

Conversational competence in children *

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ABSTRACT

Observations of early morning conversations between twin boys (2;9 at onset of research) indicate that young children are able to sustain a coherent dialogue over a number of turns. Contrary to the views of Piaget (1926), the interlocutors generally attend to one another's utterances. Coherence is achieved to a large extent by attending to the form of one another's utterances. Extended exchanges are maintained by speakers focusing on a sequence of sounds (sound play) or a constituent within an antecedent turn and reproducing it (with or without modification) in the next turn.

INTRODUCTION

This paper examines the development of communication skills in young children. It focuses, in particular, on the emergence of skills that underlie the exchange of talk. Any child who learns to speak has interacted with other members of the society. Before he utters a single word of the adult language, he is able to respond to the social overtures of others (Bruner 1975, Escalona 1973, Richards 1971). Escalona finds that even in the first month of life, a child responds to the presence of another by gazing, smiling and/or vocalizing. As a child matures, he is able to engage in reciprocal games, such as peek-boo (after five months), to comply with requests and/or answer questions (eleventh month) and independently initiate interactions by expressing a wish or demand, by showing or giving things to people. The emergence of speech in a child must be seen in the context of these social skills.

How, then, do children use language in interacting with others? In what sense are they able to produce and respond appropriately to requests, invitations, greetings, summons, insults, narratives, comments? In what sense are they able to maintain a sustained and coherent dialogue? Questions such as these have been posed by Bloom (1970), Ervin-Tripp (1973), Halliday (1973), Hymes (1972) and Ryan (1972, 1974) among others. Discussion of these questions draws primarily

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from observations of adult (usually the mother)-child interactions. This paper hopes to broaden the scope of these observations to include child-child interaction.

METHOD

Since September 1973, observations of the speech of two children have been made. The children are my own twin boys, Toby and David, age 2;9 at onset of research. Initially, the conversations of the children were recorded on an audio recorder. From 22 October, a video recorder has been used. This equipment will be used once a month over a period of a year.

The bulk of our observations of the children's conversations take place in the children's bedroom in the early morning hours. This setting was selected as it provides a locus where the children speak to one another outside the presence of any adult. One of the focal interests of this research is to examine how children maintain a dialogue on their own. Twins, in general, are particularly interesting in this respect as neither is linguistically more sophisticated than the other. In terms of their communicative competence, both share roughly the same level of development. The children have also been recorded interacting with adults (nanny, parent) and with another child approximately the same age (2;10).

THE PROBLEM DEFINED

We now turn to the conversations held by Toby and David when on their own. Our primary interest is in investigating the ways in which these children co-operate in talk. This focus presupposes that young children do engage in meaningful, sustained talk-exchanges. It opposes the Piagetian view (1926) that children tend not to address or adapt their speech to a co-present listener. The high percentage of egocentric language (47 per cent for one child, 43 per cent for a second child) observed by Piaget is not characteristic of early morning dialogue between Toby and David. For example, in the conversation of 15 September 1973, of 257 conversational turns (one or more utterances bounded by long pauses or by the utterances of another speaker), only 17 or 6.6 per cent appear to be unequivocally not addressed or adapted particularly to the co-present interlocutor. Of these turns, seven involve the construction of a narrative, three involve speech addressed to a toy animal, and seven involve songs and sound play. The narratives appear to be addressed to some imaginary interlocutor or to some audience, which may include the co-present child but not him exclusively. This shift in audience is signalled by a shift in voice quality by the speaker. Generally, narratives are marked by greater loudness in contrast to the immediately preceding utterances. The speaker appears to be talking to an interlocutor who stands some distance away.

The division of speech into egocentric and social, private and public, and the like, is riddled with difficulties. What one investigator may call egocentric or private another may call social or public. For example, Piaget considers utterances which repeat an immediately previous utterance as non-adaptive and egocentric, whereas I consider repetitions as highly social in intent! (The argument for this classification is to be discussed below.) I would like to discard this dichotomy in favour of an approach that considers talk-exchanges in terms of a speaker's expectations and a hearer's obligations (Schegloff 1968, Goffman 1971).

Two interlocutors who wish to communicate with one another are faced with what Lewis (1969) calls a coordination problem. To interact effectively, they need to share not only a linguistic code, but also a code of conduct. That is to say, interlocutors need to establish a loose set of conversational conventions. These conventions establish certain expectations on the part of speaker and hearer. For example, speaker-hearers may establish speech conventions concerning turn-taking, points of interruption, audibility. These expectations cut across all types of dialogue. Other expectations may be tied to particular utterance types. A speaker producing utterance X may expect a particular sort of verbal/non-verbal response from a hearer. That is, the speaker expects the hearer to recognize the speaker's utterance as a certain kind of talk and expects the hearer to respond in a manner appropriate to that talk. Generally, if the hearer recognizes the category of talk offered by the speaker and if he responds in the manner appropriate to that talk, then we can say that the hearer has satisfied the speaker and that the talk-exchange is a 'happy' one.

Let us illustrate this principle of the happy exchange. One category of utterance which occurs frequently in the dialogues between Toby and David is the comment. Comment is a term used by Bloom (1970) to refer to utterances that describe some ongoing activity or some activity about to be performed in the immediate future. Comments also name or point out co-present objects. Applied to the dialogue at hand, comments also include descriptions of the state or condition of objects and persons.

*Examples of comments:*¹

1. Descriptions of on-going activity: *I got feathers/*
I got/ I got big one/
I rip it now/
2. Descriptions of immediately subsequent activity: *goin' [æ] scratch/* (= 'Going to scratch')
[gʌ] go scratch it/ (= 'Gonna go scratch it')

[1] The notation used throughout the paper is to be interpreted as follows: / = terminates breath group; - = turn by single speaker; + = turn by both speakers; (?) = unclear utterance. Intonation notation follows Kingdon (1958): \ = low fall, ʌ = emphatic low fall, / = high fall, ʌ = emphatic high fall, ʌ = low rise, etc.

3. Descriptions of state/condition of objects/persons: *oh/ house broken/ oh dear/*
very quiet/
all very quiet/
4. Naming, pointing out of objects: (looking at letters in book) *ABC in 'er/* (= 'ABC in there')
that \A/ \B/ that \A/
[i:]¹ moth/ (3 times) (= 'There's a moth')
some over in 'er/ David/ some over in 'er/
 (= 'Some in there David; some in there')
some in there/ lots in 'er/ (= 'Some in there. Lots in there')

Bloom states as well that comments contrast with directions in that the former 'do not attempt to influence the behaviour of the receiver' (1970: 22). One interpretation of this generalization is that, in uttering a comment, a speaker has the primary intention of expressing a certain belief about the world to a hearer; the primary intention of the speaker is not that the hearer should carry out some course of action. Grice (1968) discusses the distinction between these two types of utterances. For him, the distinction is not between comments and directions, but between indicatives and imperatives. In Grice's analysis, indicatives and imperatives can be distinguished in terms of their 'meaning-intended effect'. The meaning-intended effect of an indicative utterance is that the hearer should think that the utterer believes something. The meaning-intended effect of imperative-type utterances is that the hearer should intend to do something.

Clearly we want to distinguish between the conventionalized use of these two types of utterances – comments and directions. It would be a mistake to infer, however, that the uttering of a comment incurred no behavioural obligations on the part of a co-present hearer. In the dialogues between Toby and David, for example, a speaker uttering a comment expects the hearer to ACKNOWLEDGE that comment. That is, once a comment has been produced by a speaker, the co-present interlocutor is normally obligated to respond verbally to that comment. If the hearer recognizes the utterance as a comment, and if he responds appropriately with some form of acknowledgement, we can say that the talk-exchange is a happy one.

Let us look at the data that support this generalization. How can we justify the assertion that the speaker expects some form of acknowledgement from the co-present hearer? One basis for this assertion is simply the observation that comments are almost always followed by some utterance that addresses itself to that comment. For example, out of the first 76 conversational turns containing com-

[1] [i:] is a general deictic particle. It could be glossed as 'there', 'here', 'he', etc.

ments three received no verbal acknowledgement. This absence of response cannot always be explained, but often it may be due to its place in a topic-related conversational episode. If the comment has occurred after a number of exchanges it may not receive a response. That is, the topic has been exhausted, and a new topic is taken up.

(1) (Toby and David are looking through an Alphabet book).

– *ABC in 'er* (= 'ABC in there').

– *that A/ B/ that A/*

– *A/*

– *that A/ C/*

– *X/*

– *tickles/*

(2) – *you/ pillow/ you rip it/ ee/ I find feather/ I find feather/*

– *yes/ I find (?)/ I get one/ now I get good one/ I get good one/ a big one/*

– *oh yes/ got one/*

– *I got big one/ I got big one/ I got big one/ I got big one/*

– *oh dear/ oh dear dear dear/ piggy fall down/*

Generally, comments do receive acknowledgements. Acknowledgement is expressed by any one or a combination of the following forms:

I. Positive particle: *yes, yeah*, etc.

(3) – *got feathers/ got feathers/ baby one one/ feathers one/ big one/ big one/*

– *oh yes/*

– *big one/*

– *yes/*

II. Negative particle: *no, not*, etc.

(4) – *Sockerbopper/* (Sockerbopper is the name of a toy)

– *No/ Sockerbopper/*

III. Expletive: *oh, oh dear, oopsee*, etc.

(5) – *My lost it/* (= 'I lost it')

– *Oopsee/*

IV. Indicatives

(a) Indicatives that carry no new information: exact repetitions of comment, partial repetitions of comment (deletions).

(6) – *big one/ no/ big one/*

– *big one/*

(7) – *Mommy's silly/*

– *Mommy's silly/*

(b) Indicatives that carry new information:

(i) Extended repetitions

- (8) – *big one/ yes/ big one/*
 – *I got/ I got big one/*
 (9) – *flower broken/ flower/ its flower broken/ [ε]/ oh/ end/*
 – *many flowers broken/*

(ii) Negative repetitions:

- (10) – *you silly/*
 – *no you silly/*
 (11) – *cradle will rock/ cradle fall/ cradle will rock/*
 – *no cradle will rock/*

(iii) Other extensions (predicates that do not repeat comment):

- (12) – *many moths/*
 – [i: go:d]/ *on the ceiling/* (= 'He go-ed on the ceiling')
 (13) – *fall down now (2)/*
 – *no/ I not fall down/ I ALRIGHT/ I not fall down/*

(Small capitals indicate the utterance that belongs to this category of acknowledgement.)

A second body of evidence in support of the assertion that one who comments expects a response comes from exchanges in which acknowledgement is not immediately provided. In many such cases, the comment is repeated until it is acknowledged.

- (14) – [i:] *moth (2)/*
 – *goosey goosey gander/ where shall I wander/*
 – [i:] *moth (4)/*
 – *up downstairs lady's chamber/*
 – [i:] *moth (3)/*
 – [i:] [le:] *moth/*

In this example, the speaker solicits the attention of the hearer by uttering the comment over and over (a total of nine occurrences). In other cases, the speaker may accompany the comment with an explicit directive (request, command) to acknowledge the comment:

- (15) – *^see it/ ^ABC/ ^see it/ ^see/ ^ABC/ 'look/*
 – *^oh yes/*
 (16) – *^tree (2)/ see got ^grass/*
 – *yes I ^see it/ I ^see it/*

These examples show that most comments are directed to the co-present hearer. Acknowledgement by the hearer is expected by the speaker, and when no such acknowledgement is forthcoming, the speaker solicits it. Comments, then, do not fit into Piaget's notion of egocentric speech: 'The child talks either for himself or for the pleasure of associating anyone who happens to be there with the activity

of the moment... He feels no desire to influence his hearer nor to tell him anything' (Piaget 1926:9). I point this out particularly because included in the category of egocentric speech are repetitions. 'The part played by this [repetition] is simply that of a game; the child enjoys repeating the words for their own sake, for the pleasure they give him, without any external adaptation and without an audience' (*ibid.*).

It is clear from the examples provided above that a child may repeat utterances not for himself but for the benefit of his co-conversationalist. This is true for the two types of repetition seen in these examples. First, there is repetition in which a child repeats an utterance he himself has previously produced. As seen in (14), this kind of repetition may serve as an attention-getting device. The speaker solicits some form of acknowledgement from his co-conversationalist. Second, there is repetition in which a child repeats an utterance previously produced by his conversational partner. As seen in (6) and (7), repetition of an antecedent utterance serves to acknowledge that utterance. Given that acknowledgement is expected by the initial speaker, repetitions here are sociocentric rather than egocentric. The hearer has honoured his obligations with respect to the speaker.

CATEGORIES OF TALK

We have discussed in some detail the handling of comments by Toby and David. Let us consider several other categories of speech behaviour found in the bedroom dialogues. In addition to comments, there are:

Questions. I use this term as defined by Bloom (1970) to refer to utterances used by the child to seek information or confirmation. Whereas comments are expressed by utterances in the indicative mood, questions are expressed by utterances in the interrogative mood. (I include here declarative sentences uttered with a question intonation.)

- (17) - \oh what's that/
 - \house broken (2)/ \I rip it (2)/ \see/
 (18) - \you do this/
 - \yes/

Mands. Mands are one category of interpersonal directive in which the primary intention of the speaker is to direct the hearer to carry out some course of action. I use the term mand rather than directive, as the utterances tend to be in the speaker's interests (requests, demands) rather than in the hearer's interests (directions, warnings) (Ross 1968). Mands are expressed in a number of ways. The majority are expressed by utterances in the imperative mood. The subject of the imperative may be the addressee or a third party:

- (19) - I do this/ ^look/
 - oh yes/ \you do that/

- (20) - *\Toby \kiss it (3)/*
 - *No ʰ[zæt]/*
 - *\kiss it/*
 - *no \[zit]/*
 - *\kiss it (2)/*
 - *no ʰ[zit]/*
 - *\kiss it/*
 - *no kiss ʰit/*
 - *ʰkiss it/ (2)*
 - *ʰJoanie¹ kiss it/*

Mands may also be formed from utterances which express a wish or need or which specify the object of that wish or need (Halliday 1973):

- (21) - *Jack Jill/ I want Jack and Jill/*
 - *Jack and Jill/*
 - *yes/*

A third form of mand includes the use of a performative verb. The verb specifies what social act is being performed by the speaker in uttering that mand.

- (22) - *tell² David to do this/ do this (3)/ do this in 'er/ do make eye/*
 - *oh yes/*
 (23) - *make² you wake up/ you you wake up/*
 - *no (?)/ no/*

Narratives. Narratives are closely related to comments in that they tend to be formed from indicative utterances. They differ in that they describe a sequence of two or more events which the child imagines take place. Furthermore, unlike comments, narratives are not addressed specifically to the co-present interlocutor (see the above discussion). The speaker does not expect a topic-related response from the co-present interlocutor and is not upset when one is not forthcoming.

- (24) - *I see ribbon/ get shop/ I [ge]/ get house/ (?) ask lady/*
 - *I go shop/ byebye (4)/ I goin' shop/ big bend/ I get shop/ byebye (4)/*
 (25) - *I go bye bye now/ gone/ I go mommy/*

Songs, Rhymes. Songs and rhymes occur often throughout the dialogue between Toby and David. In the dialogue of 15 September, of 257 conversational turns, 21.5 turns involved songs and rhymes.

- (26) - *Jack and Jill (2) fetchapail water/*
 - *Jack fall down and broke crown/*
 - *and (?) after/ (?) caper/*
 - *went to bed/ broke his head/*
 - *[gʌgʌgʌgʌpi] paper/*

[1] Personal referent not present.

[2] Performatives.

Sound play. This category of utterance is one of the most frequently occurring types of talk between the children.

Sound play refers to exchanges in which speaker and hearer focus primarily on the sounds of words. That is, a basic motivation for uttering the word(s) is to manipulate, to play with possible sound combinations. Sound play is an example of what Jakobson (1960) calls the poetic function of language (see also Weir 1970). It enters into most of the children's utterances to varying degrees. For example, the performing of songs is strongly motivated by the enjoyment experienced in articulating the words in a rhythmic manner. In this analysis, however, I have restricted the category primarily to those cases which are unambiguously sound play. That is, I have restricted the notion of sound play to utterances which cannot be referentially interpreted by an adult native speaker. Of course, one could assume that the children have constructed a code in which these utterances do assume conventional meaning. However, I argue against this position. First, PARALINGUISTIC CUES indicate that the children themselves realize they are using language in some manner out of the ordinary. Sound play is often engaged in on a relatively high pitch level. Further, it is generally accompanied by laughter. An utterance is produced. A burst of laughter follows. The utterance is repeated or modified by the co-present interlocutor and so on.

- (27) - [zaeki su]
 - (laughing) [zæki su] (2) (both laugh) [æ:] (laughing)
 - [api:]
 - [olp] [olt] [olt]
 - [opi:] (2)
 - [api:] (2) (laughing) [api] (3)
 - [ai] [ju]
 - (laughing) [ai] [ju] [api] (repeats over and over) (laughs)
 [kaki] (repeats over and over)
 - [ai] [i:] [o:]
 - [ai] [i:] [o] [o:]

Secondly, the DIRECTION of the dialogue seems to be motivated by the phonological properties of the utterance rather than by any semantic considerations. Particular words which do have referential meaning are produced in the course of this play, but the motivation is purely formal. The word happens to fit the sound pattern being explored in the dialogue. In fact, the realization that a 'real' word fits the paradigm is greeted with enormous hilarity:

- (28) - [a] [batf]
 - [batfi:] [birtfi:] [badi:] [bi:di] [babi]
 - [badi:] (laughing)

Focus on the shape of the utterance is seen as well in the frequency of REPETITIONS of particular utterances. It is characteristic of sound play that particular

lexical items be repeated over and over, as many as fifteen times. These repetitions may be uttered by one speaker or by both interlocutors simultaneously.

- (29) – [ga:] [ba:] [ba:] [blæk] [ʃip] [hæveg] [ʌl:] (yawns) [bægz] [leɪəl]
 [baki:] (repeats over and over)
 – [baki:]
 – [baki:] (repeats over and over) (laughs)
 – [baki:] (repeat over and over)
 – [tapu:ts] (repeats over and over)
 – [tapu:] [tapu:ts]
 – [tapu:t] (laughs)
 – [o:]

In sound play, the speakers attend not only to different points of articulation, but to prosodic features of the code as well. Thus, the focus of a particular exchange may be intonation contours or stress patterns or tempo.

- (30) – [ˈæpl] (2) [o:wo:wo:] [o]
 – [ˈæpl] [ˈæpl] [ˈæpl] [ˈæpl]
 – [æpl ˈki:nz] [æpl ˈki:z] [æpl ˈki:nz] } (simultaneous)
 – [ˈæpl] (repeats over and over)

It is difficult to say whether or not this type of dialogue is a twin phenomenon. Conversations of this sort have not been reported in the literature. However, it may be more characteristic of children's discourse than acknowledged. For example, an illustration of a collective monologue cited by Kohlberg, Yaeger & Hjertholm (1968: 693) resembles the sound-play exchanges reported here:

Brian: *I'm playing with this.*

David: *A what's, a what's.*

Brian: *Oh nuts, oh nuts.*

Furthermore, sound play by a solitary child has often been described (Bloom 1970, Chao 1951, Jespersen 1922, Jakobson 1968, Weir 1970).

Comments, questions, mands, narratives, songs and sound play represent the major categories of talk used by Toby and David on their own. They can be distinguished in terms of mood (indicative, imperative, interrogative), in terms of presence or absence of propositional content (sound play vs. comments, questions, etc.), in terms of hearer addressed (narrative vs. comment, for example). They can also be distinguished in terms of the type of response expected by the speaker from the hearer. That is, we can consider each of these uses of language in terms of the obligations each imposes on the hearer. Very roughly, we can divide the set into two groups. In the first group fall comments, questions and mands. All categories of talk in this group impose some form of obligation on the co-present hearer. Minimally, this obligation consists of the hearer acknowledging that the

speaker has addressed some utterance to the hearer. Songs, sound play and narratives fall into the second group. None of these categories of talk obligates the co-present hearer to respond. Many times the co-present hearer does respond but he is under no obligation to do so. Speakers initiating a song or sound play, for example, do not necessarily expect that the hearer will attend to the utterance. They are content to play with sound or sing or narrate for long stretches. In fact, when used in this way, these three categories fit Piaget's definition of egocentric speech (i.e. speech which is not addressed or adapted to a listener).

- (31) – (begins to sing, yawning) *twinkle twinkle little star/ how I wonder/*
 (yawns) *up so high like a diamond dum/ rockababy on treetop/*
when wind blows cradle rock/ bow breaks/ cradle fall/

In looking at the data, I have the impression that these passages would go on for longer if they were not interrupted by the other child. That is, rather than the speaker expecting some attention from the hearer, the hearer expects some attention from the speaker. Rather than the speaker becoming irritated because the hearer has failed to attend (as happens, for example, with mands and comments), the hearer becomes irritated because the speaker has failed to attend to the hearer. Often the co-present child does not like the fact that the speaker has withdrawn from the dialogue. If the speaker appears to be drifting off into an exclusive universe of talk, the co-present child will try to solicit his attention, to bring him back into conversational play. This may be done by contributing to the speaker's utterance. That is, the co-present child may interrupt the speaker's talk with the next line of a song he is singing or with sound play appropriate to the speaker's paradigm.

- (32) – *goosey goosey gander, where shall I wander/ upstairs downstairs/ la*
lady's chamber/ [m:] [ma] met it old man/ [a:]/ say prayers/ fall down
stairs/ [la] lady's chamber/ [m:] [ma] met it old man/ rockababy on the
tree top/ and the windows/
 – *big rock/ biggy will fall/*
 – *and cradle all/*
 – *and all/*

Another strategy is to interrupt the monologue with a comment, mand or question. The motivation behind using these categories of talk is obvious. In addressing any one of those speech acts to the co-present child, the speaker obligates the latter to evidence his attention. Thus the excluded child insures that he will be excluded no longer. In order to attend to the comment, mand or question of the other, the speaker must discontinue his own talk. The speaker is not always willing to do this, and often the co-present child may find it necessary to repeat his comment, question, etc., several times before it is acknowledged.

- (33) – (yawns) *goosey goosey gander*/
- (sings a song to toy pig)
 - (whispers) *goosey goosey gander*/
 - [i:] *moth*/ [i:] *moth*/
 - *goosey goosey gander where shall I wander*/
 - [i:] *moth*/ [i:] *moth*/ [i:] *moth*/ [i:] *moth*/ [i:] *moth*/
 - *up downstairs lady's chamber*/
 - [i:] *moth*/ [i:] *moth*/ [i:] *moth*/
 - [i:] [le:] *moth*/
- (34) – *I see ribbon get shop/ I get house/ (?)/ ask lady/*
byebye/ byebye/ I go shop/ byebye/ byebye/ byebye/ byebye/ I goin' shop big
bend/ I get shop/ byebye/ byebye/ byebye/ byebye/ (?)toys/ byebye/ byebye/
byebye/ byebye/
- (interrupting) (?) [i:]/ *what's 'at*/ [i:]/ *what's 'at*/ [i:]/ *what's 'at*/
 - [i:]/ *what's 'at*/
 - *hello/ hello/ hello/ hello/ (?) [i:] god*/
 - [i:] *god*/ [i:] [da:]

This behaviour of the co-present child indicates once again the highly social nature of these dialogues. Egocentric speech on the part of one child is not tolerated by the other child. This description again contrasts with that provided by Piaget. Piaget's observations showed co-present children using egocentric speech for extended stretches of discourse. One explanation for this contrast may be that the interlocutors are twins, and perhaps they cannot be considered representative examples of interacting children. Only further research can substantiate this claim. Another explanation may be that the setting and social activity of Piaget's subjects and the subjects of this study differed radically. Piaget observed children as they interacted in a nursery school classroom. The exchange of talk between children was accompanied by a variety of non-verbal activity. The dialogues between Toby and David took place in the familiar surroundings of their bedroom. Furthermore, they conversed in semi-darkness (early morning). During most of the talk, the children remained in their beds. The point I wish to stress is that in the nursery school setting there existed a variety of stimuli (visual, tactile) to interest the child; the child need not depend on talk alone to interest him. In the bedroom setting, these stimuli are not present to the same extent: the major activity in this setting is the exchange of talk, and when one child fails to participate in the exchange, the other child rapidly becomes bored; his only alternatives are to fall asleep, to talk to himself, or to re-engage the other in conversational play. If this hypothesis is correct, it suggests that the talk of children (like that of adults) is sensitive to context. The commitments of speaker to hearer and hearer to speaker differ according to range and kind of activities they are engaged in. Collective monologues (Piaget 1926) may be

tolerated by interlocutors in a nursery school setting, where other forms of play absorb the child. In a less provocative environment, however, speakers and hearers may be obliged to attend more closely to each other's talk.

RECIPES FOR A DIALOGUE

In his lectures on logic and conversation, Grice (1968) has suggested a number of conversational maxims to which speakers generally adhere. One of these maxims concerns the relation of the speaker's utterance to the 'accepted purpose or direction of the talk-exchange'. This maxim is simply: *BE RELEVANT*. Of course, speakers do not conform to this principle in every instance. But generally interlocutors expect each other's utterances to relate to some mutually accepted orientation. One of the communication skills which a child must learn is, then, this maxim.

The notion of relevance implies that the utterances at hand can be assigned a meaning. When we say that an utterance is relevant to some previous talk, we mean that the utterance is referentially or sociologically (as a kind of speech act) tied to the topic or direction of the talk. Before we can discuss to what extent children's utterances are relevant, we must clarify the extent to which their dialogues are meaningful (i.e. have meaning).

At 2;9 Toby and David entertain conversations of two sorts. First, they have conversations in which the verbal contributions are referentially interpretable. That is, they use utterances which have a referential meaning. Second, they have conversations in which the verbal contributions cannot be assigned a referential meaning. These conversations are exchanges of nonsense, what we have previously discussed as 'sound play'. These dialogues are coherent in the sense that both interlocutors co-operate in the same social act. And they are coherent in the sense that the interlocutors attend to the phonological shape of one another's utterances. A nonsense syllable from an initial conversational turn is repeated or modified slightly:

- (35) - [apfi:] [autfi:] (2) [ɔtfi:] [o:ʃabat:]
 - [ʃa:ʃabat:]
 - [ʃo:babat:]
 - [ʃo:babat] [ʃobabat:] (laughs)
 - [ʃo:bababat:]
 - [ʃo:bat:] (laughs)
 - [ʃo:bat:]
 - [bapt:]
 - [ʃo:bat:]
 - [bat:] [bit:] [badi] [bidi] [babi]
 - [badi] (laughing)
 - (?) [dænju]

- [latla:ju]
- [latlodu] [latlogu]
- [latlodo]
- [bau:] (laughing) [gali gu:du]
- [i:ja] [gi:ja]
- [gi:ja] (both laugh) [dabu:t] (15)
- [da`bu:t] [ˈda:but]
- [da`bu:t] (repeats over and over)
- [gal] [gʌl]

This particular sequence of talk was interrupted by a comment by one of the children. After a brief exchange, however, it was resumed for another ten conversational turns. Interrupted once again by a song sung by one child, it was continued for a further ten lines.

This example is no exception. The conversational discourse of these children is laced with sound-play exchanges of this sort. The frequency and length of these exchanges make it clear that it is perfectly acceptable for interlocutors to address their utterances to the form of an immediately preceding utterance. This applies not only to utterances which are clearly instances of sound play. It applies as well to utterances which can be referentially interpreted. That is, it is often acceptable to reply to a comment, mand, question or song with an utterance which attends only to the form of that talk.

- (36) - *wake up/ wake up/*
 - [he:kʌt] (laughing)
 - [he:kʌt]
 - [be:kʌp]
 - [bre:kʌt] [bre:kʌp]
 - *wake up/* [wi:kʌp] (laughing) [wi:kʌp]
- (37) - *black sheep* (4)/
 - *black/* [bʌkʃi] (?)
 - [bʌdijotʃ] (2)
 - [bʌdzɒts]
 - [bʌtʃi] [bʌtʃiɒtʃ]

For these children, the maxim BE RELEVANT can be interpreted as 'The utterance to phonological form of previous utterance'. This interpretation is not, however, shared by adult interlocutors in western society (at least not to the same extent). Normally,¹ it is not acceptable for adult interlocutors to attend solely to the form

[1] I am grateful to David Crystal for pointing out to me that sound-play-like exchanges may appear in adult conversations as 'jocular chidings'. In informal conversation, one adult may brush off the worries or complaints of another by converting his utterance to sound play: e.g. A: *My hair's falling out. I'm worried.* / B: *Hair shmair, who cares?* This kind of sound play is short-lived, however, in contrast to the extended exchanges sustained by the children.

of one another's utterances. An adult who responded to the command /*wake up*/ *wake up*/ with the utterance [he:kʌp] would be regarded as very strange indeed. This difference in interpretation of relevancy may be an important criterion in distinguishing the conversations of adults and young children.

Let us now consider dialogues which have referentially interpretable turns. Some of these dialogues are dominated by genres such as songs or nursery rhymes. The song or rhyme provides a more or less fixed routine in which the children can co-operate in talk.

- (38) – (unclear sound play) /*fetch a pail of water*/ *Jack fall down*/
 – *Jack*/ *Jill*/ *Jack Jill*/
 – *broke crown*/ (?)
 – *Jack*/
 – *Jack fall down*/ *broke*/
 – *Jack fall down*/ *broke crown*/ *after*/
 – *Jack and Jill fetch a pail of water*/ } simultaneous
 – *broke crown*/ }
 – (?) *paper*/

In other instances, however, these dialogues may consist of comments, acknowledgements, questions and/or mands centring on one or more topics. As the interlocutors rely on no ready-made routine (song, rhyme), it is reasonable to assume that in these cases a coherent dialogue is more difficult to achieve. A close examination of these conversations shows that to a large extent the interlocutors achieve coherency by applying a few formal operations to one another's utterances. An initial utterance offered by one speaker is modified in some way by the second speaker and offered as a response or part of a response. We refer to these modifications as functions. The nature of the modification defines the function that relates the utterances.

The bulk of the conversations between Toby and David at 2;9 can be accounted for in terms of two major functions. The first is what the author calls the *FOCUS* function. Focus functions take an initial conversational turn, focus on a constituent of it, and repeat it in a subsequent turn. The constituent focused on may be a whole utterance within a turn.

Focus functions can be broken down into a number of specific types:

I. The *BASIC FOCUS* function focuses on a constituent of an antecedent turn and repeats it exactly as it appeared originally (including intonation). The constituent most often repeated is the predicate or some part of the predicate (e.g. direct object) of a preceding utterance.

- (39) (Toby and David are looking at letters in book)
 – *that* \A/ \B/ *that* \A/
 – \A/

Other constituents repeated in the data are subject, subject+predicate, and subject+partial predicate.

(40) – *Mommy to do/ Daddy to do/*

– *Daddy to do/*

(41) – *Mommy's silly/*

– *Mommy's silly/*

II. In addition to the BASIC FOCUS function, there are a number of COMPLEX FOCUS functions. These functions are complex in the sense that basic focus is accompanied by some further formal modification.

(a) FOCUS+PROSODIC SHIFT repeats a constituent within an antecedent turn but alters the intonation or voice quality assigned to the constituent.

(42) – *\flower broked/ \flower broken/*

– *ˌflower/*

(b) FOCUS+CONSTITUENT EXPANSION focuses on a constituent within an antecedent turn and expands it syntactically. The expansion does not alter the grammatical status of the focused constituent.

(43) – *flower broken/ flower/ its flower broken/ eh/ oh/ end/*

– *many many flowers broken*

(c) FOCUS+CONSTITUENT EMBEDDING focuses on a constituent within an antecedent turn and embeds it in a larger construction.

(44) – *big one/ yes/ big one/*

– *I got/ I got big one/*

Both *b* and *c* may be accompanied by prosodic shift as well.

These focus operations also relate utterances within a conversational turn. For example, the turn 1 *and teddy bear/* 2 *teddy bear have ribbon/* 3 *teddy bear have ribbon /* 4 *teddy bear have/* 5 *teddy bear have ribbon/* includes utterances related by basic focus (e.g. 2 and 3) and focus+embedding functions (e.g. 1 and 2, 4 and 5). Focus functions can be applied to many such utterance sequences mentioned in the literature on child language. Bloom's 'expansions' (1970), Braine's 'replacement sequences' (1965), and Weir's 'build-ups' and 'break-downs' (1970) can all be characterized in terms of these operations. For example, Weir's 'break-downs', (*Anthony jump out again/ Anthony jump/*) are related by the basic focus function. Weir's 'build-ups' (*block/ yellow block/ look at all the yellow block/*) can be explained by complex focus functions, for example, focus+constituent embedding, focus+constituent expansion.

What the present study contributes to this literature is the fact that these syntactic modifications can be applied by a young child to utterances of another child (or adult). The current literature tends to focus on sequences produced by

one child to show the level of syntactic complexity achieved by the child. The present study indicates that the production of such sequences can be a co-operative enterprise and a means by which young children achieve a dialogue.

Let us now consider the second major function that relates utterances in the dialogues of Toby and David. In addition to focus functions, there are SUBSTITUTION functions. Substitution functions take an utterance within a conversational turn and replace a constituent within it with a constituent of the same grammatical category. (An entire utterance may not be replaced.)

- (45) – *two moths*/
– *many moths*/

Again these functions can apply to utterances within a turn as well as to utterances between turns. For example, in the sequence by one child: *Mommy to do/ Daddy to do/* the utterances are related by a substitution function. (The subject Mommy is replaced by the subject Daddy.) Again such a function can apply to many sequences reported in the psycholinguistic literature. For example, in the sequence reported by Bloom for Kathryn at stage II: 1 *make a block/* 2 *make a house/* 3 *blocks/* 4 *make a house/* utterances 1 and 2 are related by a substitution function. In fact, the entire sequence can be described in terms of both the focus and substitution functions. Utterances 1 and 3 are related by focus + expansion, 2 and 4 by basic focus.

The bulk of the utterances between conversational turns are linked formally through these functions. The child uses all or part of an initial utterance in the formulation of a subsequent utterance. However, every utterance in the corpus cannot be explained in terms of these formal modifications. Some utterances appear which have no formal relation whatsoever to previous discourse. We have categorized these utterances into two groups:

I. *Response Constants*. The bulk of the formally unrelated utterances are drawn from a small set of particles. The set includes the affirmative particles *yes, yeah, oh yes*; the negative particles *no, not*; and the expressive particles *oh, oh dear, oopsee, ouch, eegod, ee*. These particles may appear alone in a conversational turn or may accompany another utterance. They usually serve to acknowledge an utterance offered by the other speaker. (See discussion of comment-acknowledgement exchanges above.)

II. *Novel utterances*. A novel utterance is any utterance which is not related to an antecedent turn by some function and is not a response constant. Most novel utterances appear in a conversational turn after some utterance that is functionally related to previous discourse.

- (46) – *I gets some ribbon/ (?) too.*
– *I see ribbon/ get shop/ I [gɛ] get house/ (?) ask lady/ byebye (2)/ I go shop/ byebye (4)...* (continuation)

In some cases, an entire turn may contain novel utterances relative to the immediately preceding turn.

- (47) – *no silly*/
 – *big one*/ *piggy one*/ *pig it*/ (?) *it piggy*/

Although it is difficult to make any definitive judgement about the semantic relationship between turns related in this way, I feel that such exchanges are usually collective monologues (Piaget 1926) rather than semantically coherent dialogues. Semantically coherent dialogues are achieved largely by means of focus and substitution functions and response constants, as the following example illustrates:

(48)	Turns tied by	
– you \silly/ you \silly/	focus+ constituent embedding	
– \no Toby's silly/	focus+ prosodic shift (2)	
– you \silly (2)/	response constant & focus+	
– \no/ \you silly/ no not \you ² silly/	prosodic shift (2)	
– \you silly/	basic focus	
– \no/ \not/ \no silly (2)/	response constant (2) & focus+	
	embedding	
– \no silly (2)	basic focus (2)	
– \no/ \no you silly (2)/ \you silly/	response constant & focus+	
	embedding & focus+ embedding	
– \you silly	basic focus	
– \no you silly/ \oh/	focus+ embedding+ prosodic shift	
	& response constant	
– you \silly	focus+ prosodic shift	
– \no/ \you silly/	response constant & focus+	
	prosodic shift	
– (unclear mumbling)	(unclear)	
– no \you silly/ you \sil'ly/		
– you \silly (5)	} simultaneous	
– you \you silly/ \you silly(2)		focus+ prosodic shift (3)
– \no you silly		focus+ embedding+ prosodic shift
– \you silly (3)	} simultaneous	focus+ prosodic shift (3)
– \no silly (3)		focus+ embedding
– you \silly (repeats over and over)		focus+ prosodic shift
– no \no silly/ \no silly (2)/		focus+ embedding+ prosodic
		shift (3)

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- 'no (repeated)/ 'silly/ 'no/	} simultaneous	response constant & focus +
'silly/ (?) 'silly		prosodic shift & (?)
- 'no (repeated)/ no 'sil"ly/		focus & focus + embedding +
		prosodic shift (2)
- 'silly (3)/		focus + prosodic shift (3)
- 'no sil"ly/		focus + embedding + prosodic shift
- 'silly/ 'sil"ly/		focus + prosodic shift (2)
- 'no silly/		focus + embedding + prosodic shift
- 'silly/		focus + prosodic shift
- 'no/		response constant

(This dialogue continues in this fashion for a further 16 conversational turns.)

We are now in a position to suggest a partial formalization of discourse procedure (for young children). It is possible to represent the options available for responding to a conversational turn in terms of a set of phrase structure rules:

Notation

X = a particular antecedent turn

Resp to X = response to X

f(X) = a function applied to X (any one of those in phrase structure rules)

F = focus function

F_b = basic focus function

F_c = complex focus function

Pros. Shft. = prosodic shift

Expansion = constituent expansion

Embed = constituent embedding

Sub = substitution function

RC = response constant

NU = novel utterance

(Resp to X)ⁿ = response to X repeated *n* times

f₁(f₂(X)) = function₁ applied to function₂ which is applied to X

Phrase structure rules

$$\text{Resp to X} \longrightarrow \left\{ \begin{array}{l} F(X) \\ \text{Sub}(X) \\ \text{RC} \\ \text{NU} \end{array} \right\}$$

$$F(X) \longrightarrow \left\{ \begin{array}{l} F_b(X) \\ F_c(X) \end{array} \right\}$$

$$F_b(X) \longrightarrow \left\{ \begin{array}{l} \text{subj}(X) \\ \text{pred}(X) \\ \text{partial pred}(X) \\ \text{subj} + \text{pred}(X) \\ \text{subj} + \text{partial pred}(X) \end{array} \right\}$$

$$F_c(X) \longrightarrow \left\{ \begin{array}{l} \text{Pros. Shift } (F(X)) \\ \text{Expansion } (F(X)) \\ \text{Embed } (F_b(X)) \end{array} \right\}$$

$$\text{Resp to } X \longrightarrow (\text{Resp to } X)^n$$

$$\text{Resp to } X \longrightarrow \text{Resp to } X + \text{Resp to } X$$

These rules apply only to referentially interpretable responses. To cover all possible responses, the set of response options would have to be expanded to include sound play as well. A first examination of sound-play dialogue shows that not just any phonological sequence is offered as a response. Turns containing sound play are closely related in form. In fact, with some modifications, the relations between sound-play turns can be analysed in terms of focus and substitution functions. For example, we can replace the notion 'constituent' with the notions 'syllable' and 'sound' in our definition of focus functions. This function can be represented as F_{syl} and defined as follows: F_{syl} functions take an utterance, focus on one or more syllables or one or more sounds within a syllable and repeat it (them) in a subsequent turn.

(49)

Turns tied by

- [i:] [ga:b] [i:] [golb]

+ [i:] [golb]

 F_{syl}

- [golb]

 F_{syl}

Just as in referential discourse the focus functions may be basic or complex, so in sound play this distinction is readily applicable. The basic focus function takes a syllable or sound within it and repeats it exactly as it appeared in the antecedent turn. Complex focus functions modify the intonation or voice quality (F_{syl} + prosodic shift), expand a syllable to include other sounds (F_{syl} + expansion), or add new syllables to a focus syllable (F_{syl} + add).

(50) -[du:] (3)

Turns tied by

- (laughing) [dut]

 F_{syl} + expansion

- [du] (repeats over and over) (pause)

 F_{syl}

- [fΛpi] [du:]

 F_{syl} + add

Similarly, substitution functions can be applied to sound play. Substitution functions (Sub_{syl}) replace one or more sounds within a syllable (but not all the sounds) with another sound (or sounds) occupying the same linear position within the syllable;

(51)

Turns tied by

- [gi:nɔg] (3)

- [gi:nan] (repeats over and over)

 Sub_{syl}

- (laughs)

- [ki:tan] (2)

 Sub_{syl}

The systematic nature of sound-play discourse brings out the degree to which young children attend to the formal features of one another's utterances. Extended stretches of co-operative talk are achieved by reproducing exactly or modifying slightly each other's utterances. This is true for referential as well as for non-referential (sound play) discourse. Novel utterances may appear as topically relevant comments on an antecedent utterance. But normally such exchanges are short-lived. Extended sequences of novel utterances in adjacent turns are either part of a routine (e.g. lines of a rhyme or song), or they are non-attentive or egocentric speech (e.g. narratives).

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