Lack of Workable Interactive Formats for Dyads of Very Young Peers

Anat Ninio

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**Abstract:**

It has been well established since Parten (1932) that before they are 3;0-3;6, children typically do not engage with peers in focused interaction, although they do so in dyadic situations with adults. Children over 3;6 do engage peers in interaction but mostly in talk discussing nonpresent topics (Garvey & Hogan, 1973). Such talk is a late achievement, rarely observed before 3;0. With parents, very young children interact around the here-and-now. We hypothesize that very young peers do not attempt to establish joint attention to an object present in the environment. This effectively leaves them without a basis for engagement. To test this hypothesis we compared three speech corpora from the CHILDES archive for the presence and relative frequency of attention directives. To establish a baseline, we counted how often parents focus young children’s attention to present objects. To ensure fair age comparison, only verbs occurring in single-word utterances were considered. In a sample of 391 English-speaking parents, 88% generated attention-directing imperatives, mostly *look*, *see* and *watch*. Next, we checked 15 children engaging in dyadic peer-interaction, 2;10-3;7. Only 4 (26%) produced single-word attention-directing imperatives. To check if young children produce such directives in dyadic interaction with their parents, we analyzed the spontaneous speech of 268 children, 1;2-3;3. A large number, 166 (62%) addressed such directives to parents. It appears that interaction with peers in young children does not involve joint attention to a shared environmental focus although it does with parents. The reason may be pragmatic: At this age, shared attention in parent-child dyads is a means to get information or help, not a way to play. It may seem pointless for a child to establish shared attention with a peer who cannot follow up with information or help. Without a workable interactive format, young children abstain altogether from focused interaction with peers.

**Introduction:**

It has been well established since Parten (1932) that before they are 3;0-3;6, children typically **do not engage with peers in focused interaction**. Instead, they mostly engage in nonsocial (solitary and parallel) play with peers, rather than in social types of play such as cooperative play. We also know however that at the same developmental period, young children do engage in cooperative social interaction with older partners, in particular their parents and caretakers. We don’t yet understand fully why this disparity in interaction style and my talk will try to contribute to the explanation.

The preference for interacting with an adult was demonstrated in a well-controlled study in the previous talk (Brooks *et al.,* 2014) in which seven to fifteen months old twins preferred to interact with their mother rather than with their twin when both were available. Brooks *et al*. discussed the finding as reflecting children’s choice to interact with an expert rather than with novice modelers in the acquisition of conventional, communicative, and instrumental behavior.

Another explanation often offered for the preference for adult interactive partners is in terms of some deficit or limitation in young children’s abilities to carry out social behaviors on their own (Bronson, 1981; Eckerman, Whatley, & Kutz, 1975), and adults’ provision of support or **scaffolding** that makes such behaviors possible. According to such authorities as Wood, Bruner & Ross (1976), Bruner (1982), and Bakeman & Adamson (1984), adults scaffolding of focused interaction consists in such behaviors as following the attentional focus of the infant, establishing and interacting within repetitive activity “formats” consisting of sequences of predictable actions; and assisting the child in the motor elements of the activity. It is claimed that young children experience a relatively prolonged apprenticeship at such situations, during which they gradually increase their participation in collaborative activities and perfect the necessary action repertoire. Thus children may not engage in focused interaction with peers because they do not yet possess the conversational and interactive social abilities to do so without the support provided for them by adults.

**In this talk** I would liketo **explore a further possibility** why young peers wouldn’t engage in focused interaction with each other but they would with an adult. Although the explanations appealing to adults’ expertise and scaffolding and their absence in peers are convincing, there may be additional reasons for avoiding focused interaction with peers. I want to explore some of the possible **pragmatic reasons** to do with the focus of interaction.

Focused interaction either relates to the **here-and-now** or it is about non-present topics. We know that talk discussing nonpresent or fantasy topics is a late achievement, rarely observed before 3;0 either with adults or with peers (Ninio & Snow, 1996). At the young ages, up till 3;6, dyadic interaction of young children with parents and other adults center around the here-and-now (Snow, 1977), namely in joint action and conversations where the joint focus of attention is a perceptually present object or event. The question is, then, why don’t young peers interact around the here-and-now, namely, present objects and events?

Our hypothesis is that the reason is not because they can’t but because they won’t. Not lack of ability but lack of motivation.

To **discount the effect of scaffolding** as much as possible, we concentrated on **attention directives** in children’s speech. An attention directive is an initiative to begin focused interaction involving the here-and-now, and it does not obviously scaffolded by parents. It is the child’s initiative. Scaffolding, as I said above, consists mainly of responding to child, setting up a repetitive format, and assisting in motor acts. A new attention directive by the child is not a response by the parent, it is not a form of assistance, and it is not by necessity part a familiar format. It is, rather, the first move of a new interactive cycle. We considered only bids for attention consisting of single word imperatives such as “*Look!*”, “*See!*” and *Watch*!” in order to discount semantic ambiguity and syntactic complexity as confounding effects in the study.

We hypothesized that very young children do not attempt to establish joint attention to an object present in the environment when addressing a peer out of a pragmatic choice, not because they cannot do so.

Table 1 presents the design and hypotheses of the study:

**Table 1: The hypotheses of the study**

|  |  |  |
| --- | --- | --- |
| Speaker/Addressee | Young children | Parents |
| Parents | Bid for joint attention |  |
| Young children | Do not initiate joint attention | Bid for joint attention |

We are testing three hypotheses:

1st hypothesis: parents model bids for joint attention to present objects and events when addressing young children, providing models for learning the behaviour;

2nd hypothesis: young children don’t initiate joint attention with peers;

3rd hypothesis: young children do initiate joint attention with adults, showing they can if they want to.

This design provides two controls on young children ability to produce attention directives consisting of verbs in a single-word utterance: First, do children at this age receive such directives from parents, proving the necessary input for learning? Second, can young children produce such directives in other contexts, demonstrating they are able to?

To test these hypotheses we compared three speech corpora for the presence and relative frequency of attention directives. The corpora were: speech of parents to young children; children to peers; children to parents. The samples were taken from the English language observations transcribed and stored in the CHILDES archive. To control for developmental variability, we included only speakers producing at least one single-word utterance with a verb in the observations analysed.

**The first sample** consisted of 391 English-speaking parents addressing young children. The observations were of normally developing young children with no diagnosed hearing or speech problems, and of their parents, native speakers of English, their speech produced in the context of naturalistic, dyadic parent-child interaction.

We counted attention directives produced by the parents. We considered only bids for attention consisting of single words such as “*Look*” or “*See*” and *Watch*!” in order to discount semantic ambiguity and syntactic complexity as confounding effects in the study. Table 2 and Table 3 present the parental sample and the results.

Table 2. Attention directives produced by the parental sample

|  |  |
| --- | --- |
| Total number of different parents | 391 |
| Number parents producing attention directive imperatives | 343 (87.7%) |
| Total tokens of single-word verbs | 3,821 |
| Tokens of attention directive imperatives | 2,274 (59.5%) |
| Mean age of children addressed (SD) | 2;3.17 (0;4.1) |

Table 3. Verbs serving as attention directives in parental speech and their token frequency

|  |  |  |
| --- | --- | --- |
| Verbs | Frequency | % |
| look | 1390 | 61.13% |
| see | 647 | 28.45% |
| watch | 166 | 7.30% |
| listen | 61 | 2.68% |
| smell | 4 | 0.18% |
| touch | 3 | 0.13% |
| feel | 2 | 0.09% |
| hear | 1 | 0.04% |
| total | 2274 |  |

Almost all parents – 88% -- produced attention-directing requests. These made up 60% of their single-word verbs. We may summarize that there is ample input for young children to learn attention bids from in parental speech.

**Next,** we checked a sample of 15 children engaging in dyadic peer-interaction, collected by Garvey and Hogan (1973). The children ranged in age from 2;10 to 3;7. The children were videotaped in 15-minute play sessions, with no experimenter or other children present.

Table 4 presents the peer sample and the results. Only 4 (26%) produced single-word attention-directives. These consisted of 15% of the total single-word verb tokens of the sample.

Table 4. Attention directives produced by children addressing peers

|  |  |
| --- | --- |
| Total number of children | 15 |
| Number children producing attention directives | 4 (26.7%) |
| Total tokens of single-word verbs | 39 |
| Tokens of attention directives | 6 (15.4%) |
| Mean age of children (SD) | 3;2.3 (2.19) |

To check if young children produce such directives in dyadic interaction with their parents, we analyzed the spontaneous speech of 268 children, between 1;2 and 3;3. These children were somehow younger than the sample of peers. Table 5 presents the child sample and their attention directives addressing parents. A large proportion of the children -- 62% -- addressed such directives to parents. 99% of the directives were produced by children who were younger than the children in the peers sample.

Table 5. Attention directives produced by children addressing parents

|  |  |
| --- | --- |
| Total number of children | 268 |
| Number children producing attention directives | 166 (62.0%) |
| Total tokens of single-word verbs | 2,665 |
| Tokens of attention directives | 784 (29.4%) |
| Mean age of children (SD) | 1;11.16 (3.25) |

The proportion of children addressing at least one attention directive to parents was significantly higher than the proportion of those who addressed such directives to peers. The difference was highly significant by Chi square (7. 37, *p*<0.01).

Table 6 summarizes the results of the three studies.

Table 6. Attention directives produced in three kinds of dyads

|  |  |  |
| --- | --- | --- |
| Speaker to addressee | % produced attention directives | % attention directive tokens of all single-word verbs |
| Parent to child | 87.7% | 59.5% |
| Child to parent | 62.0% | 29.4% |
| Child to peer | 26.7% | 15.4% |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

It appears that interaction with peers by young children tends not to involve requests to attend to a shared environmental focus, although interaction with parents does. The majority of children younger than the peers sample produce such directives when addressing their parents, demonstrating that the peer-interacting group is probably well-able to express such directives.

As requests for joint attention to a perceptually present focus are necessary first moves in developing a conversation about the here-and-now, avoiding such bids for joint attention may account to a large extent for young peers not engaging with peers in focused interaction at an age when they are too young to interact about nonpresent topics.

**Bids leading to interaction**

It appears that young children are not hindered by linguistic or communicative limitations to make bids for joint attention to present objects to peers, but, rather, avoiding such moves is a matter of pragmatic choice. To try to understand why children would not wish to address peers with attention directives, we turned to their bids to parents, to see what such attention directives provide to the children.

The following tables present some episodes where child began an interaction cycle with an attention directive at his mother. Informal tabulation revealed that in very many cases, the child’s attention directives opened a typical naming episode. Table 7 is such a case, with a child that doesn’t say a lot. The child makes the attentional request but the mother does all the rest: She asks “What’s that?”, then labels the object, and even adds some extra information.

Table 7. Typical naming episode – mother asks for name

|  |  |
| --- | --- |
| **Speaker** | **Utterance** |
| Child | Look! [laughs] |
| Mother | What's that? |
| Mother | That's a jack-in-the-box. [Child laughs, then Mother does] |
| Mother | That's a present. |
| Child | [nods yes] |

Table 8 is another naming episode – child doesn’t know how to ask but tries.

Table 8. Naming episode – child tries to ask for name

|  |  |
| --- | --- |
| **Speaker** | **Utterance** |
| Child | Look. |
| Mother | Oh. |
| Child | It. |
| Mother | Oh [surprised], I think it's a rabbit. |
| Mother | I think it's a rabbit. |
| Mother | See its big ears? |
| Mother | Hop # hop # hop # hop. |
| Child | Hop # hop. |

Table 9 presents a more mature naming episode – the child asks for the name.

Table 9. More mature naming episode where child asks for the name

|  |  |
| --- | --- |
| Child | Look. |
| Mother | I see. |
| Child | What that? |
| Mother | It's a nipple # for a bottle. |
| Child | A bottle? |
| Mother | Mmhm. |
| Mother | For a baby bottle. |
|  | [continues for 7 more turns] |

Table 10 presents a different type of episode, the child expresses fear and apparently appeals to the mother for help to deal with the strange situation.

Table 10. Help asking episode

|  |  |
| --- | --- |
| Child | Look [points to cameraman]. |
| Mother | What do you see? |
| Child | He scare me. |
| Mother | He scare you? |
| Child | Yeah. |
| Mother | He don't scare you. |

**Conclusions:**

We began this inquiry with a well established finding that young children typically do not engage with peers in focused interaction. We also know however that at the same developmental period, young children do engage in cooperative social interaction with older partners, in particular their parents and caretakers. To explore a factor besides adults’ scaffolding of child actions, we concentrated in this talk on children’s initiations of interaction focusing on present topics, in the form of bids for joint attention.

A**ttention directives are of central importance in adult-child dyadic interaction.** In particular, adult-child interaction has been found to consist of two-step formats: the first step is to establish joint attention to some object, the second step is to name it or to direct some action to it. Some examples of such interaction formats are naming games (Ninio & Bruner, 1978) where attention is first focused to some object or picture, which then makes it possible to ask what is its name and to name it. A very similar format underlies parental directives, proposals, and offers: Schaffer *et al* (1983) found that adults first focus joint attention to an object and only then directed the child to act on the object. The same principle applies to requests for help by adults or the children. That is, initiating interaction around a perceptual focus of attention requires directing the other’s attention to some object in the environment, either to subsequently ask its name, or to request some act involving it.

When young children interact with adults, the interaction formats they are leading to by an attention directive are precisely these two-step formats. We hypothesized and found that very young peers **do not attempt to establish joint attention** to an object present in the environment.

In the reported study, it appeared that interaction with peers in young children rarely involves bids for joint attention to a shared environmental focus although young children often engage in such a bid with parents. We examined the outcome of such bids and came to the conclusion that the reason may be pragmatic**: At this age, bids for shared attention in parent-child dyads is a means to get information or help**. Attention directives are typical first steps in such interactive formats as asking for unfamiliar objects’ names, asking the hearer to help to get to an object or to see it, or asking for help when the object causes

distress, and so on. When the bid for joint attention is addressed to a parent, the outcome is that the parent provides the information asked for, usually telling the child what an unfamiliar object is, and even elaborating on the subject some more. Similarly, when a child turns a parent’s attention to an object in order to ask the parent’s help in dealing with the object, the outcome is, usually, that the parent provides such help. It seems that young children don’t consider their peers to be likely sources for the provision of information and help, hence they don’t address such attentional bids to them. Upon examination, it appears that interaction formats centering on attentional objects in the environment are utilitarian moves and require **asymmetrical participants**. Peers usually do not deliver, thus children apparently do not bother to start this kind of interaction with them. We say this is NOT lack of ability but a deliberate pragmatic decision. Peers are unable to provide the services which are the point of interaction with adults on the here-and-now.

However, this leaves very few alternatives for any kind of interaction. Interestingly, Hogan and Garvey report that, at a slightly older age, beyond 3;6, interaction between peers is still not interaction on the hear-and-now but conversations on the past and future. At the younger age-group we are investigating, we know that children usually cannot yet discuss nonpresent topics. Thus, avoiding interaction around the here-and-now effectively leaves them without workable interactive formats. **It may seem pointless for a child to establish shared attention with a peer who cannot follow up with information or help. Without a workable interactive format, young children abstain altogether from focused interaction with peers.**

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