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TOPIC AS A DISCOURSE NOTION: A STUDY OF TOPIC  
IN THE CONVERSATIONS OF CHILDREN AND ADULTS\*

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I. Orientation and Goals:

Topic has been described as a discourse notion (see, for example, Chafe 1972, Li and Thompson, this volume). However, there has been no systematic study in linguistics of the way in which topics are initiated, sustained, and/or dropped in naturally-occurring discourse. This paper addresses itself to this concern. It draws from notions developed by sociologists engaged in conversational analysis and integrates them with our own observations of the conversations of children and adults. Our observations include non-verbal as well as verbal contexts in which topics are entertained by interlocutors. On the basis of this record, the prerequisite steps for getting a topic into the discourse are characterized and a notion of discourse topic is defined.

In everyday conversations much of the talk that occurs concerns propositions about persons, objects or ideas. Moreover, when individuals, objects, etc., are not known to the hearer, the hearer initiates a series of fairly predictable exchanges directed at clarifying and locating the referent about which some claim is being made.

Consider for example, the following exchange in which the speakers are eating dinner:

- (1) 1.1 Bambi: It's coming out fast.  
          (shaking salt on food)
- 1.2 Elinor: What's coming out fast?
- 1.3 Bambi: The salt.

In this exchange, Bambi assumes that Elinor is attending to her actions and is able to locate in the environment the referent of "it". Elinor however, has not been attending to Bambi's action and cannot identify that referent. Further, Elinor had no clues from prior discourse; Bambi did not precede the utterance with talk about salt, e.g. "Pass me the salt." In other words, Elinor had no source for identifying the referent, and consequently, she did not understand what Bambi was talking about.

Clark (1973) has pointed out that when speaker-hearers engage in talk, they abide by a "Given-New contract", that is, the speaker is responsible for marking syntactically as "Given" that information that he thinks the listener already knows, and marks as "New" what he thinks the listener does not know. For example, it is appropriate for the speaker to use syntactic devices such as definite articles, pseudo-cleft constructions, and anaphoric pronouns when he thinks the listener knows the referent. Indefinite articles and cleft constructions appropriately mark the information that is New to the listener. The appropriate marking of Given and New is critical to the listener's comprehension of particular utterances. Information marked as Given leads the listener to search for its "unique antecedent" in memory or in the ongoing situation. The listener "then integrates the New information into memory at that point". (Haviland and Clark 1974: 513)

Analyses of spontaneous conversations show that listeners demand that the Given-New contract be adhered to. That is, listeners will not accept as Given referents that they cannot identify in terms of general knowledge, prior discourse or present context. Speakers make an effort as well to insure that listeners can identify what or whom they are talking about. One device employed by the speaker (in English) is to describe an object or individual using rising intonation. Sacks and Schegloff (1974) call such a construction a "try-marker". The speaker leaves a short pause following this construction in which the listener can evidence his recognition or non-recognition of the referent. Absence of a positive listener response (uh huh, head nod, etc.) in this pause indicates non-recognition. This in turn leads the speaker to offer further try-markers in an attempt to elicit a positive listener response.

(2)

- 2.1 A: ...well I was the only one other  
than than the uhm tch Fords?, Uh  
Mrs. Holmes Ford? You know uh//  
the the cellist?  
2.2 B: Oh yes. She's she's the cellist.  
2.3 A: Yes  
2.4 B: Ye//s  
2.5 A: Well she and her husband were  
there....

(Sacks and Schegloff 1974: 6)

Another such device is to overtly introduce a referent into discourse such as "Do you remember Tom?" or "Do you remember the guy we met in Paris?" "You know those boots we tried on yesterday with the fur lining?" or "Do you see that chair over there?" and so on.

The point to emphasize here is that speakers are reluctant

to make claims involving individuals or objects that have not been or cannot easily be identified or recognized by the hearer. That is, they are reluctant to add New information to the discourse if the objects or individuals to which they are referring can not be established as Given.

The phenomenon that we have been describing -establishing referents- is a prerequisite for successful collaboration on a DISCOURSE TOPIC. We take the term discourse topic to refer to the PROPOSITION (or set of propositions) about which the speaker is either providing or requesting New information. E.g.

- (3) Allison III, 20.34 months  
3.1 Mother: (trying to put too large  
diaper on doll, holding diaper on)  
Well we can't hold it on like that.  
What do we need? Hmm? What do  
we need for the diaper?  
3.2 Allison: pin/

In (3) the mother is requesting New information about the proposition 'we need something for the diaper'. The proposition thus constitutes a discourse topic. When Allison says "pin/", she is providing the New information requested. The proposition attended to in both the question and the answer is the same; thus the discourse consisting of that Question-Answer pair has a single discourse topic.

When speaker and hearer are directing their utterances to a particular proposition of this type, they are collaborating on a discourse topic. To collaborate on a discourse topic, the hearer must know what proposition the speaker is adding new information to or requesting new information about. If the speaker wants collaboration, he must select a discourse topic that takes account of the listener's knowledge. That



is, he must insure that the proposition that constitutes the discourse topic is known to or knowable by the listener. There are several things the speaker can do to this end: He can draw on general background knowledge he shares with the listener; or he can draw on information available in the interactional setting; or he can draw on prior discourse in the conversation at hand. (Garfinkel 1967)

In practice we find that much conversational space is taken up by exchanges in which speaker and hearer attempt to establish a discourse topic. In these exchanges, the speaker tries to make the discourse topic known to the hearer.

We propose here a dynamic model of the way in which speakers establish a discourse topic. The model represents the initial work involved in making a discourse topic known. We suggest that getting a discourse topic established may involve such basic work as securing the attention of the listener and identifying for the listener objects, individuals, ideas, etc. (Atkinson 1974) contained in the discourse topic.

The model is based on child-adult and child-child conversations. However, the application of the model is not limited to these interactions. The model can be applied to adult-adult discourse as well. Child language simply offers abundant and salient instances of this behavior.

## II. Data Base:

The data used in this study are drawn from three major sources. The first source consists of 6 30 minute video

tapes of a mother and her child (16.3 months-34 months). The first four of these tapes have been analyzed by Lois Bloom in One Word at a Time (1973). The second major source consists of 25 hours of audio- and video-taped interactions of twin boys with one another and with adults. The tapes were made over a period of a year, from 33 months to 45 months. (see Keenan, E.O. 1974, 1975a, 1975b, Kernan, E.O. and Klein 1975 for other analyses of this material.) Transcriptions of the videotaped data included extensive nonverbal information. The contextual information forms an integral part of our analysis. The third major source consists of transcriptions of audio-taped conversations between five adolescents and a therapist in five Group Therapy Sessions (GTS). These tapes were transcribed by Gail Jefferson.

In addition, we wish to acknowledge several other sources: L. Tweed has provided transcriptions of audio-tapes of monolingual and bilingual children interacting with adults (Infant Development study UCLA). E. Schegloff and members of his graduate seminar on conversational analysis have provided illustrations from adult-adult discourse.

## III. Defining Discourse Structure:

Before defining discourse/<sup>topic</sup>more formally, let us describe in brief the context in which discourse topics emerge, i.e. the discourse itself. For the purpose of this analysis, we take a discourse to be any sequence of two or more utterances produced by a single speaker or by two or more speakers who are interacting with one another (at some point in time and



space). Discourses may evolve or develop in several ways.

For example, a stretch of discourse may contain a series of linked discourse topics. The discourse topics are linked in the sense that the propositional content of each is drawn from one or more of the utterances already produced in the discourse. These utterances, unless otherwise challenged (Givón 1975), form a "presupposition pool" (Venneman, in press) out of which discourse topics are selected.

The discourse topics may be linked in at least two ways:

1. Two or more utterances may share the same discourse topic. This is the case in question-answer pairs, for example, (see (3)) and in some repetitions; e.g.

- (4) Allison IV, 22 months
- 4.1 Allison: (looks in box, finding calf) cow/
  - 4.2 Mother: A cow!
  - 4.3 Allison: (holding calf) moo/↑<sup>2</sup>
  - 4.4 Mother: Moo, cow says moo.↓

In this example the same discourse <sup>topic</sup> is sustained from speaker to speaker in lines 4.1 and 4.2. Both utterances provide new information relevant to an object Allison is attending to, the new information being that the object that Allison has noticed is "a cow". Likewise, utterances in 4.3 and 4.4 appear to address the same discourse topic, i.e. 'The cow (Allison is holding) makes some sound'. Allison provides the information that the cow makes the sound "moo" and her mother confirms this claim in her subsequent utterance.

We refer to a topic that matches exactly that of the immediately preceding utterance as a COLLABORATING DISCOURSE TOPIC. Sequences in which a discourse topic is sustained

over two or more utterances are TOPIC COLLABORATING sequences. (For other examples of topic collaborating sequences see examples 3 and 5.)

2. Discourse topics may take some presupposition of the immediately preceding discourse topic and/or the new information provided relevant to the discourse topic preceding (all part of the presupposition pool) and use it in a new discourse topic. For instance, the dialogue between Allison and her mother in example (3) continues as follows: (We repeat the initial turns for convenience)

- (3) continued
- 3.1 Mother: Well, we can't hold it on like that. What do we need? Ham? What do we need for the diaper?
  - 3.2 Allison: pin/
  - 3.3 Mother: pin. Where are the pins?
  - 3.4 Allison: home/

Here, the discourse topic is established at 3.1 ('we need something for the diaper') and is collaborated on in 3.2. In 3.3 Allison's mother poses a different but related question (of immediate concern). It is related in the sense that the proposition about which information is being elicited, 'the pins are somewhere', presupposes that 'there exists pins', a presupposition that is assumed as well in Allison's preceding claim, "pins/ (are needed for the diaper)". This new discourse topic becomes collaborated on in 3.4 by Allison's providing the new information requested.

We refer to a topic that uses the preceding utterance in this way as an INCORPORATING DISCOURSE TOPIC. Sequences in which a discourse topic integrates a claim and/or

presupposition of an immediately prior utterance are TOPIC-INCORPORATING sequences.<sup>3</sup>

We refer to stretches of discourse linked by topic collaboration and/or topic incorporation as CONTINUOUS DISCOURSE.

Continuous Discourse	
Collaborating Discourse Topic	Incorporating Discourse Topic

On the other hand, we may find discourse in which the discourse topics of each utterance are not linked in any obvious way, i.e. where the discourse of one utterance does not draw on a claim and/or presupposition of the preceding utterance. In these discourses a speaker disengages himself from a set of concerns addressed in the immediately preceding utterance and turns to an unrelated set of concerns. (see examples 8, 9, 14) We refer to such stretches of discourse as DISCONTINUOUS DISCOURSE. (Kernan and Schieffelin, ms 1975)

Discontinuous discourse may have two types of discourse topic. The first type reintroduces a claim and/or a discourse topic (or part thereof) that has appeared in the discourse history at some point prior to the immediately preceding utterance. (It could draw from the discourse topic and/or claim of the last utterance but one.) We call such discourse topics RE-INTRODUCING TOPICS. Constructions such as "concerning...", "as for...", "as far as...is concerned (goes)", may mark this sort of discourse for adult English speakers, along with remarks such as "getting back to...", "like you said before..."

A second type of discontinuous discourse topic introduces a discourse topic that is in no way related to the preceding utterance, and does not draw on utterances produced elsewhere in the discourse. We refer to such topics as INTRODUCING DISCOURSE TOPICS.

Discourse			
Continuous		Discontinuous	
Collaborating Discourse Topic	Incorporating Discourse Topic	Re-introducing Discourse Topic	Introducing Discourse Topic

#### IV. Defining Discourse Topic:

We turn our attention now to a more detailed definition of discourse topic. As noted previously, a discourse topic is a proposition (or set of propositions) expressing a concern (or set of concerns) the speaker is addressing. It should be stressed that each declarative or interrogative utterance in a discourse has a specific discourse topic. It may be the case that the same discourse topic is sustained over a sequence of two or more utterances. We have described these as topic collaborating sequences (see section III). On the other hand, the discourse topic may change from utterance to utterance, sometimes drawing on the previous utterance (incorporating topic) and sometimes not, (introducing topic, re-introducing topic).

In determining the discourse topic of an utterance, it is useful to determine the purpose or reason behind each utterance. Why did the speaker say what he did? Although we may never have access to the more remote or global motivations underlying




a particular utterance, we can make some headway by determining what low-level, immediate considerations the speaker may be attending to.

These low-level considerations are found in the utterance context (verbal and non-verbal). For example, an utterance may be produced in response to something heard (prior utterance) or in response to something witnessed or noticed.

We may think of some utterances as providing an answer to some specific question related to something in the utterance context. For example, if a speaker hears a crashing noise, he may respond "An accident." This utterance may answer the implicit question, 'What was that noise?' Similarly, when in (4) Allison notices an object and says, "cow/", she may be answering the question, 'What is this object?'


The listener "constructs" questions of this sort in interpreting utterances addressed to him: The listener takes the utterance and relates it to some aspect of the utterance context. For example, in (4) Allison's mother takes Allison's utterance "cow/" and relates it to the non-verbal context, in particular, to what Allison is noticing. The listener then must ask how the utterance is related to that feature of the context, that is, the listener asks, 'What is the speaker informing me of?' Is the speaker providing me with an explanation of some phenomena? An evaluation of some phenomena? A description of some phenomena? An identification of some phenomena? Or what?

Another way of putting this is to say that the listener

tries to determine what question the speaker may be answering. 

For example, in interpreting Allison's utterance "cow/", Allison's mother tries to construct a plausible question Allison may be providing the answer to. In this case, the mother interprets Allison's utterance, "cow/" as possibly an answer to the question, 'What is this object?'

Of course what the listener considers to be the question the speaker is answering may not always correspond to the question the speaker believes he is answering. In conversations between adults and children, it is often the case that an adult will not be able to determine exactly what question the child is addressing. (see section V. B-E) Or, a child may not understand the point, i.e. the question behind an adult's utterance, and so cannot respond relevantly. Adults often have to make their questions explicit. We treat this behavior in fact as a defining characteristic of speech directed to small children. (Section IV. E considers this and related behaviors.)

We will refer to the question (or set of questions) an utterance is a response to as the QUESTION OF IMMEDIATE CONCERN. 

In many cases the question of immediate concern is explicit, i.e. a question actually appearing in the discourse. The question can be produced by one conversational partner and answered by the same speaker. For example,

- (5) Allison V. 28 months
  - 5.1 Allison: (looking into box)  
What's in here?/
  - 5.2 Allison: (reaching into toy box)  
It's a pig!/:



On a more abstract level, the question of immediate concern can be treated as a theoretical construct. The linguist may use it to explain more precisely what a discourse topic is. The discourse topic is based on the question of immediate concern. It is the proposition or set of propositions that the question of immediate concern presupposes. It has been shown (Keenan and Hull 1973) that such a set of propositions can always be represented by a single one, one that implies all the others. Let us call this presupposition the PRIMARY PRESUPPOSITION. Hence, in example (3) line (3.1), the discourse topic is derived from the question of immediate concern, 'what do we need for the diaper?' The discourse topic is the primary presupposition of this question, namely, 'we do need something for the diaper'. And in example (4) line (4.1), the discourse topic is the primary presupposition of 'what's in here?', namely, that 'something is in here'.

Questions of immediate concern themselves request specific information about the primary presupposition (the discourse topic). Informative responses to these questions presuppose the primary presupposition (the discourse topic), and provide new information relevant to the question posed. For example, in (3) Allison's response (3.2) presupposes the primary presupposition ('we need something for the diaper') of the question, and adds the new information, "pin/". In (5), Allison's response (5.2) presupposes the primary presupposition 'something is in here' of the question asked and adds the new information that something 'is a pig'. The discourse

topics for these responses are the primary presuppositions of the questions of immediate concern.

Declarative (Response)	=	New Information relevant to Q of immed. concern	+	Primary Presupposition of Q of immed. concern (Discourse Topic)
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#### IV. B. Determining the Question of Immediate Concern:

Of course, not all questions of immediate concern appear overtly in a discourse. A declarative utterance may address itself to some implicit question of immediate concern. In this case, the linguist may not have access to the information needed to determine the question. In many instances the question of immediate concern may be understood by speaker and hearer because it arises from their shared background knowledge. Where a declarative utterance initiates a social interaction, the linguist may have no clue whatsoever as to what the discourse topic is. If A says to B: "Tom called today", the question of immediate concern may be 'What happened today?' or 'Who called today?' or 'What did Tom do today?' or 'What's the good news?' or some other question relevant to speaker and/or hearer.

The more information about the speaker's and hearer's shared knowledge the observer has access to, the easier it will be for him to determine the question of immediate concern and the discourse topic. Given that questions of immediate concern may be drawn from both verbal and non-verbal dimensions of the immediate situation, it is to the advantage of the observer to have available the most complete record of the situation.

#### IV. B.1. Non-verbal Context:

For example, interlocutors often make reference to some non-verbal action or event that they are observing or experiencing, or that they have just observed or experienced. Speakers assume that listeners perceive these occurrences. They treat these occurrences as old or given information for the listener, and base questions of immediate concern on them. If the listener has not in fact perceived the event or activity in question, he will not be able to determine the discourse topic. For instance, in (1) above, Bambi incorrectly assumed that Elinor was aware that Bambi was putting salt on her food (with a saltshaker). Bambi's discourse topic was something like, 'it (the salt) comes out (in some manner)'. The question of immediate concern was, 'In what manner does it (the salt) come out?'. However, Elinor could not reconstruct the discourse topic because she had not noticed, i.e. identified, the referent of "it" and so did not understand exactly what claim is made by the primary presupposition 'it (the salt) comes out (in some manner)'.

Just as interlocutors may fail to determine the discourse topic, because they have not attended to a relevant phenomenon, so the linguist may repeat this experience if he does not have access to a visual record. The need for a visual record, is, in fact, critical for understanding children's utterances in these terms. In interpreting the communicative intentions of young children, others (adults and other children) make full use of ongoing context. What constitutes the discourse topic may only be reconstructable on the basis of observing

what the child is doing, where the child is looking, and so on.

- (6) Allison IV, 22 months  
(Mother and Allison are sitting on a big chair)  
6.1 Allison: (pointing at TV monitor, seeing herself) Baby Allison/  
6.2 Mother: Do you see Baby Allison?

For instance in (6), it is critical to take into account Allison's pointing at the monitor, seeing herself, in interpreting her utterance, "Baby Allison/". Among other things, her pointing indicates she is aware of something being at a designated location. Allison's utterance provides the information that <sup>that</sup> something is "Baby Allison/".<sup>4</sup> We can think of "Baby Allison/" as new information being added to the discourse topic 'something is there (where I am pointing)'. If we or her mother did not know that Allison was pointing, we would not be able to reconstruct the discourse in this way. The discourse topic could be different if Allison were patting herself, playing with her doll or reaching for a cookie as she produced her utterance.

#### IV. B.2. The Verbal Context:

Another resource available to speakers for determining discourse topic is the ongoing discourse itself. That is, speakers often draw discourse topics from the dialogue as it proceeds. They base their discourse topic on some proposition (or set of propositions) that has been produced in the course of the conversation. In so doing, they may employ either a topic-collaborating or a topic-incorporating strategy.



## (7) Adolescents GTS 4 (p.31)

(pause)

7.1 Ther: There are such things as  
con-artists.

7.2 Jim: I'm one.

7.3 Ther: Are you?

For example, in (7), Jim employs a topic-incorporating strategy. He uses the immediately prior proposition "There are such things as con-artists" as a discourse topic. He adds the new information that he is one of these "things" called con-artists. (The proposition at 7.1 represents New information with respect to a prior discourse topic.)

This process of formulating discourse topics from prior propositions is part of what it means for a speaker to make his conversational contribution relevant to the current state of talk (Grice 1975). Grice states that interlocutors usually expect one another to make their utterances relevant. Interlocutors use the history of the discourse in making sense of a particular conversational contribution. From our point of view, interlocutors make use of the discourse history in reconstructing one another's discourse topics. At least, a listener assumes that a discourse topic is some proposition relevant to the ongoing talk, because the listener assumes the speaker is following the conversational norm of relevance. For example, in (7), Ther assumes that Jim's discourse topic is drawn from his own (Ther's) prior proposition because he assumes Jim is responding relevantly to his utterance.

The constraints on when a relevant response is to be provided will vary across cultures and across situations. For example, Philips (1974) notes that Wasco Chinook Indians

in speaking English, do not necessarily expect each turn in a conversation to be relevant to an immediately prior turn. Speakers often provide a relevant response to some proposition long after the proposition first appeared in the discourse (and after numerous intervening turns) without marking it in any overt way.<sup>5</sup>

IV. B.3. 'Breaking and Entering':

If a speaker is conforming to the convention of making his utterance relevant to those that precede his, then he normally assumes that the listener can compute his discourse topic. That is, he can assume that the listener knows to turn to the discourse history to locate the discourse topic. The speaker does not have to mark the discourse topic explicitly.

When a speaker produces a conversational contribution that he realizes is not relevant to the discourse history (i.e. an introducing discourse topic) or may not seem relevant (from the listener's point of view), then he is under some constraint to make the discourse topic known to the listener. Typically, the speaker marks a break in the continuous discourse, alerting the listener to the fact that the discourse topic may not follow from previous discourse. Speakers often announce a break with some metalinguistic remark such as "I am sorry to change the subject but..." or "Not to change the subject but..." and so on. These remarks are often accompanied by attention getting devices, e.g. hey!, listen! look!, wait! (see sections VB and VD) along with hesitations and word searches (Sacks, 1968 ms)



## (8) Adolescents GTS 3 (p.25)

(pause)

8.1 Ken: E-excuse me changin' the  
subject but didju hear anything  
about what happened Monday night?  
(pause)

8.2 Dan: no, w-weren'tchu uh--

8.3 Louise: What happened Monday  
night? (pause)

8.4 Ken: Oh I came in here y'know,  
Mom and Dad decided I should...

Other remarks of this ilk are, "Before I forget, I have to  
tell you something" or "Hey, I heard a good joke".

## (9) Adolescents GTS

(pause)

9.1 Ken: hey,  
wait.  
I've gotta- I've gotta  
joke. (pause)  
What's black 'n white 'n  
hides in caves (pause).

9.2 Roger: a' right I give up,  
what's black 'n white// 'n  
hides in--

9.3 Al: a newspaper.

9.4 Roger: hhhh.

9.5 Ken: no, (pause) pregnant nun.

In addition, discourse topics may be explicitly introduced  
into the discourse by the speaker. The speaker may, for  
example, pose a question that has as its primary presupposition  
the intended discourse topic.

## (10) Allison IV, 22 months

(Allison had been wiping a chair,  
is now sitting with fingers in  
mouth, staring at the camera)

10.1 Mother: What were we gonna do?

10.2 Allison: eat/\*cookies/

In (10) Mother initiates a "new discourse topic" ('we were  
going to do something') by proposing a question of immediate

concern that is not contingent on prior discourse.

In example (8), Ken introduces the discourse topic  
'something happened Monday night' as a SECONDARY PRESUPPOSITION  
of the question, "Did you hear anything about what happened  
Monday night?" (the primary presupposition is that 'you  
(the addressee) either did, or did not, hear something about  
what happened Monday night') This strategy is a common one  
for speakers of English. Speakers often introduce discourse  
topics as secondary presuppositions of yes-no questions such  
as "Do you know what happened today?" "Did you see in the paper  
where Tom Dixon resigned?" and the like. Used in this way,  
these questions function primarily to direct the listener to  
attend to a "new" proposition.

The main point to be made here is that the speaker, in  
order to communicate felicitously, should make sure that the  
listener has sufficient resources to reconstruct the discourse  
topic. One body of resources is the discourse history itself.  
The speaker may assume that the listener knows this history  
as a co-creator of it (or witness to it). As long as the  
speaker bases his discourse topic on the preceding talk, he  
may assume his discourse is reconstructable. If the speaker  
wishes to focus on a concern that is not part of the discourse  
history, he may not be certain that the listener will realize  
what this concern is. In this case, it may be necessary for  
the speaker to 1) alert the listener that the speaker is turning  
to a different set of concerns, 2) introduce this set of con-  
cerns explicitly as a presupposition of a new question of  
immediate concern.

## V. The Model:

### V.A. Prerequisites for Establishing a Discourse Topic:

The model we present here represents the interactional work involved in getting a discourse topic known to a listener. We claim that in order to determine a particular discourse topic the hearer minimally must:

1. Be attending to the speaker's utterance.
2. Decipher the speaker's utterance.
3. Identify those objects, individuals, ideas, events, etc. that play a role in the discourse topic.
4. Identify the semantic relations obtaining between referents in the discourse topic.

We may rewrite these prerequisites for topic establishment from the perspective of the speaker in the form of steps the speaker must take to make a discourse topic known to the listener:

- Step 1: The speaker must secure the attention of the listener.
- Step 2: The speaker must articulate his utterance clearly.
- Step 3: The speaker must provide sufficient information for the listener to identify objects, etc. included in the discourse topic.
- Step 4: The speaker must provide sufficient information for the listener to reconstruct the semantic relations obtaining between referents in the discourse topic.

Steps 1 and 2 are general requirements on any successful communication. Steps 3 and 4 are more specifically prerequisites on topic establishment and might be restated as Felicity Conditions on the successful establishment of a discourse topic.

The steps described here may correspond to actual moves taken by speakers. These moves may take up varying amounts of conversational space. For example, if the attention of the interlocutor has already been secured prior to the utterance, if the utterance is comprehensible, and if relevant objects, persons, ideas, etc. and their semantic roles are known to the hearer, then all four steps may be completed in a space of a single utterance:

- (11) Adolescents GTS  
(in context of a discussion on the merits and demerits of smoking cigarettes)
- 11.1 Roger: Cigarettes aren' (very) healthy.  
(pause)
- 11.2 Roger: You shouldn't be smokin' Ken.  
(short pause)
- 11.3 Ken: So the coaches tell me.

For example, in (11.2), Roger has addressed Ken specifically; therefore Ken at (11.3) can assume that Roger will be attending to his response. Hence step 1 is taken care of for Ken. Second, because the interlocutors are engaged in face-to-face verbal interaction, with no concurrent distracting activity, they can assume that their utterances will be heard and decoded without interference; that is, they can operate on the assumption that the noise to signal ratio is low. Hence, step 2 is satisfied for Ken. Third, Ken's discourse topic at (11.3) 'that Ken should not be smoking', is drawn from Roger's assertion (11.2, topic-incorporating). Ken can assume that Roger knows the referents specified in the discourse topic on this basis. In fact, Ken can assume that Roger knows the discourse topic itself. Hence, steps 3 and 4 are accomplished.



However, it is often the case that several utterances or even several conversational turns will be needed to take care of these steps.

- (12) Adolescents GTS 4 (p.15)
- 12.1 Ken: Uh Pat McGee, I don't know if you know him, he- he lives in// Palisades
  - 12.2 Jim: I know him real well as a matter of fa(hh) (he's) one of my best friends.
  - 12.3 Ken: He- he used to go to the same military school I did.

For example in (12), two turns, (12.1 and 12.2) are taken up with insuring that a referent (critical to the topic) is known to the listener.

It sometimes happens that one or another step is never completed and the discourse topic is dropped by the speaker:

- (13) Toby and David at 36 months, in the bedroom. (calling out to mother who is not present)
- 13.1 David: Honey!// calling honey!// honey!// we lost our blankets!
  - 13.2 David & Toby: honey!// honey!// honey!//
  - 13.3 David: honey!//
  - 13.4 Toby: honey!// honey!//
  - 13.5 David: honey!// (4 sec. pause) where are ya/
  - 13.6 Toby: no/ mummy/ (gloss: no, she's not called Honey, she's called Mummy)
  - 13.7 David: no/ honey/ honey/ honey/

In (13), step 1 is never satisfied as the intended addressee (the mother) never responds to either the vocative (13.1-13.5) or the question (13.5) directed to her. It is difficult to assess exactly what constitutes the discourse topic for the

utterance "we lost my blankets/", as the utterance attempts to initiate the interaction with the mother. There is no preceding context from which a discourse topic can be determined (by an outsider). We suggest that the discourse topic associated with such discourse-initial assertions (i.e. an Introducing Topic) is of the general form 'something happened'. This discourse topic is dropped, as step 1 is unsuccessful. Having failed to secure the attention of the mother, the children redirect their utterances to one another, and engage in a different discourse topic, roughly 'what name to use in calling mother'. By (13.7) this new topic becomes collaborated on, as Toby has secured David's attention, David has indicated that he has understood (13.6) and has accepted it as discourse topic by adding new information to the discourse topic proposed by Toby.

- (14) Allison III, 20.3 $\frac{1}{2}$  months (prior context: Mother had brought out glass of juice set into a stack of paper cups. Allison had commented "glass/" since she had previously been served juice in either a paper cup or a can) (Allison eats cookie, looking at cookie)
- 14.1 Allison: (putting cookie in her cup like the way the glass of juice was in the cup) glass/↑↓
  - 14.2 Mother: Well, what did you do?
  - 14.3 Allison: glass/
  - 14.4 Mother: What did you do? Where's the cookie?
  - 14.5 Allison: cup/
  - 14.6 Mother: in the cup.

In this example, Allison makes eye contact with her mother, helping her to secure the attention of the mother. (Step 1 is taken care of), and mother does not question

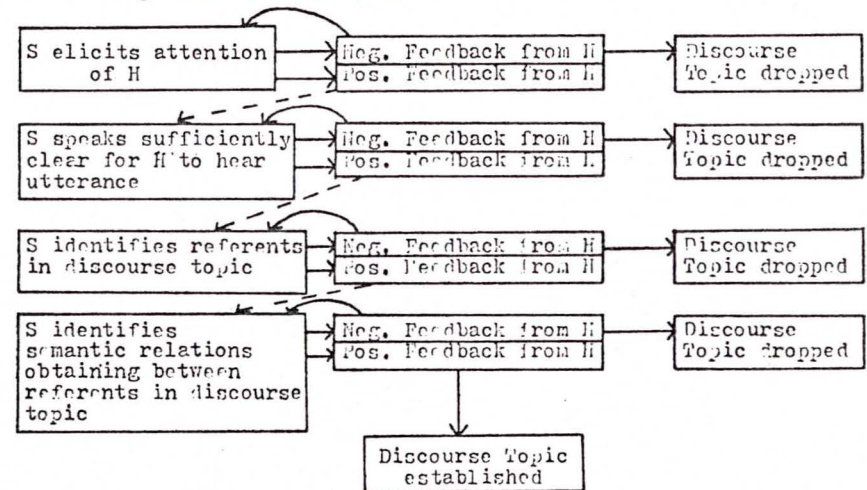


Allison's articulation (step 2 is taken care of). However, step 3 is unsuccessful for a number of reasons. The mother cannot identify the specific object referred to by Allison's utterance "glass/". From Allison's point of view, "glass/" is part of a comment on her non-verbal activity, i.e. that the cookie in the cup is like the glass in the cup witnessed earlier. But because the specific referent of "glass/" never becomes known to mother, neither "glass/" or the event that it relates to, becomes part of an established discourse topic.

Our model for proceeding through conversational space is basically an interactional one. The amount of conversational space taken up with completing these steps is related to the kind of response the speaker receives from the hearer. If the speaker receives a positive response from the listener, then he can assume that the steps for topic establishment have been satisfied. On the other hand, if at any point the speaker gets negative feedback, then he will have to do more interactional work, take up more conversational space, to complete steps. For example, the listener often will question some assumption of the speaker. If the speaker believes that he has secured the attention of the listener but in fact has failed to do so, then the listener may respond "Who me?" or "Are you talking to me?", etc. If the attention of the listener has been secured, but he has not heard all or part of the speaker's utterance, he may request a second hearing, or he may state "I didn't hear you", "I didn't quite catch that", and the like. If the speaker believes that the identity of the referents of the discourse topic are known to the hearer, but in fact, their identity is not known; then the hearer may challenge

the speaker's belief, and/or request further information concerning these referents.

The dynamic model for establishing a discourse topic can be represented as follows:



The interactional work described here is similar to material described by sociologists involved in conversational analysis. In particular, the work of correcting misunderstandings and mishearings is tied to the notion of REPAIR in conversation (E. Schegloff, pers. comm.). The work of REPAIRING some communication involves minimally a REPAIRABLE, the item or set of items that need to be corrected, and a REPAIR RESPONSE, in which the source of misunderstanding or mishearing is attended to. The repair response may or may not actually repair the misunderstanding or mishearing. If it does not, it may in turn be treated as a repairable, requiring some further repair response.

Two major types of repair are relevant to establishing

discourse topic. First, there are cases in which the speaker who produces the repairable perceives the repairable and repairs it. These are SELF-INITIATED REPAIRS, and they normally occur within the space of a single conversational turn.

- (15) Adolescents GTS 3  
 15.1 Louise: Doc-Mister Cheibe-  
 when 're ya gonna be a  
 doctor?

- (16) Toby, 45 months  
 16.1 Toby: (looking at his mother)↑  
 daddy/ uh mommy/  
 16.2 Mother: yeah?  
 16.3 Toby: Are we gonna go<sup>↓</sup>now?/

Examples (15) and (16) illustrate self-initiated repairs on the vocatives used to elicit the attention of the addressee.

In addition, we find many examples in our data of OTHER-INITIATED REPAIRS. In this type of repair, someone other than the speaker who produces the repairable indicates that some repair is necessary. This type of repair may take up several turns. For example, one interlocutor may produce a repairable in one turn, a second interlocutor evidence his misunderstanding or mishearing in the next turn, and in a third turn, the first interlocutor may produce a repair response. Example (17) illustrates such an exchange:

- (17) Toby, David, 35 months, bedroom  
 17.1 David: (drawing on misty  
 window) (?) moon/ I make moon/  
 17.2 Toby: (pointing to window)  
 there?/  
 17.3 David: there/

In this exchange, Toby indicates that he needs further information about David's utterance; he needs to know which of David's

drawings is the moon. David repairs Toby's misunderstanding by indicating the location of the moon drawn. Example (1) also illustrates this type of repair. In (1) Elinor indicates her lack of understanding, and Bambi repairs this misunderstanding by providing a more explicit referent for "it". ("the salt").

It is not always the case that other-initiated repairs are repaired by the speaker producing the repairable. The "other" can repair the repairable of a conversational partner directly in the next turn:

- (18) Allison IV, 22 months  
 (Allison starting to eat cookie)  
 18.1 Allison: chocolate+chip cookie/  
 18.2 Mother: Chocolate chip cookie?  
 I think that's just a chocolate  
 cookie.

In (18), Allison's mother points out an error in Allison's identification of the cookie (18.2) and then repairs the error in her subsequent utterance. Schegloff (pers. comm.) has pointed out that repairs of this sort frequently appear in adult-child discourse. Adults feel they have a responsibility (or right) to correct judgements of a child. In talking with one another, however, adults show a preference for giving the individual who produced the repairable an opportunity to correct himself. These latter alternates are face-preserving (Goffman 1963) and hence more polite than direct repair of another's error.

Integrating the notion of repair into our model, we can say that repair procedures tend to be inserted into conversational space when one or more of the four steps have not



been satisfied by a speaker. For example, in (15) and (16), the speakers introduce repair machinery to secure the attention of the intended addressee. (step 1) In (1), the speaker repairs her utterance so that the addressee can identify an important referent in the discourse topic (step 3).

On a more general level, repair machinery tends to be introduced when an interlocutor has misjudged the communicative needs of a conversational partner. Sacks and Schegloff (1974) refer to the shaping of utterances to meet these needs as "recipient design", the "recipient" being the intended conversational partner. When some utterance fails to meet the needs of a partner, then that utterance has poor recipient design.

The notion of recipient design is useful to the analysis at hand. From our point of view, collaboration on a discourse topic demands good recipient design on a number of levels. Utterances must be designed so that the recipient knows he/she is being addressed and so that the recipient can hear the utterance. Good recipient design is also needed to insure that the recipient can identify who or what is being talked about (Sacks and Schegloff 1974). In the discussion to follow, we consider recipient design in developmental terms. The bulk of our data shows that young children experience communicative difficulties because their utterances have poor recipient design.

#### V. B. How to Secure the Attention of the Hearer:

Atkinson (1974) explores the use of attention drawing devices used by small children (look! see! - pointing) which demonstrate to the listener which persons, objects, or events

the child wishes the listener to focus on. If both participants focus on the selected object, it can be presumed that the speaker has obtained the attention of the hearer, as well as directing him to a specific object. Here we discuss only the first of these procedures; attention-getting.

Before any communication can take place, the speaker must secure the attention of the hearer. This is done in a variety of ways and is one of the earliest acts a child must learn. Crying and other distressful sounds usually bring attention to the infant, indicating the "something is the matter". Gazing at the other is also one of the earliest ways to secure his/her attention (Stern 1974). These acts may not be intentional at the age of three<sup>months</sup>, but by one year of age, the child starts using these as conscious devices (Schieffelin 1975a).<sup>6</sup> Smiling plus gazing, as well as laughing while gazing at the other often elicits not only the attention of the hearer, but a query from the hearer, e.g. "What happened?" or "What's so funny?". They elicit attention to self even if that is not what is always intended.

Smiling and laughing are thought of as social phenomena. People feel that they can ask another individual why he/she is laughing - especially if the context does not provide an explicit explanation or source. Presumably one is laughing about something - laughing being a comment or new information about a proposition.

Other non-verbal means of getting a listener to attend to the speaker are touching the listener, tugging, poking, turning towards the listener, getting closer. These



behaviors as well typically elicit such queries such as "What do you want?", etc.

In addition to several non-verbal means of securing the attention of a specific individual, the child develops verbal ways of performing the same act. While crying and other distressful sounds do not specify who should attend, the use of vocatives, i.e. "Mama" and "Papa", etc., do. The number of times a name will be called out repeatedly, the pitch and loudness of the calls depend on the utterance context and the desires of the individual. For instance in example (13) the mother does not respond to her children's calls since she doesn't hear them, and subsequently she is not involved in the interaction. By way of comparison:

- (19) Maria, 24 months, Spanish-speaking  
(in same room with mother)  
19.1 Maria: mommy/  
19.2 Mother: ¿Qué? ¿Qué quieres?  
Huh?

Maria succeeds in calling attention to herself in one turn, and her mother indicates that she is attending to the proposition that 'Maria wants something' with her response.

In the next example, Maria has assumed that the attention of the listener has been secured, when in fact it has not.

- (20) (several people present in the room)  
20.1 Maria: sientate aca/ sientate  
aca/ sientate aca/  
20.2 friend (2 yrs. old): ¿mi?/  
20.3 Maria: sientate aca/

(transcribed by L. Tweed)

Not only must children learn to secure the attention of the listener, but when several potential respondents are available, they must select explicitly. For example:

- (21) (dinner table, 3 adults, 3 children,  
(aged 4 yrs.) noisy)  
21.1 Zachary: You know what I saw  
today?/  
21.2 David: What?/  
21.3 Zachary: Not you, I'm talking  
to my mom/ Mommy?/  
21.4 Mother: Yeah?

These problems also face adults in conversation with each other. Using vocatives also serves as a check on the other's attention, during conversation, and is one of several devices available to maintain the attention of the listener, e.g. "George, George, are you there?" used when one suspects that the listener has not been completely attending. Other devices used are expressions like, "hey!" or "wait!" plus eye contact and touching the individual. Both children and adults use as well expressions such as "You know what?" or "Guess what" to shift attention to themselves. (see section IV.B.3)

Another way to call attention to oneself (used by both adults and children) is to use one of the many expressive particles such as "uh oh", "oh dear", "ouch", "woopsey", "wow", etc. Placed in the beginning of an event, the listener hearing such an exclamation will usually look to the speaker and inquire, "What happened" or "What's wrong?", in an attempt to find out what has caused such an outburst. The occurrence of one of these expressions during an ongoing interaction usually draws the focus away from what is happening and causes a shift in attention to occur. These particles can simultaneously draw attention to the speaker and the event that he is commenting on. Schegloff (pers. comm.) treats these expressions as a "pre" to a "noticing" by a co-present individual or individuals. That is, they are expressions that elicit a

"noticing".

V. C. On Articulating Utterances for the Listener:

To collaborate on a discourse topic, a listener must have received a minimally comprehensible message from a speaker. Adults in talking with one another may miss part or all of an utterance if it was delivered too quickly or too softly or if noise from the context interfered with the signal. The problem of poor articulation is even more apparent in interactions involving children as interlocutors.

For example, young children often distort the phonological shape of their utterances to the extent that conversational partners cannot interpret them as meaningful strings in the language. It is often necessary for young children to repeat their utterances several times to get them understood at this basic level. In many cases, the utterance is not deciphered and the topic is dropped:

- (22) Toby, David, 33 months  
(eating midday meal, facing caretaker, Jill)  
(Jill has just asked if Toby and David would like a banana in jelly (British term for jello))  
22.1 Toby: no no jelly/[tinkl]/  
22.2 Jill: You eat your dinner then.  
22.3 Toby: [tinkl]/  
22.4 Jill: What?  
22.5 Toby: [tinkl]/  
22.6 Jill: tinkle?  
22.7 David: yeah/  
22.8 Toby: no tinkle/[tinkl](repeats)/  
22.9 Jill: You're a prack.

In this example, Toby repeats his utterance but with little success. He never gets his message across. It is possible that "[tinkl]/" is intended as "tin of jello" (unclear), but in any case Jill interprets the utterance as a distortion of

"tinkle", a lexical item which makes little sense in this context. This example illustrates as well the use of repair machinery to achieve comprehensibility. Jill initiates repair procedures twice (22.4 and 22.6) to this end.

At the one word stage, children experience even greater problems in articulating their utterances with sufficient clarity. Scollon (1973) has documented the way in which many of these early utterances are lost on co-present adults:

For example, one day, this little child (20 mos.), whose name is Brenda, said to me, [k<sup>h</sup>a] [k<sup>h</sup>a] [k<sup>h</sup>a] [k<sup>h</sup>a]. I didn't understand and said "What?". She then said [go] [go]. The next thing I said cannot be heard clearly enough on the tape to transcribe, but Brenda then said [bais], nine times. I still didn't understand what she was saying and said "What? Oh, bicycle? Is that what you said?" Her answer was [na']. I said, "No?". She, [na']. I, "No-- I got it wrong."

When Scollon listened to his recording of this conversation, he heard the sound of a car passing just before Brenda started to speak. On this second hearing, he realized that [k<sup>h</sup>a] was Brenda's equivalent of "car", [go] corresponded to "go" and [bais] corresponded to "bus". Scollon's analysis illustrates the point that caretakers and others rely heavily on utterance context in interpreting phonologically ill-formed utterances of children. Where no salient referent in the immediate environment can be isolated, adults find it difficult to understand what a child is saying.<sup>7</sup>

We can well imagine that these early attempts to communicate are laced with repair machinery. In fact, Scollon reports that the one-word period is "cluttered" with self-repetitions on the part of the child and attempts at clarification by a co-present adult. The child repeats a lexical item over and



over until he/she receives some sort of assurance from the adult that the utterance has been deciphered.

Scollon observes that the child may repeat an utterance with or without a verbal prompt from the adult. From our point of view, even when there is no verbal repair-initiator such as "What?", "Hm?" or trial repetition of the child's utterance, absence of a verbal response from the adults may count as a negative response for the child. That is, silence on the part of a conversational partner may initiate a repair from the child. When the child does not get an immediate verbal confirmation, the child attempts to clarify the utterance (repair) through repetition.

Aside from problems of phonological distortion, the communications of young children may suffer because the child's voice is too soft or too low:

- (23) Allison VI, 34 months  
(Allison climbs up on a big chair,  
trying to move bars into their holes)
- 23.1 Allison: I'm-I'm put-putting  
these bars in there/  
23.2 Mother: I can't hear you.  
23.3 Allison: (pointing to holes)  
in these holes/  
23.4 Mother: What honey?  
23.5 Allison: (moving hand up and  
down bars) a these bars/  
23.6 Mother: What about these bars?  
23.7 Allison: (trying to move bars)  
I'm trying to put them in  
these hole - mommy?/ I can't  
get it in these holes/

In many instances, the child may not in fact be directing utterances to others present. The child may be speaking softly because he is engaged in some activity and talking to himself. Others overhearing such talk may try to re-direct

it so that it includes themselves. In these cases, the child is not "guilty" of poor recipient design. Rather it is the co-present other who demands to be recognized as the recipient.

It is important to note that adults regularly apply repair machinery to these communication roadblocks and that very young children respond appropriately to this machinery. That is not to say that young children respond exactly as an adult would respond. Adults tend to treat a mishearing as a misunderstanding and offer an alternate phrasing of their original utterance (Schegloff, pers. comm.). Children up to about 2½ years of age tend to repeat what they uttered previously. However, they do recognize that a re-delivery is appropriate when a repair-initiation is addressed to them.

In many cases, children do provide a clearer articulation of the utterance in the repair response. In her study of peer interaction, Garvey (1975) found that children 34-67 months regularly altered such "repeated" utterances. In contrast to the original formulation (i.e. the repairable), these utterances (i.e. the repair responses) were marked by:

- a. reduction in tempo, e.g., clear separation of syllables
- b. increase in precision of articulation, e.g. release of final consonants
- c. increase in volume
- d. use of contrastive stress on portion of the queried segment  
(Garvey 1975: 28)

Before the age of 3 years, then, a child evidences some sensitivity to, and use of, "recipient design".

#### V.D. On Identifying Referents in the Discourse Topic:

The given-new contract (Clark 1974) requires that speakers refer to individuals, objects, events, etc. in such a way that

the listener can mentally identify the referent. Applied to discourse topic, this means that the speaker should take into account the listener's knowledge or awareness of a particular object in making reference to that object within a discourse topic.

The speaker can misjudge the listener's knowledge/awareness in two ways. It is possible that the speaker may underestimate the listener's knowledge. He may, for example, describe an individual without naming him with the mistaken belief that the listener does not know that individual or at least does not know the name of that individual. In these instances, the listener may indicate his knowledge of the referent's name, e.g. through comments such as "You mean John?", "Oh yeah, John", "Are you talking about John", etc.

In many cases, such errors on the part of the speaker are taken as "talking down" and insulting by the listener. In "talking down" the speaker believes that the listener is not informed about some individual, event, process, etc. to the extent that the speaker is. For example, a speaker might say, "Do you know what John Kennedy, a famous president who was assassinated, once said? 'Ask not what your country can do for you, but what you can do for your country.'". The discourse topic, 'You (the addressee) do or do not know what John Kennedy, a famous president, who was assassinated, once said', makes explicit that John Kennedy was a famous president who was assassinated. In cases where the listener already knows this information, the listener may feel that the speaker has underestimated the state of his general knowledge. In other words, the speaker should have presupposed more.

Far more often are cases in which the speaker overestimates the speaker's knowledge or awareness of a referent. We have discussed this behavior with respect to example (1). In cases such as this, the listener will not be able to understand what claim is being made or elicited. And, in our society at least, such overestimations of the listener's knowledge provoke some sort of clarification request (repair initiator) from the listener, e.g. "Who?", "What?", "What comes out fast?", etc.

The speaker, then, must take steps to aid the listener in identifying particular referents within the discourse topic. This is part of good recipient design (Sacks & Schegloff 1974). In identifying requests, speakers appeal to two major sources, first, there are appeals to the physical setting in which the communication is conveyed. Second, there are appeals to the listener's background knowledge. In the first case, the speaker directs the listener to locate the referent in physical space. In the second case, the speaker directs the listener to locate the referent in memory space.

Let us consider the way in which young children aid the listener in locating particular referents within discourse topic.

#### V. D.1. How to Locate a Referent in Physical Space:

Overwhelmingly, the conversations of young children are about objects, people, or events that are present in the utterance context. Further, from a very early point in their development, children employ a variety of devices to direct the listener's attention to these entities. These devices include both verbal and non-verbal behaviors.



Non-verbal means for locating a referent (X) include:

a. Looking at (X)

COMMENTARY

- (24) Allison II  
(Allison had been pointing to mike on her mother)
- 24.1 Allison looks at hanging mike) ← referent = object looked at
- 24.2 Mother: That's another microphone. ← referent identified by listener

b. Holding (X)

- (25) Toby & David, 35 mos.
- 25.1 David: oh dear/X/ (sitting up, looking at his blanket) ← referent = object looked at
- (picking up blanket, facing Toby) that messing up/ this/X/X/ don't mess it up/ you mess it up/ like this/
- 25.2 Toby: mummy did/ mummy did/ ← referent identified by listener
- 25.3 David: yes/

(see also examples (30)(32))

c. Reaching for (X)

- (26) Allison III  
(Allison and mother had been talking about putting a diaper on the baby doll)
- 26.1 Allison: (reaching for doll) ← referent = object reached for
- 26.2 Mother: Oh, there she is! ← referent identified by listener

d. Offering (X)

- (27)
- 27.1 (Allison offering cookie to mommy) ↑ mommy/ ← referent = object offered

COMMENTARY

- 27.2 Mother: Oh, thank you. ← referent identified by listener

e. Pointing at (X)

- (28) Allison II
- 28.1 Allison: (crawling into mother's lap and pointing to microphone) man/ ← referent = object pointed at
- 28.2 Mother: The man put the microphone on. ← referent identified by listener

(see also example (6))

f. Touching (X)

- (29) Allison III
- 29.1 Allison: (touching overhead mike) mike/ ← referent = object touched
- 29.2 Mother: That's the microphone. ← referent identified by listener
- 29.3 Allison: (turns to mother, touching her mike) mommy/ mike/ ← referent = object touched
- 29.4 Mother: Mommy has a microphone. ← referent identified by listener

From the single word stage on, the child does not rely on non-verbal means alone to locate referents for the listener (Schieffelin 1975b). As Atkinson (1974) points out, non-verbal means are efficient only when the listener is already visually attending to the speaker.

In the data at hand we find that gestures such as reaching, pointing, and the like are accompanied by verbal means of expression; or verbal means can be used to direct the listener to the relevant referent.

The child can locate a referent verbally (with or without accompanying non-verbal devices) by using:

a. Notice verbs: (look, see, etc.) (Atkinson 1974, Keenan and Klein 1975)

- (30) David & Toby, 35 mos., in bedroom  
 30.1 David: (standing, facing Toby, David holding up a battery)  
 a battery/ this is ← referent = object held and identified  
 battery/X/  
 look I find  
 battery/  
 30.2 Toby: I see: that ← referent identified by listener  
 Jiji's/

b. Expressive particles: (see section V.B.)

- (31) Allison III, 20 mos. 3½ wks.  
 31.1 Allison: (noticing that mother's juice has spilled) ← referent = object/event noticed  
 uh oh!/  
 31.2 Mother: uh oh. ← referent (implicitly) identified by listener  
 31.3 Allison: (smiling, looking at juice spilled on floor) mommy/  
 31.4 Mother: What did mommy do?  
 31.5 Allison: ↑spill/4 ← referent identified explicitly

c. Deictic particles:

1. Declarative

- (32) Allison V, 28 mos.  
 32.1 Allison: (holding truck) This is a ← referent = object being held  
 dump truck/  
 32.2 Mother: This is a dump truck. ← referent identified by listener  
 Yeh.  
 (33) David & Toby, 35 mos.  
 33.1 David: (pointing out moth in room) ← referent = object pointed at  
 [i] moth/X/X/\*

- (33) cont.  
 33.2 Toby: I see/ ← referent identified by listener  
 (put out window)/  
 33.3 David: yes/

\* [i] = general deictic particle for "there" "it" "this", etc.

2. Interrogative

- (34) David & Toby, 34 mos. eating dinner  
 34.1 David: (looking at his bowl of food) what's zis?/ ← referent = object looked at  
 34.2 Toby: kamoniz/. ← referent identified by listener  
 34.3 David: no macaroniz/sketiz/

d. Descriptive or identifying NP:

In many cases, the child identifies a referent for a listener (or himself) by "naming it". This is the case in (29), (30), (32), (33), etc. In some instances the child is not secure about the appropriateness of his identification, and waits for a confirmation of the identification from the listener. In other cases, as Atkinson (1974) points out, the child may be secure about his identification, but may not be sure that the listener has identified the item. Often the child may refer to the item but wait for evidence that the adult has identified the object, action, etc. before going on to supply new information about it. Atkinson calls this behavior PRIMING. Priming gets the listener to focus on what the speaker wants to talk about.

As is evident in these examples, several means may be employed by the child to locate a referent in physical space. (Of course adults use these same devices when interacting with children as well as when interacting with each other.) A child may first try to locate the referent with an identifying NP, then follow this NP with a string of notice verbs, pointing, showing, etc.

We do not want to imply that every time a child touches, holds, points, or names some entity that he is trying to locate



a referent for the listener. Indeed, at the one word stage, children often employ these behaviors in the course of their own exploration of the environment. The adult may simply be an observer of this process. And if the adult wishes to enter into the interaction with the child, he may use one or another of these behaviors to locate exactly what the child is talking about.

In many cases, however, the child wants a listener to attend and acknowledge the claim he is making about some discourse topic. In these cases, the child employs means such as those described about.

The variety of means and the frequency with which they are employed suggest that young children are often sensitive to the fact that listeners must be able to identify specific entities addressed in a discourse topic proposition. This sensitivity is evidenced as well by the number of tries the child will produce to get the referent located. In many cases the child will repeat a try 9 or 10 times, stopping only when the listener evidences verbally that he is attending to the child's focus of attention.

#### COMMENTARY

(35) David & Toby, 35 mos.  
(David holding a truck,  
picks up rabbit. Toby  
whistling on pretend  
flute continuously,  
while facing David)

35.1 David: rabbit/X/ ← referent = object  
I find truck/ being held  
rabbit/ (?) as  
like rabbit/ truck/  
rabbit/X/X/ truck  
truck rabbit/  
truck/ rabbit  
(showing truck  
and rabbit to Toby)  
truck/ rabbit/X/X/

(35) cont.

35.2 Toby: truck/ rabbit/ ← COMMENTARY  
(continues whistling) referent identified  
by listener

35.3 David: let me blow?/

(For other examples see Keenan 1974)

The listener indicates that he has identified the referent in question by repeating the identification of the referent, examples (4), (14), (32), (35), by offering an alternate identification of the referent, examples (18), (34), by explicitly stating that he "sees" the object, etc., examples (30), (33) or, by providing some other comment concerning the referent, example (25). These responses are characteristic of both the child-adult and child-child discourse under study.

On the other hand, there is a way of evidencing awareness of the referent in question that is characteristic of adult behavior only. An adult may state explicitly the question of immediate concern, addressed by the child, and in so doing specify the object, event, process, etc. pointed out earlier by the child. For example, in (31) Allison notices that her mother did something and directs her mother to notice this action (specifically the result of this action). Allison's mother shows that she has noticed in two ways: First, she repeats Allison's comment, "uh oh!/", and second, she formulates a possible question of immediate concern, "What did mommy do?" This question has as its discourse topic 'mommy did something', a proposition that expresses what Allison noticed.

Although in the discourses described above, the child is relatively successful in calling attention to a referent, there are cases in which the child does not provide adequate cues. In these cases, the referent is located only after one

or more repair initiators by the listener; or the referent is never located at all, and the communication fails. In our data, the listener's difficulties in locating referents in the discourse topic derive from at least two major sources:

1. First, the child may confuse the listener by providing conflicting non-verbal cues. For example, COMMENTARY

- (36) Allison II, 19.2 mos.  
(sitting on mother's lap)
- 36.1 Allison: (pointing ← referent = object  
toward photo- pointed at  
grapher, touching  
her mouth) man/  
36.2 Mother: mouth? ← repair initiator on  
identity of referent
- 36.3 Allison: (point-  
ing to her tongue)  
↑(?)/↓(whimpers)  
down/  
(referent not identi-  
fied by listener)

In (36), line (36.1), Allison incidently touches her mouth as she is pointing out the photographer. At (36.2), Allison's mother is misled by Allison's touching her mouth, and tentatively interprets her utterance as "mouth", not "man". The utterance "mouth?" requests clarification (initiates a repair) but Allison interprets her mother's utterance as a question about her mouth, e.g. 'where is your mouth?'. Step three of the pre-requisites for establishing a discourse topic is, then, not successful, and the discourse topic is dropped at (36.4).

In other interactions of this sort, the child may be looking at one thing, and holding up another, and commenting on just one of these things. COMMENTARY

- (37) Allison IV, 22 mos.  
(Allison has taken a  
calf then a cow out  
of a box. She has

COMMENTARY

- called the calf "cow/"  
and the cow, "big cow/"  
she then,
- 37.1 Allison: (looks at ← referent = object  
calf, holding up looked at  
cow) tiny ku/↑↓
- 37.2 Mother: what? ← repair initiator on  
step 2
- 37.3 Allison: (look-  
ing at cow) ← repair response on  
step 2
- 37.4 Mother: Where's ↑ ← repair initiator on  
the tiny cow? ↓ identity of referent
- 37.5 Allison: (show-  
ing mother calf,  
holding it next  
to cow, then  
lifting it up)  
right here/ ← repair response
- 37.6 Mother: Right, ↑↓ ← referent identified  
that's the tiny by listener  
cow.

In (37), the adult is using the child's gaze direction as a cue in helping to locate what the child is referring to. At (37.4), the adult initiates a repair to establish the unique referent of "tiny cow". (The adult knows which object is the tiny cow; she does not know which object the child is calling a tiny cow.) At (37.5) Allison is able to repair this misunderstanding through non-verbal and verbal means.

2. A second source of confusion for the listener stems from the child's failure to specify the referent in a precise enough manner. Again, in many of these cases, the communication was never intended as social and so not oriented to listener needs. In other cases, however, the child does want to convey the discourse topic and locating a key referent for the listener is a means to this end.

In the data at hand, vagueness is a result of a failure to provide sufficient non-verbal cues, and/or sufficient verbal cues. For example, we find that a child will often look at an



object or an event, or hold an object and refer to it as if it were already identified by the listener. In many cases, the child looks at or touches something present in the environment, and refers to it by some deictic term, such as "this", [i], "it". This is illustrated in a different "spill" sequence from that in example (31).

# COMMENTARY

- (38) Allison V, 28 mos.  
(Allison had been eating a cookie, drinking juice, she spills some juice from her mouth)
- 38.1 uh/ (looks at her dress, purposely pours juice onto it)
- 38.2 Mother: Oh, what happened? What did you do? What did you do?
- 38.3 Allison: (touching her knee, looking at original spill) spill something/
- 38.4 Mother: What did you do?
- 38.5 Allison: (holding up cookie, scraping it with her finger) it came down from cookie/ ← referent = objects being scraped (crumbs)
- 38.6 Mother: What? ← repair initiator on step 2
- 38.7 Allison: (rubbing her dress) it came on my dress/ ← repair response
- 38.8 Mother: It came on your dress. It didn't come on the cookie.  
↓ Oh means we better wipe you off.  
(referent not identified by listener)

In (38.4) Allison's mother is eliciting information about the spilling of the juice by Allison. Allison, however, turned

her attention to something else that fell on her dress along with the juice, that is, cookie crumbs. Her utterance at (38.5) is a claim that the crumbs ("it") 'came down from a cookie'. The discourse topic is something to the effect, 'the crumbs came from somewhere'. But, because Allison did not clarify sufficiently the referent of "it", Allison's mother takes the term to refer to the juice, rather than the crumbs. This is evident at (38.6) when Allison's mother comments, "it came on your dress. It didn't come on the cookie."

Underspecification may also result from a child's deletion of a lexical item, or items within an utterance. Greenfield and Smith (1975) have observed that children in the one word stage delete certain 'presupposed' information and make explicit what they consider to be important or noteworthy, i.e. 'informative'. Often the information deleted concerns an individual(s) or an event(s) about which the child's utterance provides a 'comment'. We find that deletion of taken-for-granted material continues, but to a lesser extent, throughout our child data sample. (In fact, adult discourse is laced with these deletions as well.) In some contexts, the deleted referent (or set of referents) is not altogether obvious to the listener, and the listener initiates a repair on this referent.

# COMMENTARY

- (39) Allison IV, 22 mos.  
(Allison seeing herself on the TV monitor)
- 39.1 Allison: (putting hand to her head) comb hair/ ← referent = agent
- 39.2 Mother: Comb hair? ← repair initiator on step 2
- 39.3 Allison: Baby Allison comb hair/ ← repair response
- 39.4 Mother: Baby Allison comb hair? ← repair initiator on steps 2 and 3

(39) cont.

39.5 Allison: yeah/

← repair response

(referent identified  
by listener)

## COMMENTARY

Notice that the child is able to repair the unclarity and successfully locate a critical referent. We find that children at the single word stage can repair misunderstandings related to referents located in the present physical space. However, the same cannot be said for their ability to initiate repairs on locating referents in the utterances of other children or adults. We found no instances of such repair initiators in the Allison Bloom sample, ranging from age 16 months to 28 months. Repair initiation of this sort starts <sup>at 35 mos.</sup> in the Toby and David sample, see example (17). However, it is a rare occurrence (Keenan, Schieffelin and Platt, work in progress). Much more frequent in the Toby and David sample is repair initiation on step 2, articulation. (see Garvey 1975 for a careful discussion of this phenomenon.)

We have seen, then, two striking differences between adult-child and child-child discourse. The first is that the adult often explicitly reconstructs a question of immediate concern on the basis of a referring expression by the child. The second is that the adult initiates a repair from the child if a referent is insufficiently located. These observations need to be confirmed by looking at a wider sample of children's discourse.

V. D.2. How to locate a referent in memory:

We have stated that most of the claims made or elicited by young children concern entities that exist in the physical environment of the verbal interaction. However, even very young children sometimes refer to events or individuals that are not present in the ongoing setting. Some of these references

are to fictitious events or individuals (fantasy) and some relate to actual individuals or events known to the child from some prior experience. We find child-child discourse up to 37 months to include primarily the first of this type of "non-situated reference" (fantasy), whereas child-adult discourse contains primarily the second type of these references.

Both types of reference are usually provoked by some object or event, or individual that is situated in the ongoing physical context. In the case of fantasy, something noticed in the setting is associated with some imaginary entity. For example, a battery picked up from the floor by David at 35 months of age is identified first as a battery, and then as a steam roller. Subsequent stretches of discourse use steam roller in various roles within a discourse topic. In the case of "real world" non-situated reference, some event, etc., triggers off a remembering by the child of a similar entity in the past.

We find that before the age of three, children experience enormous difficulty in getting "real world" non-situated events, individuals, etc. established as a discourse topic. Typically, the transition from the here-and-now to past experience, is not clearly communicated by the child. In adult-child interaction, the transition often takes the adult by surprise, and the referent in question cannot be determined. Example (14) illustrates this type of communication road block. Here the particular "glass" being referred to by Allison cannot be identified by the listener, and so "glass" is not included in subsequent discourse topics.

There are numerous reasons, why these referents are often not identified by the listener. To sort out these reasons,



it is useful to compare means available to the child for locating referents in physical space with those available for memory searches:

1. Salient from the video record is the fact that children rely heavily on non-verbal cues to locate what they are talking about. This is true both in initial identifications of referents, and in responses to repair initiators. These cues are appropriate to the here-and-now context, but ineffective in locating objects in the listener's memory. Thus, one important class of 'locators' play no role in helping the listener to retrieve the referent from memory space.

2. Second, although the children in this study use "notice verbs" such as "look" and "see" to direct the listener to an object in physical space, they do not use these notice verbs to locate referents in memory. Adults, in contrast, often direct the listener's attention to some individual or event not present through such utterances as "Look at what happened to Joe...he got a very raw deal from that company." In certain Scots dialects the verb see is used in this way. Atkinson (1974) quotes Macrae as saying that sentences of the form, "See Jimmy? See chips? He likes 'em" are perfectly appropriate even when "Jimmy" and "chips" are not present in the speaker's or hearer's environment.

Additionally, adults have several other notice verbs that are used to focus attention on a referent in memory (Atkinson 1974). As discussed in part 1; adults often explicitly request the listener to search in memory for some particular referent. They ask the listener if he "remembers" or "knows" or "recalls" a particular individual, object or incident before going on to

say anything about it (e.g. example (2)). The use of these verbs is not evident in the childrens' discourse under study.

3. A further impedance to locating referents in the listener's memory is the late development of old information markers in the speech of young children. The use of anaphoric pronouns, for example, is not part of the child's competence until his average utterance length is at least 2.5 morphemes (Bloom, Lightbown and Hood 1975). (The child is regularly producing three word utterances.) Before this point, a child may use pronominal forms, but they are used deictically, i.e. to point out things present in the environment, rather anaphorically. The same can be said of definite articles. Their use in referring to entities not present is not part of the child's competence before 32 months (Maratsos 1974). Relative clauses as well do not appear anywhere in our corpus of children's utterances.

Thus it is difficult for the young child to mark specifically that he/she is talking about something that he/she has already experienced. Allison at 20 months, 3½ weeks has no way of marking that the glass she is referring to (example (14)) is that or the glass that was set in the cups.

4. It is also important to note that the transition from present to prior experience is confounded by the child's non-existent (or later) inconsistent use of tense marking.

In general, referring to objects, persons, etc. not contextually situated puts a greater burden on the child's verbal resources. The child must rely exclusively on verbal means to locate the referent in question. In many cases, the listener can simply not determine this referent, as adequate syntactic and semantic marking has not yet emerged in the child's

speech. Adults often treat these references of the child as coming "out of the blue" or irrelevant. They may initiate repairs on the referent, e.g. "where is the X?" or shift the discourse to a discourse topic that can be determined by both conversational partners.<sup>8</sup>

### V. D.3. Identifying referents and old information:

Our observations of adult-adult, adult-child, and child-child conversations indicate overwhelmingly that objects, events, and persons, etc. that play a role in a discourse topic are known to or knowable by the listener as well as the speaker. This is evidenced in two ways:

First, in adult-child discourse, if a child refers to some entity that can not be located by the adult in physical or memory space, the adult listener usually initiates a repair in an effort to elicit information that will facilitate an identification.

Second, both adult and child speakers are reluctant to use a referent in a discourse topic without confirmation that the referent is known to, or knowable by the listener. (See also Sankoff and Brown 1975 for a discussion of this phenomenon in Tok Pisin.) We have provided numerous examples in which young children wait for confirmation from the listener that the relevant referent is identified. And, while adults in talking to one another elicit such confirmation less often, at times they spend considerable efforts in insuring that the entity that they are referring to is a piece of "shared knowledge". The following conversation illustrates the amount of conversational space that a speaker can take up with this endeavor.

- (40) (2 women in a dress shop)  
 Marie tapes (transcribed  
 by Francoise Brun-Cottian)  
 (pause)  
 40.1 Marie: Hah-Hah-Ha  
 Remember that red  
 blazer you got on  
 the other-you had  
 on the other day?  
 (pause 3 sec.)  
 40.2 Dottie: Me?  
 40.3 Marie: Yah that r//ed  
 40.4 Dottie: Sweater?  
 40.5 Marie: Ya That red-  
 (.6sec) thing that  
 uh (1sec) that uh  
 keeps the cold out  
 (but) (2sec)  
 The red one  
 (it's-) (2sec)  
 thin thin thin  
 (7sec)  
 40.6 Dottie: You mean with  
 the roun' neck?  
 (2sec) (what cha)  
 talking about (.4sec)  
 Marie turns to third woman  
 and discusses a dress for  
 several turns. She then re-  
 turns to her conversation  
 with Dottie.  
 40.7 Marie: (finds object  
 in shop, shows to Dottie) COMMENTARY  
 This. (1.2sec)  
 40.8 Dottie: Oh the red one ← referent identi-  
 I had on// ya:h ← fied by listener  
 40.9 Marie: Yeah uh-  
 somebody wanted one,  
 who wanted it

### V. E. Identifying the discourse topic proposition:

When adults talk to one another, they may not always be certain of the discourse topic addressed by a speaker. That is, the speaker may not always state the discourse proposition as part of an explicit question of immediate concern. On the basis of the utterance itself, prior utterances exchanged and other shared background knowledge, however, the listener may reconstruct a plausible discourse topic addressed by the speaker.



On the basis of this reconstruction, the listener then provides (what he perceives to be) a relevant or appropriate response.

There are a number of reasons why this reconstruction process for the listener is easier in adult-adult conversations than in adult-child or child-child conversations.

As noted earlier, adults usually conform to the conversational convention of making their utterances relevant to the current discourse (unless otherwise marked). If an adult (in this society) is attending to a discourse topic that is not tied to the prior discourse topic and/or claim (introducing topic, re-introducing topic) then he is expected to mark this break in some overt manner, e.g. through expressive particles ("Hey", "Oh no", "I forgot", etc.), explicit topic-switching expressions, or explicit questions of immediate concern. (See sections III and IV B.3)

This convention is not well-established for young children, particularly those at the one- and two-word stages. There are several reasons for this:

a. First, children at this point in their development have a more limited attention span than do older children and adults. This limitation makes it difficult for them to collaborate on or incorporate discourse topics for an extended period of time. At a point of topic exhaustion (Keenan and Klein 1975) the child may suddenly turn to a radically different focus of attention.

b. Second, the child is easily distracted by some new thing he/she has noticed in the physical environment. In producing an utterance, the child may be focussing on a novel entity rather than on a discourse topic or claim in some last

utterance.

c. Third, the child may not provide a relevant next utterance because he does not understand the point (the discourse topic) of the preceding utterance. This is particularly the case where the preceding utterance is a declarative produced by another speaker. In declarative utterances, the question of immediate concern is implicit. In contrast to explicit questions of immediate concern, the child must construct for himself the concern underlying a declarative. This process may often be too difficult for the child, leading him to produce an irrelevant next utterance.

d. Fourth, the child may not respond relevantly to a preceding utterance because he had not attended to it in the first place. The child may, for example, be absorbed in his own description of some activity and not attend to utterances directed to him from a conversational partner. This behavior is characteristic of egocentric speech, what Piaget (1926) calls "collective monologues". Thus, if an adult directs a question to a young child, the subsequent utterance by the child may not be a response to that question but a comment relevant to the child's previous discourse.

In many cases, the conversational partner realizes that the child has not attended to the immediately preceding utterance but to some other concern. In other cases, however, the child does not provide sufficient cues that his/her attention is directed to some utterance other than the preceding one. For example, attention to a novel object in the environment may be marked only by a shift in gaze direction. The listener is often not aware of this non-verbal behavior. Thus he is

not aware of the concern the child's utterance addresses.

In some cases, the child provides no salient cues whatsoever that his attention has shifted, e.g. where the child is referring to some past experience. For example,

- (41) Jason, 24 mos.  
 41.1 (Jason falls on floor)  
 Mother: What happened? (2X)  
 (long pause)  
 41.2 Jason: book/  
 41.3 Mother: Is that a book?  
 41.4 Jason: me/  
 41.5 Mother: This isn't your book.  
 Where's your book?  
 41.6 Jason: me/  
 41.7 Mother: Where's your chicken  
 book?  
 41.8 (Jason picks up book)  
 Mother: No, that's Gramma's  
 book.  
 41.9 Jason: me/  
 41.10 Mother: You can't read Gramma's  
 book.  
 41.11 Jason: yeah/  
 41.12 Mother: No. Where's your book?  
 41.13 Jason: me/  
 41.14 Mother: Where's Jason's book?  
 41.15 (Jason looks at book)  
 Mother: Gramma's book.  
 41.16 Jason: me/  
 41.17 Mother: Oh, what did you hurt?  
 41.18 Jason: nose/  
 41.19 Mother: Oh, you hurt your nose.  
 41.20 Jason: bleed/  
 41.21 Mother: Oh, does your nose bleed?  
 41.22 Jason: yeah/ nose  
 (transcribed by L. Tweed)

In (41), Jason falls down but does not respond immediately to his mother's query about the fall. He turns his attention to a book in the room. This shift is perceived by the mother, and she directs a number of utterances to Jason concerning the book. However, by (41.4), Jason shifts the focus of attention back to himself. The mother, however, continues to interpret Jason's utterance, "me/", in terms of the immediately preceding focus of interest, identification of the book. For example,

Jason's utterance at (41.4) is treated as a response to (41.3), and it is corrected by the mother at (41.5). For the bulk of the discourse, two distinct concerns are being handled by child and mother. In addition to the mother's (and occasionally Jason's) concern with the book, Jason is apparently saying something about his fall in uttering "me/" (41.4). He is not replying to his mother's question. This becomes clearer when Jason stops repeating "me/" and answers his mother's question at (41.17). This question articulates Jason's concern (his discourse topic), i.e. 'Jason hurt something (some part of himself)'. He collaborates on this discourse<sup>topic</sup> at 41.18 and from this point on in the discourse, matters relating to this proposition are addressed.

The misunderstanding in (41) prevails for an extraordinary number of turns.<sup>9</sup> We find nothing of this length in the Allison tapes, for example. The length of this confusion was probably affected by Jason's occasional verbal and non-verbal collaboration on/incorporation of his mother's discourse topic and claim ((41.8), (41.11), (41.15)).

A second problem in determining the discourse topic proposition of a child's utterance is linked to the child's limited syntactic/semantic competence. It is usually much more difficult for a listener to determine the discourse topic for utterances that express only part of a claim than for utterances that express a claim explicitly. For example,

- (42) Allison II, 19 mos. 2 wks.  
 42.1 Allison: (crawling into her  
 mother's lap and pointing to  
 microphone) man/  
 42.2 Mother: The man put the micro-  
 on. Right.



In (42), it is more difficult to reconstruct the discourse topic for Allison's utterance (42.1) "man/" that it would be if the utterance were syntactically and semantically more complete. At (42.1), the child conveys only that "man/" is somehow related to the object she is pointing to (the microphone). If the utterance were more complex, then the listener would have a clearer idea of the claim being made by the child and would be better equipped to determine the question of immediate concern being addressed.<sup>10</sup>

Faced with utterances such as these, the listener has to bring in a great deal of contextual knowledge to reconstruct the question of immediate concern. (See section IV A). The listener considers plausible questions that the communicative act (pointing at one object and uttering "man/") could be a response to: Is the child telling me (the listener) 'what a man did' (discourse topic: 'the man did something'); or 'who did something to the microphone' (discourse topic: 'someone did something to the microphone'); or what? When Allison's mother EXPANDS (interprets) Allison's utterance as "The man put the microphone on", she creates a range of possible questions of immediate concern that Allison's utterance might be a response to; e.g. 'What did the man do?' 'Who put the microphone on?'

EXPANSIONS can be seen as one of several means of delimiting possible discourse topics addressed in a child's communicative act. An expanded interpretation can be expressed as an assertion or, more tentatively, as a clarification request (repair initiator). The first alternative assumes that unless otherwise challenged, the expansion (interpretation) is plausible. The second alternative requests an explicit confirmation check

(repair response) from the child.

As noted previously, an additional means for arriving at the intended discourse topic of the child is to propose it as a primary presupposition of an explicit question of immediate concern. This response is illustrated in examples (31) and (38). This alternative differs from expansions in that the speaker commits himself to a specific discourse topic. In expansions, the speaker merely reduces the number of possible questions the utterance is relevant to. On the other hand, questions of immediate concern share certain characteristics of expansions used as repair initiators. They both generate a topic-collaborating sequence of utterances. In both cases, the listener is eliciting information about a particular proposition, and the child (speaker) is providing information relevant to that same proposition.

#### VI. Implications for the Notion of Competence in Child Language:

The four steps described here for establishing a discourse topic are fundamental to successful communication. Children must develop means to accomplish each of these steps, if they are both to contribute to, and sustain, a coherent discourse. We propose that the extent to which a child is capable of completing these steps is an important measure of the child's developing communicative competence. We say communicative, rather than strictly linguistic, because the child relies on both verbal and non-verbal means for accomplishing these steps.

We need to examine the visual and verbal records of children's speech to determine

##### 1. which steps are taken by the child:

For example, the first analysis of children's speech

at the one- and two-word stage shows that steps 1, 2, and 3 are taken by the child. Children at this point in their development can point out referents that are relevant to a discourse topic proposition, but they do not specify the semantic roles of such referents in the discourse topic (step 4). As we have seen, the listener is left to reconstruct the proposition on the basis of the referent located, and shared background knowledge.

2. how much conversational space (number of utterances, number of turns) is taken up with satisfying each step:

One of the most important things to consider here is the context in which the interaction is occurring. The amount of conversational space taken up depends on the number of individuals present, the extent to which they are attending to the child, and the extent to which they are familiar with the child and his experiences. In addition, it is important to consider whether the intended listener is an adult, an older child, or a peer. The same string of sounds could be successfully interpreted in one context, yet not understood at all in another context. Those who are intimate with a child may compensate for poor articulation, idiosyncratic expressions, and "out of the blue" references.

Contexts in which the listener is not intimate with the child reveal more clearly the child's competence. In these contexts, the child must work harder to accomplish these steps. Further, these contexts generate repair procedures. These procedures make explicit what information the child can and cannot provide at each step.

It would be useful to examine adult speech to children to see the extent to which adults initiate repairs on each of these steps. It may be the case that adults only request repairs on

those steps the child is capable of carrying out. In this case, we would see a shift in the nature of the repair initiator over time. (This shift would also be affected by what needs to be repaired, e.g. as the child articulates his message more clearly, there should be fewer repair initiators on step 2.)

3. the means employed by the child for implementing each step:

Although speakers never stop relying on non-verbal means in conveying messages, the extent of their reliance varies developmentally. That is, children come to rely more and more on verbal means to convey their messages, and this in turn provides more explicit cues as to what discourse topic is being addressed. This process has often been noted, but only recently has documentation of this process begun (Greenfield and Smith, in press).

Looking to verbal means, we need to examine developmental changes in the child's ability to refer to entities in both physical and memory space. And we need to document when and how a child makes it explicit (verbally) that he is introducing a novel topic, or reintroducing a topic addressed earlier.

VI. B. Comprehension:

A further dimension in the development of competence concerns the extent to which a child is able to determine the discourse topic of a conversational partner. As has often been noted, the relationship between comprehension and production at any one point in time is difficult to determine. <sup>However,</sup> ~~^~~ We can get some indication of what the child is understanding from observing two kinds of responses:

1. When an adult does not understand an utterance, he has the option of initiating a repair on that utterance. It would seem reasonable to look at the child language data for these



responses. We find, however, that children initially do not evidence their misunderstanding in this form. As noted, we find no such verbal repair initiators in our data until the child is almost 3 years of age. Once they have emerged in the child's speech, it is important to document the changing character of the repair-initiators, that is, the order in which repairs on each step emerge.

2. The second response that may be said to indicate comprehension on the part of the child (listener) is topic collaboration. This is clearest in question-answer topic-collaborating sequences. To answer a question, the child must locate the discourse topic of the question (i.e. the proposition about which information is requested) and use this discourse topic in his/her answer (see examples (3),(10),(13),(14),(34)).

It is necessary to examine the child's ability to both collaborate on "old" topics and initiate "new" topics into the discourse. We find in our data that asking questions is a speech behavior more characteristic of adults speaking to children than children speaking to adults, or to each other. A consequence of this is that children often collaborate on a discourse topic proposed by an adult. We expect to find variation in the extent to which one child can introduce a discourse topic rather than collaborate on a discourse topic. In many of the interactions between adults and children, for example, the adult controls the direction of the conversation by repeatedly initiating discourse topics which the child is then expected to respond to (Corsaro 1974). This is particularly characteristic of experimental situations, where a question-answer tactic is employed. In these situations, only the child's ability to determine the discourse topic proposition is evident. The child's ability to establish

new discourse topics cannot be observed.

### VIII. Why Discourse Topic?

Our treatment of topic as a discourse notion should be considered as distinct from other descriptions of topic in the linguistic literature. From our point of view, topic is not a simple NP but a proposition (about which some claim is made or elicited). In the linguistic literature, left - dislocation of an NP (e.g. 'This paper, it's almost done.') has been treated as a topicalization device (Gruber 1967, Gundel 1975). From our point of view, these left-dislocated NPs vary in the roles they play with respect to discourse and discourse topic.

For example, unstressed left-dislocated NPs preceded by As for or Concerning typically retrieve earlier discourse material. In our framework, these constructions mark re-introducing topics. The construction brings a prior proposition or a referent within a prior proposition back into focus. This function might explain why the NPs appearing after As for or Concerning are not drawn from an immediately preceding utterance. For example, a sequence such as "Where is John?" "As for John, he's at home" seems inappropriate. It is inappropriate, because there is no need to retrieve or foreground the referent. This function explains as well why As for constructions followed by stressed NPs are used to contrast or emphasize referents or propositions, e.g. "Mary said she wouldn't help, but as for me, I'm willing."

Left-dislocated NPs not preceded by As for or Concerning are considerably less restricted in discourse. We find that these constructions may both introduce novel referents and propositions or reintroduce

previously mentioned referents and propositions. We find that in many cases the left-dislocated NP may be part of the new information or comment on a discourse topic, e.g. "What's the matter?" "My father, he's bugging me again." Here the left-dislocated NP is part of the new information provided about the discourse topic proposition, 'something is the matter'. The NP 'my father' is the 'center of attention' (Li and Thompson, this volume) of the sentence in which it is couched. It is not the 'center of attention' of the discourse in which the sentence is couched.<sup>11</sup>

It would be valuable to have some understanding of discourse dynamics in topic-prominent languages (Li And Thompson, this volume). In languages where topic-comment constructions alternate with subject-predicate constructions, e.g. Chinese, the use of topic constructions may be contextually constrained. It would be useful to examine spontaneous conversational discourse in these languages to determine the functions of the topic construction in the discourse context. Can these constructions re-introduce, introduce, collaborate, incorporate discourse material? Or is their use restricted to some of these functions only? Where topic-constructions are always the norm, we would like to determine as well 1) if all these functions are handled; and 2) if the language differentiates these functions morphologically or syntactically. In general, we want to establish a framework for comparing topic constructions in their discourse contexts across languages.

We offer here a baseline description of topic in discourse. We refer to this notion as discourse topic, because it is usually discourse-generated (relevant) and often discourse-generating.

# FOOTNOTES

1. This research was supported by a grant from Social Science Research Council grant #HR/2941/1.
2. For the Allison data, only gaze directed to the mother is marked. ↑ = child makes eye contact with mother. ↓ = child terminates eye contact with mother.
3. This notion is very close to that of topic-shading as discussed by Schegloff and Sacks (1973: 305): "One procedure whereby talk moves off a topic might be called 'topic shading' in that it involves no specific attention to ending a topic at all, but rather the fitting of differently focussed but related talk to some last utterance in a topic's development." We do not employ the same term, as the co-creators of it may not agree with the notion of discourse topic developed in this paper.
4. Greenfield and Smith (in press) have discussed the notion of informativeness for children at the one word stage. In their framework, the child tends to encode that aspect of a situation that the child considers to be the least certain. For example, in volitional acts (requests, demands), "when the object is securely in the child's possession..., it becomes relatively certain and the child will first encode Action/State...When the object is not in the child's possession, it becomes more uncertain, and his first utterance will express the object" (ms. p.20 chap. 4).
5. Anglo speakers of English, of course, also 're-introduce' concerns discussed at some prior time. The difference between the two cultures is that Anglo speakers of English mark these re-introducing topics in formal social contexts with constructions such as "As for...", "Concerning...", etc., whereas Indian speakers do not. In less formal contexts, Anglo speakers too are under less constraint to mark overtly that they are addressing their utterance to a prior concern (not addressed in the immediately preceding utterance).
6. For children of 13+ months the establishment of eye contact is one of the most reliable measures of having secured the attention of the listener. (Huttenlocher 1974)
7. These utterances are typically omitted in developmental psycholinguistic literature. They are characterized as unintelligible. From our point of view, they are often unreconstructable, from the hearer's point of view.
8. Frequently the adult can reconstruct what the child is talking about despite the child's inability to provide adequate information. The amount of shared experience is critical in this reconstruction process. Someone who spends many hours



footnotes, cont.

8. (cont.) a day knowing what the child has been doing can often understand an "out of context" utterance to a much greater extent than an investigator making infrequent visits.

9. It is difficult to say to what extent the child has designed his communication to meet the recipient's needs without access to a video record of the event. The child might have been giving additional cues that the mother didn't attend to.

10. There is adequate evidence prior to this utterance that Allison knows the appropriate label for "man" and for "microphone". Her utterance combined with the pointing can be assumed to be an intentional linking of man and microphone.

11. We wish to point out that a left-dislocated simple NP may be either an explicit 'representation' of an implicit proposition or a referring expression only: "Champagne, that's a fantastic idea" vs. "Champagne, it makes me feel fine".

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