Differences in the structure of conversations between a father-child and mother-child dyad: a preliminary investigation

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A father-child and a mother-child conversation were analysed based on Stech's (1982) framework in order to determine whether there were structural differences between the two conversations. The child subject was a male, 3:7 years of age. Structural complexity, topic initiation, topic maintenance and development were the key areas examined. The father-child conversation displayed greater structural complexity and a greater balance in contributions between father and child. This conversation also displayed greater cohesion than the mother-child conversation. Conversely, in the mother-child conversation, the mother had greater control of the conversation and introduced most of the topics as a result of which the child contributed less than in the father-child conversation. These differences can be attributed to speaker style, gender-based linguistic differences and parental roles.

1. Introduction

This comparative study aims to investigate possible differential features with regard to initiation of topics, topic maintenance, topic development and structural complexity of spoken discourse in two conversations between a father-child dyad and a mother-child dyad.

The conversational behaviours that infants display at the pre-linguistic stage have been termed "protoconversations" (Owens 2001:192). The very term implies that there are at least two participants and that they are taking turns. It has been suggested that a child's interactional behaviours commence within the first weeks of its birth during feeding (Kaye 1979:196; Stern 1977:85) and continue to develop through various stages until words replace other forms of communication in turn-taking (Schaffer 1971; Bloom, Russell and Wassenberg 1987). However, in order to be a competent participant in conversations, the child must learn to take turns appropriately (Sacks, Schegloff and Jefferson 1974; Schegloff 2000: 1-3) and to follow the conventional routines of conversation. Grice's Cooperative Principles of Conversation (Wells Lindfors 1980: 287-9; Allan 2001:27-33) are a set of often culturally specific maxims observed by participants to ensure the conversational flow. Anecdotal evidence indicates that adults make allowances for a child's violation of these maxims as they have an implicit awareness that communicative competence is acquired in an interactive environment and over time.

In order to facilitate conversation with children, adults modify their speech both in terms of length of utterance and complexity (Snow 1972; O'Brien and Nagle 1987:269). Another facilitative strategy that adults employ to ensure the success of the conversation is that of control. Mothers' control strategies were the focus in one of Martlew's studies (1980). Martlew (1980) found that mothers maintain the conversation with children by controlling the speaker/listener roles and inviting the child to contribute to the conversation on topics with which the child has experience. A number of studies have focused on mother-child dyads (Kaye and Charney 1981; Kloth, Kraaimaat and Brutten 1998; Fraser and Roberts 1975; Bloom et al. 1987; Wanska and Bedrosian 1985), but father-child dyads have not received as much attention.

Those studies which have focused on similarities and differences between father-child and mother-child dyads (e.g. Golinkoff and Ames 1979; Malone and Guy 1982; McLaughlin, White, McDevitt and Raskin 1983; Hladik and Edwards 1984) have primarily compared features such as sentence types, verbs forms, MLU (mean length of utterance), number of turns, repetitions, imitations and expansions. Ratner (1988), on the other hand, examined the differences in vocabulary choice between fathers and mothers addressing their children while Tomasello, Conti-Ramsden and Ewert (1990) have focused on differences between breakdown and repair in mother-child and father-child conversational dyads. Their findings support the Bridge Hypothesis, according to which fathers contribute to the child's ability to communicate with communicative partners who are less familiar to them.

In order to compare the father-child and mother-child conversations in this study, a structural analysis of each was conducted and the data were analysed qualitatively and quantitatively. The structural analysis is based on Stech's (1982) framework to the extent that the basic units comprising oral discourse according to Stech (1982) - talk acts, main sequences and embedded subsequences - are adopted.

1.1 Identification of talk acts

The *talk act* is the basic unit of analysis in this study. This term has been retained for consistency, as Stech's (1982) basic framework has been adopted for the analysis. Stech (1982:78) identifies a talk act as "a simple or complex sentence, a question, an agreement or a disagreement". Stech (1982:78) claims that his definition of a talk act is equivalent to Bales's (1950) definition of thought unit, as being "a single simple sentence expressing or conveying a complete single thought", one usually with " a subject and predicate, though sometimes one of these elements will only be implied" (Bales 1976:37). However, it appears that a talk act, as exemplified by Stech (1982:78-9), is in fact an *utterance*, in its narrower sense, i.e. a stretch of speech identified by preceding and following pauses and changes in pitch movement and rhythm, which is the definition adopted in this study. The following are examples of talk acts identified in the data collected.

Father-child dyad	Mother-child dyad
I have got your car.	There were two police cars.
No one's got my car.	Two Police cars!
My car's in the car park at work.	Yeah.
Actually, Silvester has got your car.	Did they have the siren going?

1.2 Identification of topic sequences

According to Stech (1982:77-8), topically-related talk acts make up *topic sequences*, which are the basic organisational units of conversation. When talk acts are adjacent but do not share topical content, this is deemed to be the boundary of another topic sequence. If the topic following is directly or tangentially related to the previous, then it is identified as being an embedded subsequence. If, on the other hand, the subject matter bears no topical relevance to the previous topic sequence, then it is marked as a new main sequence. When topic shifts occur, they are either a *termination*, i.e. after the topic shift, the initial topic is not revisited, or a *break*, i.e. the initial topic is revisited after the first shift away from it. The method proposed by Stech (1982:79) for the identification of topic sequences involves de-identifying the turns-at-talk, placing each unit of interaction on a separate line and removing any other comments made by the transcriber/analyst. An example of a main sequence and two embedded subsequences forming uninterrupted discourse in the mother-child conversation is supplied. The speakers are not identified in these examples so that the method used to identify topic sequences in this analysis could be illustrated.

Aha! You've discovered Mummy's secret.
Want some lipstick.
That's not lipstick.
Guess what that is.
What?
What do you think it is?
What is it?
It's nail polish.

Main topic sequence:
Cosmetics

Do you want me to show...
Here, do you want me to paint the nails?
Here, let's paint the nails.
I paint it.
Huh?
I paint your nails.
Will you paint them for me?

Embedded subsequence:
Nails

Careful.
Hang on.
It might drip on the carpet though.
Just a moment.
Put it on the table, Arthur.

Embedded subsequence:
Handling of cosmetics

1.3 Sequence analysis

The analysis focused on the structural features of the conversations - main sequences and embedded subsequences - without reference to the relationship of embeddedness within the main sequence. Measures examined were those of sequence length, determined by the number of talk acts; and complexity, determined by the number and length of novel embedded subsequences, i.e. those subsequences introduced for the first time, excluding any returns to the same embedded subsequence.

2. Method

2.1 Participants

A judgement sample (Wardhaugh 1998:151) was used for the purposes of this study. The child subject was a male aged 3:7 and is an only child. Consent was gained from both parents, who are in their 30s and were the adult subjects in the study.[1] The child spends most of his time with his mother, who is currently not working, and he has recently started to attend kindergarten twice a week.

2.2 Procedure

The role of the researcher was that of the complete observer, as defined by Gold (1958) in Adler and Adler (1994:379-87). This data collection method was adopted, as it is unobtrusive and therefore expected to reduce the effects of the observer on the subjects thus making possible the collection of natural language samples (Adler and Adler 1994:382; Wardhaugh 1998:149). The data comprises two 17-minute samples of spontaneous conversation, one between father and child and the other between mother and child. The initial two minutes of each sample were not analysed, to allow the interlocutors to settle into the conversation. The parents were asked to speak to their son as they would in normal circumstances. The parent not participating in the recording was not present.

2.3 Transcription and coding

The transcription was completed on the day the data was collected. The parents were consulted when unintelligible speech was noted. All remaining unintelligible sections have been noted accordingly on the transcript. The CHAT (Codes for the Human Analysis of Transcripts) coding format and conventions were adopted for the transcription of the data (MacWinney 1996:5-15; the CHILDES manual, pp 131-5[2]). It should be noted that the CHAT symbols have not been incorporated in the examples provided in this paper to improve readability.

3. Analysis

3.1 Structural analysis of main sequences and embedded subsequences

The analysis of the conversations involved recording all the topic sequences and types of sequence, the initiator of the topic, the total number of talk acts for each topic sequence and for each speaker in the order in which they arose. Tables 1 and 2 are samples of the data yielded (F= father, C = child, M= mother).

Table 1: Two samples of sequences identified in the Father-Child conversation.

No.	Topic Sequence	Initiator	Talk Acts			Sequence Type
			Total No.	C	F	
19	Winnie the Pooh	C	12	7	5	Main
20	Chadstone	F	7	3	4	Main
21	Winnie the Pooh	C	17	10	7	Main
22	Winnie the Pooh's top	C	17	7	10	Embedded Subsequence
23	Winnie the Pooh	C	11	4	7	Main
38	Recording device	C	3	2	1	Main
39	Handling of recording device	F	14	4	10	Embedded Subsequence
40	Recording device	F	33	13	20	Main
41	Handling of recording device	F	13	3	10	Embedded Subsequence
42	Recording device	F	3	1	2	Main
43	Writing on cassette	C	12	5	7	Embedded Subsequence
44	Request to modify behaviour	F	2	0	2	Main
45	Boat	F	4	2	2	Main
46	Functions of boats	F	3	1	2	Embedded Subsequence
47	C's experience of boats	F	3	1	2	Embedded Subsequence

In the father-child conversation, there were a total of 47 topic sequences, i.e. main and embedded, including returns to these. An example of a main sequence followed by an embedded subsequence and then a return to the original main sequence is given below. The examples provided are topic sequences 38-40 in Table 1.Speakers have been identified for ease of reading (F= father, C= child).

C: *Oh! Vicki forgot that here!*
F: *And what's that there?*
C: *It's a tape re...*

Main Sequence:
Recording Device

F: *No! Don't press it, don't press it. Don't press it.*
C: *Press this what do?*
F: *No, no, no, no, no.*
F: *Don't press it.*
F: *That's Vicki's.*
F: *You can't touch it.*
F: *You might, uh, do something to it.*
C: *What might I do?*
F: *Well, I don't know.*
F: *Arthur, don't, don't do that.*
C: *I just making it stand up.*
F: *Ok, but it will fall down and it will make awful noise because...*
C: *No!*

Embedded Subsequence:
Handling of Device

F: *Look here. Look, look, look, look, look.*
F: *Look how that's moving around. See, how that's moving around?*
C: *Yeah.*
F: *It will...*
F: *Ok.*
C: *Why's zat moving around?*
F: *Because it is.*
F: *It's got a cassette in there.*

Return to Main Sequence:
Recording Device
(section only)

An analysis of the whole father-child conversation revealed that the child introduced eight novel main sequences, i.e. excluding returns to the same topic sequence, while the father produced nine. This indicates that there is a balance in father and child topic initiations. Examples of main sequences introduced by both interlocutors are supplied below. The example of the novel main sequence introduced by the child is no.19 in Table 1 while the example of the sequence introduced by the father is no.20. Only a section of the sequence introduced by the child is given.

C: *Look, look at his flippy hand.*
C: *It's all out.*
F: *Heh. His flippy hand is all out!*
C: *But, Daddy, look!*
C: *He lost the hole!*

Novel Main Sequence: Winnie the Pooh- Introduced by Child
(section only)

F: *So, where are we going to go now, Arthur? After this?*
C: *To Chaddy.*
F: *To Chadstone?*
F: *What are we going to do there, Arthur?*
C: *Wha are we goind do dere?*
F: *You tell me.*
F: *What are...*

Novel Main Sequence: Chadstone- Introduced by Father

When examining the number of novel embedded subsequences, i.e. excluding returns to these subsequences, it was found that the child introduced seven while the father introduced 12 such subsequences. The total number of talk acts produced by both interlocutors in the seven embedded subsequences introduced by the child was 76. Similarly, 76 talk acts were produced by both speakers in the 12 embedded subsequences introduced by the father. The total number of talk

acts in all novel embedded subsequences in this conversation was 152, of which 63 (41%) were produced by the child and 89 (59%) by the father. Sequence no.43 in Table 1 is a novel embedded subsequence introduced by the child. A section of the subsequence is provided below.

C: *What is that writing underneasit?*
F: *What's that?*
C: *Zis writing underneasit.*
F: *What's that?*
C: *Zis writing.*
F: *I can't hear what you're saying.*
C: *This writing underneath it.*

Novel Embedded Subsequence: Writing on Cassette – Introduced by Child (section only)

An example of a novel embedded subsequence initiated by the father is sequence no.46 in Table 1.

F: *What do boats do?*
C: *Sail in the water.*
F: *Sail in the water!*

Novel Embedded Subsequence: Function of Boats – Introduced by father

The greatest number of talk acts in a single sequence both for the father and the child was observed in the revisited main sequence *Recording Device* (sequence no.40 in Table 1) with 20 talk acts produced by the father and 13 by the child.

The mother-child conversation yielded a total of 69 topic sequences, including main sequences and embedded subsequences - both novel and revisited. The table below provides examples of the sequences found in this conversation.

Table 2: Two examples of sequences identified in the Mother-Child dyad.

No	Topic Sequence	Initiator	Talk Acts			Sequence Type
			Total No.	C	F	
1	Trains	M	3	1	2	Main
2	Activities the night before	M	5	1	4	Main
3	Trains	C	23	5	18	Main
4	Church	M	6	2	4	Main
5	Police	C	19	10	9	Embedded Subsequence
6	Church	M	6	2	4	Main
7	Police	C	3	2	1	Embedded Subsequence
8	Church - family present	M	9	4	5	Embedded Subsequence
25	Tweenies concert	M	3	1	2	Main
26	Tweenies characters	M	7	3	4	Embedded Subsequence
27	Tweenies concert	M	1	0	1	Main
28	Tweenies characters	C	1	1	0	Embedded Subsequence
29	Tweenies clock	M	2	1	1	Embedded Subsequence
30	Request to modify behaviour	M	1	0	1	Main
31	Tweenies clock	C	16	7	9	Embedded Subsequence
32	Tweenies'song	M	7	1	6	Embedded Subsequence
33	Tweenies activities	M	4	2	2	Embedded Subsequence
34	Toes	C	18	5	13	Main
35	Bedtime	M	8	3	5	Main
36	Breakfast	M	4	1	3	Main
37	Request to modify behaviour	M	1	0	1	Main
38	Breakfast	C	4	2	2	Main
39	Cosmetics	M	8	3	5	Main

Examples of a main sequence, a topically related embedded subsequence and a return to the main sequence are provided below (topic sequences 25-27 in Table 2). The speakers are identified as M= mother and C= child.

M: *Hey, where are we going today?*	**Main Sequence:**
C: *To Tweenies.*	Tweenies Concert
M: *And what are we going to see?*	
C: *Uh...*	
M: *And who's gonna, can you tell me the Tweenies characters? Can you tell me who they are?*	**Embedded Subsequence:**
C: *Milo and Fizz and and Vila.*	Tweenies Characters
M: *Yes, and what about the dog?*	
M: *What's the dog called?*	
C: *Doodle.*	
M: *Yeahehe.*	
C: *And Vila.*	
M: *I am so excited.*	**Main Sequence:**
M: *I can't wait, Arthur. I can't wait to go.*	Tweenies concert

The mother-child conversation yielded only one child-initiated novel main sequence. Conversely, the mother produced 20 such sequences. This indicates that the mother was directing the conversation and controlling the topics discussed. The child-initiated main sequence is no.34 in Table 2, of which only a section is given, while a mother-initiated example is no.4 in the same table.

C: *What are you doing?*	**Novel Main Sequence:**
M: *Oh, there's just something stuck on my toe and I'm trying to get it off, Arthur.*	Toes - Introduced by Child
C: *Is it hurting?*	
M: *It's just bothering me.*	
M: *But I want to know what you did last night at church.*	**Novel Main Sequence:**
M: *What you liked the most about it, did you get tired, were there lots of people...*	Church - Introduced by Mother
C: *Eh, I wen a walk aroun the church.*	
M: *When did you walk around?*	

Of the 17 novel embedded subsequences, excluding returns to these, found in the mother-child conversation, four were initiated by the child while 13 were introduced by the mother. The four child-initiated subsequences yielded a total of 36 talk acts by both speakers, while the total number of mother-initiated novel subsequences yielded a total of 80 talk acts by both interlocutors. The whole conversation yielded a total of 116 talk acts for all novel embedded subsequences of which 47 (40.5%) were produced by the child and 69 (59.5%) by the mother. An example of a child-initiated novel embedded subsequence is sequence no.5 in Table 2 while an example of such a subsequence initiated by the mother is no.8 in the same table. Only sections of each are provided.

C: *But the policeman if he sees cars he says,*
"Stop cars, the people are crossing the road!"
M: *No way!*
C: *Yeah.*
M: *Really?*

Novel Embedded Subsequence:
Police - Initiated by Child
(section only)

M: *Mmhm,mmhm, and who were you with?*
C: *Louis and Mummy and Daddy.*
M: *And your Daddy and Louis.*
C: *Louis is on the church bang.*

Novel Embedded Subsequence:
Church-Family Members
Initiated by Mother
(section only)

In the mother-child conversation, the single sequence in which the child produced the most talk acts was the child-initiated embedded subsequence *Police* - ten talk acts (Sequence no.5, Table 2). The mother, on the other hand, produced the most talk acts in the revisited embedded subsequence *Nails* - 27 talk acts.

The parent-initiated topics that the child did not respond to were also examined in this analysis. In the father-child conversation there were no such instances with main topic sequences. However, there was one embedded subsequence of a total of 12 to which the child did not respond. One of the embedded subsequences was excluded as the child responded with a novel embedded subsequence. Also excluded in both conversations were talk acts within instructional content as the child may have responded non-linguistically. The child did not respond to five of 17 mother-initiated main topic sequences but responded to all embedded subsequences.

3.2 Comparison of father-child and mother-child conversations

When the conversations were compared, the following information was yielded:

Table 3: Comparison of structural features in father-child and mother-child conversations

Total number of features	**Father-child dyad**	**Mother-child dyad**
Main & embedded sequences (novel & revisited)	47	69
Main topic sequences	13	19
Child-initiated novel main sequences	8	1
Parent-initiated novel main sequences	9	20
Embedded subsequences (novel and revisited)	19 in 7/13 topics	18 in 5/19 topics
Novel embedded subsequences	19	17
Child-initiated novel embedded subsequences	7 (total 76 talk acts)	4 (total 36 talk acts)
Parent-initiated novel embedded subsequences	12 (total 76 talk acts)	13 total (80 talk acts)
Child talk acts	155	135
Father/mother talk acts	219	277
Topics where parent produced [5 talk acts more than child]	9 of 13 in total	9 of 19 in total
Returns to main sequences	6	11
Returns to embedded subsequences	5	20
Topic sequences w/ instructional content - initiated by parents In topic *behaviour*	3	3

A comparison between the two 17-minute conversations revealed that the mother-child conversation contained seven more topics than the father-child conversation. There appears to be a much greater balance in the contributions of both interlocutors in the father-child dyad than in the mother-child dyad, as evidenced by the number of main sequences and embedded subsequences initiated by each speaker. In the mother-child dyad, the mother produced five or less talk acts more than the child in only nine of 19 topics (47%) while in the father-child dyad, the father produced the same number

of talk acts in nine of 13 topics (69%). Topics to which the child did not respond at all were excluded, as such attempts to introduce a topic were deemed unsuccessful. In the mother-child dyad there were three such instances initiated by the mother while none were observed in the father-child dyad. Requests for modification of the child's behaviour were also excluded, as the child may have responded non-linguistically. The father-child dyad, therefore, also displayed a greater balance in number of talk acts per topic than did the mother-child dyad.

When examining the total number of talk acts, the mother produced 67% of all talk acts and the child 33% in the mother-child conversation while the father produced 59% of all talk acts and the child 41% in the father-child interaction. This indicates that the child was more talkative in the father-child dyad than in the mother-child dyad as the mother clearly dominated the conversation.

Both conversations included almost the same number of embedded subsequences. However, the father-child conversation contained fewer topics overall, of which 54% contained embedded subsequences, while the mother-child conversation contained embedded subsequences in only 26% of the total number of topics discussed. The difference, therefore, lies in the manner in which topics were developed. In the father-child conversation, the larger number of embedded subsequences extended the topics into related areas, whereas in the mother-child conversation, the dyad discussed a larger number of topics without extending to other related topics to the extent that the interlocutors did in the father-child conversation. The instances of child-initiated embedded subsequences also differed greatly between the two conversations. While the child initiated 37% of the novel subsequences in the father-child conversation, he only initiated 24% of these in the mother-child conversation.

The analysis also revealed that the mother-child dyad displayed almost double the returns to main sequences and four times more returns to embedded subsequences than the father-child dyad, which, in a sense interrupted the flow of the conversation.

Table 4: Main topic sequences

Main Topic Sequence	Father-Child Dyad	Mother-Child Dyad
With greatest no. of talk acts	*Recording device* - 78 talk acts	*Cosmetics* - 160 talk acts
With greatest no. of talk acts from father	*Recording device* - 50 talk acts	-
With greatest no. of talk acts from child	*Winnie the Pooh* - 35 talk acts	*Cosmetics* - 43 talk acts
With greatest no. of talk acts from mother	-	*Cosmetics* - 117 talk acts
With greatest no. of embedded subsequences	*Swimming class* - 6 subsequences	*Church* - 7 subsequences
With greatest no. of returns to main sequence	*Winnie the Pooh/ Recording device* - 2 returns each	*Cosmetics* - 3 returns
With greatest no. of returns to embedded subsequence	*TV*- 3 returns	*Cosmetics* - 14 returns
Relating to child's welfare (initiated by parents)	0	3 - *Bedtime/ Breakfast/ Medicine*

Table 4 illustrates the difference between the two conversations regarding the topics developed. In the father-child conversation, a variety of topics appear to have been prominent with respect to the number of talk acts generated by the speakers, the number of subsequences and the number of returns both to main sequences and embedded subsequences. The topics which engaged the speakers most in this dyad were *Recording Device* and *Winnie the Pooh*, both initiated by the child, while the topics *Swimming Class* and *TV* were also prominent due to the number of subsequences and the number of returns to embedded subsequences respectively. Conversely, the pattern which emerged in the mother-child conversation is one of uniformity as the same topic, *Cosmetics* - initiated by the child picking up the make-up case, generated the greatest interest for both interlocutors. Nevertheless, this topic also displayed a great imbalance in mother and child contributions. Also of interest is the fact that the mother initiated topics relating to the child's welfare while the father did not initiate any such topics.

Intra-speaker and inter-speaker pauses of 2 seconds or more were measured both in length and frequency. The mother-child conversation was found to have shorter pauses (mean -3 seconds) and fewer in number (12 in total) while the father-child conversation had longer (mean -3.7 seconds) and more frequent pauses (34 in total).

4. Discussion

The aim of this study was to determine whether there were differences in the structure of spontaneous conversation and specifically in topic initiation and maintenance and to examine possible differences in the development of the conversations between the father-child and mother-child dyads. The structural analysis conducted revealed that the conversations did in fact differ structurally in terms of complexity, number of topics, child and parent contributions and topic development. What remains to be determined is why this should be the case.

In a study comparing mothers' and fathers' speech with their 3-year-old sons, Malone and Guy (1982) found that fathers tended to control the conversation more than mothers did by directing the conversation. However, Hladik and Edwards (1984), found that mothers took on the role of "initiator" and produced more utterances than fathers. In contrast, fathers took on the role of "reactor" to the child's contributions to the conversation, spending more time listening to the child and allowing the child to take the lead. The findings in the study by Golinkoff and Ames (1979) are in agreement with those of Hladik and Edwards (1984) with respect to the amount mothers and fathers speak when addressing their child. Mothers, according to Golinkoff and Ames (1979:31), "are in charge" when conversing with their child. The findings in the studies by Golinkoff and Ames (1979) and Hladik and Edwards (1984) are congruous with those of this study. The mother controlled the conversation and produced more talk acts than the father whereas the father gave the child the opportunity to introduce more topics and participate more equally.

The structure of a conversation is not affected merely by the parental role but by a multitude of factors, one of which is speaker style. The mother in this study clearly contributes more to the conversation than the child. She is talkative, has long speaking turns, does not allow long intra-speaker and inter-speaker pauses and controls the conversation, as evidenced by the number of topics she introduces compared to those introduced by the child. Kloth et al. (1988) found that mothers with this communicative style fall in the category of "explaining" communicative style and do not provide the child with many opportunities to take turns. Conversely, the father-child conversation is relatively equally balanced in father and child contributions and is characterised by longer inter-speaker pauses, which can serve as a paralinguistic cue for the child to take the floor. Although no such categories have been assigned to fathers in the study by Kloth et al. (1998), the father's communicative profile in this study fits that of the "non-intervening" communicative style. The fact that the child did not respond to five of the topics initiated by the mother as opposed to only one by the father could, to some extent, reflect the fact that children may respond to a "non-intervening" communicative style more than to an "explaining" communicative style.

Apart from individual speaker styles, studies indicate that gender-based linguistic styles also affect participants' speech behaviour. Women tend to carry out most of the interactional work which helps maintain the conversation while men contribute less to the maintenance of the conversation (Hannah and Murachver 1999:153-5; Fishman 1978:404-5). Some studies (DeFrancisco 1991; Fishman 1978) have also shown that men tend to talk less in relationships which are intimate while other studies (Holmes 1995; Swacker 1975, 1979 reported by Hannah and Murachver 1999:155) have found that they generally talk more than women in public contexts. These findings may support the pattern observed in the present study, where the mother produced a greater number of talk acts than did the father. Presumably, the child's speech behaviour would also have been affected by the gender of his interlocutor. A study of this scale, however, cannot fully support such claims.

Hannah and Murachver (1999:168) found that a facilitative communicative style, irrespective of the gender, produced greater contributions on the part of the co-participant. However, in this study it was shown that although the mother appeared to promote child contributions by asking questions and seeking his opinion more frequently than the father, the child made a greater contribution to the father-child conversation than the mother-child conversation. Perhaps the mother's efforts to maintain the conversation prompted her to talk more to ensure that there would be no breakdowns in

the conversation, which could, in fact, have discouraged the child from participating as fully as he did in the father-child conversation.

In her study, Martlew (1980:334) found that children introduced new topics or revisited already established topics more frequently than mothers did. The findings in this study, however, are not consistent with those in Martlew's study as the mother introduced most of the topics. This could be attributed to the mother's speaker style, a feature of which was providing a great deal of information, thus reducing the opportunity for the child to participate. Furthermore, the topics in the mother-child conversation were often revisited by the mother after a number of intervening new topics had been introduced, which disrupted the cohesion of the conversation. Conversely, in the father-child conversation a greater overall cohesion was observed as topics were initiated, with or without embedded subsequences, and were terminated when a new topic was introduced. Expressed differently, the topics in the father-child conversation were more closely connected in space and time.

Structural complexity of the discourse was measured by examining the total number of novel embedded subsequences and their length in terms of talk acts. Although both conversations appear to contain approximately the same number of embedded subsequences, when one considers the total length of the conversations measured in the number of talk acts, it would appear that the father-child conversation is slightly more structurally complex. The child contributed greatly to the structural complexity of the conversation in the father-child dyad and to a lesser degree in the mother-child dyad, possibly again because the mother had greater control of the conversation.

A structural view of spoken discourse views segments which are topically related in one way or another as embedded subsequences. Such segments, when viewed from a functional perspective, are labelled "shaded" topics. Topic shading is a shift of focus from one topic to another which is linked propositionally. In their study, Brinton and Fujiki (1984:355) studied groups of 5-year-olds, 9-year-olds and adults. They found that the older the subjects, the more topics they shaded. Shading therefore appears to be a more sophisticated device that allows the conversation to develop and continue. Other researchers describe this phenomenon as being "inefficient, immature, or even disordered" as Brinton and Fujiki (1984:356) mention in their work. The current study, however, shows that embedded subsequences contributed to topic maintenance and extended the "life" of the topic in a creative and natural manner. Both the father and the mother in this study introduced almost the same number of novel embedded subsequences, i.e. shaded topics. The child, however, introduced almost double the number of such subsequences in the father-child conversation. It may be that the slower pace of this conversation and the fewer talk acts produced by the father provided the opportunity for the child to manipulate the topics in a more sophisticated manner.

The mother-initiated topics relating to the child's welfare, i.e. *Bedtime* (Mother: *What time did you go to bed last night, Arthur?*), *Breakfast* (Mother: *Did you have breakfast today?*), *Medicine* (Mother: *Did you take your medicine this morning, Arthur?*), and the absence of such father-initiated topics may demonstrate the different roles the mother and father play in the child's life. Their different roles encourage both different types of speech and a different kind of interaction between the two. This notion is also supported by McLaughlin et al. (1983) in their study of similarities and differences in mothers' and fathers' speech with their young children. In it they propose the *Differential Experience Hypothesis* according to which the different types of linguistic input mothers and fathers expose their child to is related to the different roles each play in the social life of their child. The different but complementary experiences each parent offers their child may also explain the difference in the structure of the two conversations sampled in this study.

Although content was not directly focused on in this study, it should be noted that the two conversations also differed in this respect. Supporting Martlew's (1980:335) findings , the mother in this study produced more redundant utterances which did not contribute to the maintenance of the topic itself but served as praise for the child. She also produced many more repetitions of utterances serving as acknowledgement and an expression of interest in the conversation than did the father (see also McCormick1994b:1357, reported by Hudson 1996:142). This is reflected in the greater number of talk acts the mother produced in comparison with the father.

5. Conclusions

The main findings of this study are that the conversations between the father-child and mother-child dyads in this study differed structurally. The child initiated more main topic sequences and embedded subsequences in the father-child conversation than in the mother-child conversation, thus contributing greatly to topic maintenance and the development of the conversation and displaying greater control of the conversation than in the mother-child dyad. This probably reflects the child's response to his interlocutor's conversational style. The father-child conversation was found to be more complex with regard to structure as it contained a greater number of embedded subsequences in more topics although there were seven fewer topics overall in the father-child sample than in the mother-child sample. Furthermore, the father-child conversation displayed greater cohesion than the mother-child conversation as topics were developed, both with and without embedded subsequences, and terminated with the introduction of a new topic.

The mother-child conversation, on the other hand, drifted back to topics which may otherwise have been considered closed, as a number of new main sequences and embedded subsequences had intervened. One topic was clearly dominant in this dyad but nevertheless the mother produced four times more talk acts than the child even in this topic. There was also a difference with regard to topics directly related to the child's daily needs. The father did not initiate any such topics whereas the mother initiated three. The differences observed in the conversations can be attributed to a number of factors also reported in other research. These factors relate to speaker style, gender-based linguistic differences and, finally, parental role.

The current study has served as a pilot study investigating structural differences in father-child and mother-child conversations. It would be of interest to expand this research and examine a larger sample of father-child and mother-child dyads to determine whether the trends observed in this research can also be identified in a larger sample. Further research could also examine the role each parent plays in the child's life more closely and how this affects their communication. In addition, further research could take into account the total amount of time spent with the child on a regular basis to determine the extent to which this variable affects the structure of conversations between father-child dyads and mother-child dyads.

Notes

1. All subjects are bilingual in English and Greek. The mother is a native Greek speaker and the father is a native English speaker while the child has acquired these languages simultaneously. English is the primary language spoken in the home.

2. The chat symbols and conventions can be found in the CHILDES manual pp 131-5 at www.childes.psy.cmu.edu/manuals/CHAT.pdf (last accessed November, 2002).

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