition, and it  
is in conversational settings that  
children display their emerging  
knowledge together with their skill in  
using a language*

Eve V. Clark (2009, p. 41)

(1) Camille (1;10.12) and her mother

Mother<sub>1</sub>: *c'est quoi ces oiseaux là?* [pointing at image of swans on book]

‘what are these birds there?’

Child<sub>1</sub>: *les oiseaux ils volent*

‘the birds they fly’

Mother<sub>2</sub>: *comment ils s'appellent ces oiseaux là?*

‘how are they called these birds there?’

Child<sub>2</sub>: *regarde les oiseaux ils volent*

‘look the birds they fly’

Mother<sub>3</sub>: *oui les oiseaux ils volent mais ceux-là ils volent pas ils nagent là* [pointing at  
image of swans on book]

‘yes the birds they fly, but these do not fly, they swim there’

Child<sub>3</sub>: hein?

Mother<sub>4</sub>: *ils nagent ceux-là, ils volent pas # hein? ## ils sont dans l'eau* [CHI looks at  
image and MOT

alternatively]## *c'est des cygnes?*

'those swim, they don't fly # hein? ##they are in the water, they are swans?'

Child<sub>4</sub>: *nh* [confirmation] [%act: looking at image on the book]

Mother<sub>5</sub>: *t'en a déjà vu toi des cygnes #1.6 où c'est que t'as vu des cygnes toi?*

'you have seen already swans you #1.6 where have you seen swans you?'

Child<sub>5</sub>: *dans l'eau*

'in the water'

Mother<sub>6</sub>: *oui ils nagent dans l'eau les cygnes ## on en a vu au bord du lac nous? ## on avait donné du pain*

'yes they swim in the water ## we have seen them on the lake?## we had given them bread?'

Child<sub>6</sub>: *oui*

%tra: *yes*

Mother<sub>7</sub>: *nh? tu te rappelles?*

'nh? do you remember?'

Child<sub>7</sub>: *edonné pain cygnes* [turning towards OBS]

'have given bread swans'

Mother<sub>8</sub>: *oui on a donné du pain aux cygnes nous hier*

'yes, we have given bread to the swans yesterday'

Learning a language is a multitask activity that requires the mastery of many different strands, concomitantly and in a very quick manner. Children need to grasp the conventional sounds of the language as well as the meanings attributed to words and to larger constructions. At the same time, they need to keep track of context, shared knowledge, prosodic hints, and past discourse in order to infer their partner's

intentions and goals, and to produce utterances that effectively allow the partner to retrieve the child's own intentions and aims.

Conversations with knowledgeable and cooperative partners are very privileged settings where these acquisitions can take place. In (1) above, mother and child start having different aims and interests but after a few skillful turns by the mother, and the cooperative participation of the child, the partners' interests and focus of attention begin to converge, eventually reaching out into the shared recall of past experience.

Eve Clark has been a leading researcher in showing that the construction of common ground is essential to successful communication and can itself be built through conversation. In contrast to innate accounts of language acquisition that, at best, see the latter simply "triggered" by the input they hear, Eve Clark assumes that conversational exchanges offer children adequate information to learn the language. Through detailed analyses of naturalistic observations and ingenious experimental settings that keep the flavor of everyday experience, Eve Clark and her collaborators have shown how caregivers allow children to focus on the relevant information and get hold of the intricacies of the language, both as a system of meanings and rules, and as a means for communication (e.g., Chouinard & Clark, 2009; Clark, 1999; 2010; Clark & deMarneffe, 2012).

This doesn't mean that children cannot simply learn from speech directed to them, or even from general input, just by overhearing language spoken around them (e.g., Akhtar, Jipson & Callanan, 2001; Gampe, Liebal & Tomasello, 2012). However, conversational exchanges are special experiences as they present several unique and facilitating properties concurrently.

In this chapter we will review the different properties that are specific to conversational exchanges: the motivation to communicate, the reciprocal information that partners can retrieve about each other and that can be updated in real time, the information about language and its use in real settings, as well as the co-construction inherent to their realization. We argue that the convergence of these properties confers to conversational exchanges a privileged status compared to other language experiences that children are exposed to. During the early stages of acquisition, conversations have a great potential to get the process of acquisition going and to facilitate children's first steps into the language system. Empirical evidence, based on results from the literature and from new data analyses, will be provided in support of this position.

### **The unique properties of conversational exchanges**

### *Motivation to communicate*

Conversation is the natural site of communication. Hence, children are highly motivated to make themselves understood and to understand their partners. Since they have intentions and meanings to exchange with their partners, in conversation children are particularly likely to attend to their interlocutors' utterances, as well as to the effect that their own interventions have on them. This property fits well with the requirements of functional use approaches that consider language to be best learned in settings where children are *motivated* to use it and where adults talk about objects and events that are of interest to the children (Tomasello, 2003).

### *Information about partners*

Conversation is also the setting where caregivers and children get information about each other in real time, and where the two intertwined components of communication—production and comprehension—are alternatively solicited about the same topics. Caregivers can monitor children's understanding and production abilities, adjust their language to the way children talk, and respond to them. Children have the opportunity to see the effects that their utterances have on their



caregivers, and to modify their way of talking as a function of this effect (e.g., Clark, 2009; Gallaway & Richards 1994, Snow & Ferguson 1977; Wales Shugar, 1981).

### *Information about language meaning and structure*

Within this optimal motivational and communicational context, children receive well-timed interpretations of their utterances in the form of expansions, reformulations and corrections, that provide information on vocabulary (phonological shape and semantics) and on morphosyntax, while creating opportunities to produce new, better-adjusted, utterances and to consolidate emerging expressions (e.g., Cazden, 1972; Chouinard & Clark, 2003; Clark & de Marneffe, 2012; Saxton, 2000, Veneziano, 2005, 2009). In the course of conversation, adults also correct children's grammatical errors. Corrections can be explicit, but more commonly they are implicit, as in the case of reformulations (e.g., Chouinard & Clark, 2003; Farrar 1992; Moerk 1991; Saxton, 1997, 2000; Strapp 1999; Veneziano, 2005). Reformulations can be considered *error detectors* (e.g., Chouinard & Clark, 2003). Indeed, contingent corrections are likely to reveal the difference between children's and adults' productions and to offer children ideal opportunities for changing errors into more conventional forms (e.g., Saxton, 2000).

All conversationally contingent responses share the property that changes in form occur while meaning remains invariant. As Brown (1968) and Brown, Cazden & Bellugi (1969) put it, the transformations that utterances undergo "as they shuttle between persons in conversation" may ultimately be one of the most crucial features of conversations, providing the "richest data available to the child" for acquiring language (1969:72).

#### *Information about language use*

In conversation, children do not only learn about the language system, its lexicon and morphosyntactic rules, but also how to use linguistic resources to accomplish communicative acts in socially and culturally appropriate ways (e.g., Clark, 2009; Veneziano, 2010). They can learn that requests are made on the assumption that the speaker cannot carry out the object of the demand himself, that refusals should be justified (e.g., Dunn, 1991; Dunn & Munn, 1987; Goetz, 2010; Veneziano, 2001; Veneziano & Sinclair, 1995), or that the speaker's utterances should take into account the degree of shared knowledge and "common ground" among the interlocutors (e.g., Clark, 2004; Clark & Bernicot, 2008; Gundel, Hedberg, & Zacharski, 1993; Matthews, Lieven, Theakston, & Tomasello, 2006).

### *The emergence of new joint events*

Compared to both CDS or input in general, conversations have another unique property that has great potential for the acquisition of new language knowledge. As H. H. Clark puts it, “though conversations are created from individual utterances, they are more than the sum of their parts” (Clark, 1996:318). They are ‘participatory acts’ whose individual meaning derives from them being part of a joint action (*ibid.*). As a consequence, events that were not foreseen by the participants at the time they entered the conversation emerge from their joint interactional functioning. This property fits well with a psychogenetic constructivist account of language acquisition based on Piaget’s epistemology. One of its central tenets is that the acquisition of new knowledge results from a progressive construction growing out of the possibilities opened up by the functioning of earlier adapted behaviors (Piaget, 1981/1987). Accordingly, behaviors of level  $n+1$  are considered to build upon behaviors typical of level  $n$ , the current level of functioning (e.g., Piaget & Garcia, 1983/1989), in such a way that the apparent discontinuities of structures result from underlying continuities in the processes of development (Piaget, 1964/1968).

In early language acquisition, the realization of successive single-word utterances, a transitional phenomenon between single-word and two-word utterances, illustrates this property particularly well (Bloom, 1973; Greenfield, Reilly, Leaper & Baker, 1985; Scollon, 1979; Veneziano, Sinclair & Berthoud 1990; Veneziano, 1999, in press):

(2) Gael (1;10.17) holds a plastic chip that he places in front of a toy cow.

Child<sub>1</sub>: /su/

‘coin’ (money)

Mother<sub>1</sub>: *tu le donnes à qui le sou?*

‘to whom do you give the coin?’

Child<sub>2</sub>: /vaS/

‘cow’

(Veneziano, 2013)

In this particular kind of sequence, the child produces two single word utterances (‘coin’ and ‘cow’) that refer to different aspects of one event within a short period of time. The conversational framework within which these two utterances occur allows children to talk about two different aspects of the situation without planning their production

beforehand, since the second single-word utterance in the sequence ('cow') is uttered answering a question asked by the mother. In this way, by simply following the turns of the conversation, children enrich their initial focus of attention and pave the way towards the production of multiword utterances (Veneziano, 1999, 2013).

### **The effects of conversational exchanges**

#### *Immediate effects: Continuing the topic of the conversation*

Does the conversational response of one partner produce further responding on the same topic by the other? This effect was found in some earlier studies (e.g., Folger & Chapman, 1978; Tomasello & Todd, 1983). In new analysis of prior longitudinal recordings, I found additional support for this immediate effect of conversations. The longitudinal recordings came from six Hebrew-acquiring children, followed from the age of 11 to 20 months, recorded once a month in everyday interaction with their mothers (Veneziano, 1984, 1988). Results show that children are three times more likely to stay on topic after their mother's responses to their previous interventions than after the mother's utterances that initiated a topic (see Table 1).

Age periods	Mean % of Child's response to Mother's interventions	
	Mother's topic initiation	Mother's response to child
11-13 months	10.6% (137)	30.8% (59)
14-15 months	11.5% (182)	44.9% (171)
16-17 months	17.4% (158)	48.1% (175)

*Table 1.* Mean percentage of on topic response by children at three age periods, according to the type of mother's intervention (number of responded interventions in parentheses)

At each developmental period, 2x2 contingency tables were constructed for children's on-topic and not-on-topic responses to the two types of turns (mother's initiations and mother's responses to the child), for the six children together. At each of the three age periods, children's on-topic responses were significantly related to mothers' responses to the child (at 11–13 months:  $\chi^2(1, N=1478)=57.51, p<.001$ ; at 14–15

months:  $\chi^2(1, N=1970)=222.48$ ,  $p<.001$ ; at 16–17 months:  $\chi^2(1, N=1285)=114.38$ ,  $p<.001$ ). The higher response of children to mothers' turns that are themselves a response to the child, may also be related to the fact that these responses place the word (or word approximation) uttered by the child in a focalized position in the turn. The mother's response may contain only that word, or emphasize it by separating it from the rest of the utterance. In (3) below, the mother's turn contains only the repeated interpretation of the child's word approximation:

(3) Yuval (1;3) is trying to pull apart a toy drum.

Child<sub>1</sub>: /'a'ma/  
Mother<sub>1</sub>: 'ima 'ima  
'mommy, mommy'  
Child<sub>2</sub>: /'ima/  
'mommy'

This phenomenon is found also when other languages are involved. Example (4) below concerns a French-speaking mother and her French-acquiring child. The mother utters the word '*pique*' ('sting(s)'), produced previously by the child, in initial position, just

before inserting it in a longer utterance that extends the child's meaning:

- (4) Camille (1;7.18) touches the rough spot on the image of a face in a picture book.

Child<sub>1</sub>: /pik/

'sting(s)'

Mother<sub>1</sub>: *pique! ça pique oui, comme la barbe de papa*

'sting(s)! it stings yes like father's beard'

Child<sub>2</sub>: /sapik/ 'ça pique'

'it sting(s)'

(Veneziano et al., 1990)

In both examples, the child's utterance in the third turn not only remains on topic but is also more adequate than the initial production.

In the Hebrew study mentioned above, *focalization* was present in 39% of all mothers' turns, but in as many as 76% of the mother's responses that related to the child's previous production (Veneziano, 1988: 136). Children were also more likely to relate to focalized than to non-focalized words: 26.5% of focalized words and only 14.7% of non-focalized ones were picked up by the children, a statistically significant difference ( $p < .05$ ; Veneziano, 1988: 138–139). Repetition of a lexical



item didn't have the same effect, as children were just as likely to pick up words that were repeated in the mother's turn than words that were not repeated (19.7 vs. 19.1%, respectively) (Veneziano, 1988: 139). These results suggest that *focalization* is a particularly effective property of mothers' responses to children's utterances, and is quite likely involved in the topic-continuation effect of the conversations discussed above.

Are mothers affected by the responses of their children? The Hebrew data of the longitudinal study mentioned above were reanalyzed to address this question more precisely. Results show that mothers were also more likely to stay on topic after children's responses to their previous interventions than after children's utterances that initiated a topic (Table 2).

Age periods	Mean % of Mothers response to Child's interventions	
	Child's topic initiation	Child's response to Mother
11-13 months	10.8% (108)	44.7% (93)
14-15 months	14.7% (194)	53.8% (194)
16-17 months	19.4% (205)	48.8% (173)

Table 2. Mean percentage of on topic response by mothers at three age periods of their children according to the type of child's intervention

(number of responded interventions in parentheses).

Also here the relation was tested at each developmental period with 2x2 contingency tables presenting mothers' on-topic and not on-topic responding to the two types of children's turns (children's initiations and children's responses to the mother), for the six children together. At each of the three age periods, mothers' on-topic responses were significantly related to children's responses to the mother (at 11–13 months:  $\chi^2(1, N=1194)=154.38$ ,  $p<.001$ ; at 14–15 months:  $\chi^2(1, N=1671)=250.61$ ,  $p<.001$ ; at 16–17 months :  $\chi^2(1, N=1392)=134.42$ ,  $p<.001$ ).

In other words, partners influence each other mutually. When either the mother or the child takes the first step in topic-related responding, joint conversational activity is enhanced, resulting in sequences of topic-related turns. Such extended on-topic conversations provide children with the opportunity to compare their own productions to their mother's, and to then modify their utterances towards a better match to targets (e.g., Chouinard & Clark 2003; Otomo, 2001).

*Immediate effects: Increased matching*

During extended conversational exchanges children modify their

verbal productions (e.g., Chouinard & Clark, 2003, Bertin, 2012). Modifications can occur in the phonological shape (as in (3) above) and/or in the semantics of target words, as well as in the grammatical structure of the utterance, as in (4) above and (5) below:

(5) Sophie (2 ;4 ;6)

Adult<sub>1</sub>: *Qu'est-ce qu'elle veut faire Nina' ?*

'what does Nina want to do?'

Child<sub>1</sub>: *Nina [øjue]*

'Nina [ø]play'

Adult<sub>2</sub>: *elle veut aller jouer dehors*

'she wants to go play outside'

Child<sub>2</sub>: *[e]veut jouer dehors*

[e]want play outside

(Bertin, 2012)

In the longitudinal data of six Hebrew-acquiring children mentioned above, Veneziano (2005) analyzed children's consecutive productions to see whether utterances occurring later in the exchange were more on-target than initial utterances. Excluding sequences where the child's initial production was already on target, it was found that before 14

months children very rarely modified their productions. In contrast, between 14 and 17 months, they improved their utterances on average in 34% of the conversational exchanges that contained two or more child turns (individual children's values ranged between 21% and 50%).

Modifications also occur when the mother doesn't understand the child's utterance and demands to clarify it with a repair-initiating sequence (Schegloff, 1992). By requesting clarification, caretakers let children know that they need to revise their initial utterance (e.g., Saxton, 2000) and children, not yet 2;0, respond to these requests by changing it or offering the required additional information (Anselmi, Tomasello & Acunzo, 1986; Golinkoff, 1993; Marcos, 1991, Saxton, 2000, Chouinard & Clark, 2003). Modifications occur also when caregivers misinterpret children's intentions (Chouinard & Clark, 2003; Golinkoff, 1986; Marcos, 1991). In the longitudinal study of one child between 1;6 and 2;3, Saxton (2000) noted that, after reformulations and clarification requests, the child corrected the morphological form of verbs more often once the knowledge of that form was emerging, producing it correctly 50% of the time.

Conversational exchanges and, in particular, reformulations and clarification requests, thus have the effect of stimulating more conventional productions from the children. The extent of the modifications is limited, however, by the children's developmental level

and by their language knowledge (Saxton, 2000).

### **Long-term effects of conversational exchanges**

Conversational exchanges also have long term effects. Several studies reported positive correlations between reformulations and recasts by caregivers, and MLU, noun phrase elaboration, grammatical morphemes and number of verb phrases and auxiliaries per utterance (Barnes et al., 1983; Farrar, 1992; Gleitman, Newport & Gleitman, 1984; Hoff-Ginsberg, 1985). In training studies, reformulations and recasts have been found to have a positive effect on children's acquisition of the grammatical structures that were recasts, particularly on verbal constructions (Nelson, Carskaddon & Bonvillian, 1973, Nelson, 1977) and on passive structures (Baker & Nelson, 1984). Saxton (1997) found that 20 exposures to corrective reformulations were enough for 5-year-olds to learn the past irregular tense of unfamiliar verbs. However not all studies were able to confirm the positive effect of reformulations on later language acquisition (Cazden, 1972; Ellis & Wells, 1980).

As discussed earlier, conversations do not only involve the caregiver's responses to the child—they also involve the active participation of the children. Their responses to caregivers are part and parcel of language acquisition while providing, at the same time,

information about and evidence of children's attention to caregivers' turns. In the early stages of acquisition, children's imitative uptakes of words produced by mothers are positively correlated with their lexical acquisition (Nelson, Baker, Denninger, Bonvillian & Kaplan, 1985 ; Rodgon & Kurdek, 1977; Snow, 1987). Bloom, Hood & Lightbown (1974) and Ramer (1976) showed that children differ in the extent to which they imitate; however, for all children, the majority of imitations involved words they didn't use spontaneously. In a study of the longitudinal data of the six Hebrew-acquiring children mentioned above, Veneziano (1997, 2005) showed that words imitated by the children, repeated or reformulated by their mother, or both, were produced as conventional word forms at later sessions. Moreover, at later sessions, these productions were recognized as meaningful words by the mother, and solicited comments that advanced the theme two to three times more often than words appearing in that session for the first time.

Slobin (1968) stated that sequences in which children imitate mothers' expansions and reformulations have great relevance for early language acquisition, and Chouinard & Clark (2003) have shown that children's responses to mothers' reformulations are an extremely valuable source of information on the attention that children bring to bear on mothers' reformulations. However little work has been done to assess the specific impact of extended discourse of this kind compared

to discourse where mothers' expansions and reformulations are not followed by children's response to them. In another study of the Hebrew data mentioned above (Veneziano 1997), sequences in which mothers' reformulations (including repeats and expansions) were followed by the children's repetition of the word focused upon by mothers were distinguished from mothers' reformulations that were not followed by children's repeats. For each mother-child dyad, these sequences were identified and measured at 14 months, when the six children had a similar number of words in their repertoire. Three months later, the number of words in the children's repertoire varied, with gains ranging from 11 to 48 words. Results showed that sequences in which children responded imitatively to their mother's reformulations at 14 months correlated positively and significantly with gains in vocabulary measured at 17 months; in contrast, mothers' reformulations that were not followed by children's responses didn't correlate with those gains (Table 3).

Overall mothers' reformulations	0.794	n.s.
Mothers' reformulations followed by children's response	<b>0.884</b>	<b><i>p</i>&lt;.05, <i>df</i>=4</b>
Mothers' reformulations not followed by children's response	0.072	n.s.

*Table 3.* Correlations between mothers' reformulations at 14 months and

children's gains in vocabulary occurring between 14 and 17 months, for three types of mothers' reformulations: (1) total reformulations, (2) reformulations followed by children's response, and (3) reformulations not followed by children's response.

### **Child-directed speech and conversational exchanges**

Caregivers' talk in conversational exchanges is a particular kind of CDS that is closely related to children's focus of attention, to what children say and to how they say it. Both CDS and caregivers' talk in conversation are part of the input. Often input, CDS and caregivers' talk in conversational exchanges are confounded in studies of the effects of the environment on language acquisition. In a recent study of children's early verbs, the specific contributions of CDS and conversational exchanges were assessed (Veneziano & Parisse, 2010). The study was meant to investigate whether caregivers' talk could explain the verb forms children use during the period in which they produce verbs in one form only, a phenomenon found for languages with limited inflectional morphology like English, but also for languages with rich inflectional morphology, such as Hebrew, Turkish and Spanish, as well as moderate inflectional morphology like French (Bassano, 2000; Armon-Lotem & Berman, 2003; Aksu-Koç, 1998; Gathercole, Sebastian & Soto, 1999;



Laaha et al., 2007; Tomasello, 1992; Veneziano et al, 1990; Veneziano & Sinclair, 2000). The two children of the study were acquiring Swiss French and were in the single-form period until 1;11 for the girl and 2;3 for the boy. For example, they used /ka'se/ (to break/broken) for the verb *casser* 'to break' and /tuRn/ (turn/turns) for the verb *tourner* 'to turn'. Authors first analyzed CDS and showed that verb forms that mothers used most frequently explained 64% and 80% of the verb forms used by the two children, respectively. Then, they analyzed the degree of correspondence between the forms used by mothers and children when they were talking about jointly attended events. For about half of the children's verb forms, the information from CDS and conversational exchanges converged: the verb forms used by the children corresponded to the dominant forms used in CDS and were also used by both mothers and children in joint conversational exchanges. Among the remaining children's verb forms, three quarters corresponded exclusively to those used jointly by mothers and children in conversations. Fewer than 15% of these verbs corresponded exclusively to the dominant forms in CDS. The residue was neither explained by CDS nor by conversation.

This study shows that information present in conversational exchanges can be more powerful than information provided by CDS alone. Moreover, the residue of unexplained verb forms reminds us that children have their own ideas and individual preferences (Shirai, 1998)

that can override information contained in both CDS and conversational exchanges.

### **Concluding remarks**

Conversational exchanges are a particular kind of child-directed speech and a special case of input where various unique properties that have a great potential for language acquisition converge. Children are active participants, motivated to understand and to make themselves understood, and very likely to attend to what is being said to them. Moreover, Western middle class caregivers tune their conversation to the interests of their children, and often relate to what children say and are attending to. At the early stages of language acquisition, conversational exchanges offer children many facilitating features for learning language while they keep pursuing desired activities and goals. Results discussed above show that conversational exchanges have both immediate and long-term effects. They have the effect of stimulating further on-topic conversation by mothers and by children, to solicit modifications of the children's production, and to widen the number of aspects of a situation or intention that can be talked about. They also highlight the importance of joint co-constructed activity: what matters is not so much what each partner does individually but what mothers and

children do *together*, the activity of one boosting that of the other, and vice versa. This conclusion is supported by findings concerning the specific effect of children's response to mothers' reformulations for word learning and for the transition to articulated speech.

Two properties of conversational exchanges stand out as having a particularly great potential for learning. One is the fact that, in conversational exchanges, caregivers interpret, reformulate or expand their children's productions, and children are likely to continue relating to these interpretations and reformulations. In such conversations, meanings are the invariants of transformations in utterance forms, like physical matter, weight or number are the invariants of the transformations in shape. As transformations of shape help children discover physical invariances and the concept of conservation (Piaget & Inhelder, 1941/1974), transformations that utterances undergo 'as they shuttle between persons in conversation' can help children acquire grammar (Brown et al., 1969: 72).

The other important property of conversational exchanges is that they are co-constructed through the turns contributed by each participant. Although participants are in control of their contributions, each turn opens up new possibilities to the speakers, depending on what was said earlier and on the expectations of what the partner may do next. What is accomplished in conversations is thus "more than the sum of the

parts” (Clark, 1996: 318). It is a new event that was neither planned beforehand nor foreseen by the participants at the time they entered the conversation. This property allows, for example, the production of successive single-word utterances, where utterances containing only one word are meaningfully related to each other through the unfolding of the conversation (Veneziano, 2013). Successive single-word utterances foreshadow the advent of a new behavior—multiword speech—by practicing well-mastered behaviors typical to the present level of knowledge—single-word speech. This process corresponds to a constructivist principle contained in Piaget’s epistemological theory of developmental change (see, e.g., Piaget & Garcia, 1983), according to which discontinuities in the content of knowledge result from underlying continuities in the processes of acquisition: a progressive construction in which earlier acquisitions provide essential releasing steps (see also Gréco, 1985).

Another central tenet of Piaget’s psychogenetic constructivism is that the acquisition of knowledge depends, on the one hand, from cognitive mechanisms of acquisition at the subject’s disposal, and on the other hand, from the way the object is presented to the subject. Society cannot operate on the former but can modify the latter, and in particular the relation between the subject and the object to be known (e.g., Piaget & Garcia, 1983: 295). Child-directed speech, and language not

addressed to children, both contain relevant information for language learning and children can learn from them. However, conversational exchanges, where many different facilitating properties converge, may be the optimal way in which language can be presented to the learning child, as well as the most powerful resource in the early stages of language acquisition and at all those critical points where new knowledge is being acquired.

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