DOCUMENT RESUME

ED 263 979 PS 015 406

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TITLE The Influence of the Ages of the Child-Addressee and of One's Own Child on Motherese.
PUB DATE Jul 85
NOTE 21p.; Paper presented at the Biennial Meeting of the International Society for the Study of Behavioural Development (8th, Tours, France, July 6-10, 1985).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Age Differences; Child Language; Foreign Countries; Infants; *Mothers; Oral Language; *Parent Child Relationship; Toddlers; *Verbal Communication; *Young Children
IDENTIFIERS *Italy

ABSTRACT

This study investigated the influence of the speaker's experience and addressee's developmental level on baby talk characteristics. A total of 240 mothers of only child infants (1-18 months) or of children 2-3 years old responded to an Infant or Child Series of drawings with an attached list of sentences. Subjects described situations in drawings, associated drawings with "most natural" sentence, and indicated age of baby in drawing. Results indicated that 1) some general characteristics of baby talk are modified according to the addressee's developmental level; 2) mothers with differing experiential levels choose different topics for talk; 3) the rule "closeness to context" works independently of addressee's developmental level and mother's experiential level; and 4) attribution of meaning to specific situations is based on different elements grasped and given different valencies on the basis of addressee's developmental level and mother's experiential level. Preliminary evidence for the hypothesis that different representations of children, social partner's role, and the situation as a whole are responsible for different "context readings" is shown by the presence of partially different intentions and types of speech acts in experimental groups. Appendices include the Infant and Child Series of drawings, the basic list of sentences, and several figures. (BB)

THE INFLUENCE OF THE AGES OF THE CHILD-ADDRESSEE AND OF ONE'S OWN CHILD ON MOTHERESE

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Presented at the Eighth Biennal Meetings of the International Society for the Study of Behavioural Development, July 6-10, 1985, Tours, France.

INTRODUCTION

In previous studies we hypothesized that Baby Talk (BT henceforth), like many other kinds of discourse, is governed by some very general rules like "to behave so as to be understood" or the maxims specifying Grice's Cooperative Principle. On the other hand, we also thought that these rules must be specifically adaptated to the particular asymmetric interaction between an adult and a child (i.e., a prelinguistic baby or a child in the first language learning phases). With respect to these specific adaptations, one of the fundamental features of mother-infant interaction is the tendency to stabilize a topic formed of some kind of joint activity (Bruner, 1975). It may thus be hypothesized that there is a special link between what is said and what is done. Firstly, we verified this hypothesis as regards mother-infant interaction: content and syntactic type vary in strict relationship with the micro-analytically defined context both in natural and in experimental situations (D'Odorico & Franco, 1985). Secondly, we investigated the influence of experience and of habitual role on the working of the "closeness to context" rule identified in the first study. We verified that both mothers and fathers, and women and men without children all follow the rule, but in the same situation different types of speaker may perform different speech acts deriving from different "readings" of the situation and expectancies (Franco & D'Odorico, 1985).

The aim of the present study is to investigate, on one hand, specifically the influence of the speaker's experience, and, on the other, the influence of the addressee's level of development on BT characteristics.

Phase 1

METHOD We prepared two series of drawings (20 x 30 cm.) showing a mother and a child playing with a toy. The drawings represented 4 of the most significant situations identified in our previous work (D'Odorico & Franco, 1985). The two series differ with regard to the age characterization of the child: in the Infant Series the child was a baby in the first year of life; in the Child Series he was a child of about 3 years (see Appendix 1). In both series, two drawings were prepared for each context, differing only as regards the toy shown in them. A portfolio containing the drawings and a list of sentences attached to each was also prepared. The list contained 30 sentences carrying 6 different contents, each expressed in 5 syntactic types (the same list as in our previous experiment; see Appendix 2). Two hundred and forty middle-class women with children participated in the experiment without remuneration; we composed four experimental groups with 60 subjects in each of them:

MI-I Mothers whose only child was an Infant aged 1-18 months, examining the Infant Series;

MI-C Mothers whose only child was an Infant, examining the Child Series;

MC-I Mothers whose child was aged 2-3 years, examining the Infant Series;

MC-C Mothers whose child was aged 2-3 years, examining the Child Series.

Each group was further divided into 4 sub-groups of 15 subjects; each sub-group was given a portfolio containing the two drawings showing one of the four contexts (target) plus three other drawings (distractors). The order of drawings and sentences in the list was randomized.

Subjects were examined individually and were not aware of the aim of our research. They were asked:

a) to describe the situation represented in the drawings by choosing one of 4 alternative descriptions of context (these were the same as those used in Appendix 1);

b) to associate each drawing with the sentence they believed to be the most natural in that specific situation;

c) to indicate the approximate age of the baby in the drawings.

As regards data analysis, we only considered responses associated with correct interpretation of drawings; subjects' responses were considered separately for content and syntactc type, 1 point being attributed to each choice of content (or syntactic type) every time the subject chose it in a given context. Content or syntactic type choices associated with misinterpretation of context were scored 0. Because subjects saw the same context twice, content or syntactic type score in each context could range from 0 to 2.

RESULTS After square root transformation data were submitted to two 4-way ANOVAs in order to analyse the influence of a) own child's age (Infant, Child), b) age of represented addressee (Infant, Child), and c) context (Presentation, Manipulation, Distraction, Mutual Visual Regard) on content and syntax variables qualifying subjects' responses. Designs were:
content analysis A(2)xB(2)xC(4)xD(6)
syntax analysis A(2)xB(2)xC(4)xD(5).
In both analyses A, B, and C were independent factors, and D was a repeated measures factor. Results are summarized in Tab.1.

In this new sample of subjects too we found a strong relationship between context and both content and syntactic type. We may conclude that "closeness to context" is a general rule working in verbal interaction with young children. But some differences emerge between our groups; we will only comment on those relevant with to our general hypothesis.

As regards content choices, the interactions of factors Age/Content (.02) and Age/Addressee/Content (although not fully significant, .07) indicate some influence both of own child's age and addressee's age on the preferential choice of some specific contents without considering context. It appears that the content choices, differentiated with respect to contex, are independent both of own child's and addressee's ages. As regards syntactical choices, the most interesting interactions are not fully significant (Addressee/Syntax= .10; Addressee/Context/Syntax= .07; Age/Addressee/Contex' 'Syntax= .07), but they suggest the presence of a certain degree of influence on own child's and addressee's ages, even on syntactical choices in relation to context. If we look at the means presented in Fig.1A (content analysis) and Fig.1B (syntax analysis), we observe that in some cases there is, for example, a clear relationship between syntactical choices and addressee's age in a given context, without any apparent relationship with own child's age (Presentation: very high means in

Wh-Questions when the addressee is Child, but not when he is Infant). But in other cases a more complicated differentiation appears; for example, content means in Mutual Visual Regard follow four different patterns, in which those of MI-I and MC-I are similar but those of MI-C and MC-C are not. This and analogous observations suggest that both own child's and addressee's ages in some subtle way affect what is "felt" as the best thing to say in a given situation. ANOVA results give us a general picture about the main relationships present in our data, but analysis of variance designs force us to make distinctions (or groupings) of variables which are probably not sensitive enough to account for subtle differentiations.

Phase 2

METHOD AND RESULTS Phase 1 results appear to account for the consistencies observed across our experimental groups (e.g., a tendency to modify the syntactic realization of meaning in its relationship to context according to addressee's age), but they also suggest carrying out a more qualitative analysis in order to understand the roots of the subtle differentiations found in our data. Our hypothesis is that mothers with different levels of experience may attribute different meanings, and/or different values, to the same features qualifying interactional context; analogously, it is reasonable to suppose that the addressee's characteristics (motor, cognitive, linguistic, social capacities) contribute to this process of "attributing meaning" to the various objective features defining a given situation (e.g., those defining our four contexts). If contextual features are important determinants of what is said in a given situation, it is fundamental to know whether they are coded in the same way by our different experimental groups.

In order to investigate this point, we tried to extract the meaning attributed by the four experimental groups to the different contexts on the basis of the distribution of the thirty sentences. For each group we had a 4 (variables: contexts) x 30 (items: sentences) matrix, which we submitted to an Analysis of Correspondences (Benzecri, 1976). Fig.2 summarizes the most general findings based on the factorial structure;

Although the main factors are quite similar across groups, they identified different hierarchies and are composed of different elements. This means that the same elements, belonging to different factors, are differently

interpreted as regards their meaning or importance. For example, the Manipulation context is objectively defined by infant/child manipulatory activity on the toy while the adult is inactive; however, the important feature is

for MI-I: infant acts on object (opposed to situations in which he acts on adult, like Mutual Visual Regard);
for MC-I: infant is the protagonist (opposed to situations in which the protagonist is the adult, like Presentation);
for MI-C: (the same as MC-I);
for MC-C: child is involved in playing with the toy (vs. he is not, MVR) and he is the protagonist (vs. adult protagonist, P). And so on.

What does paying attention to different dimensions, or interpreting them according to different nuances, imply? We think that both everyday experience and knowledge about "what a child/infant is" contribute to form partially different representations of the addressee, of the interactional partner's role, and of the situation as a whole. One of the most important consequences, at least at a linguistic-interactional level, of having different representations is, plausibly, to display different intentions linked to different expectancies.

In the literature on Baby Talk, we find several implicit references to the speech act model because of the possibility it gives us inferring some standard-defined intentions from language. But, differently from the speech act model, very often the mood of the verb has been taken as a direct indicator of the sentence's illocutionary force, so that two sentences like "take the puppet out" and "do you want to take the puppet out?" are generally distinguished as carrying two different intentions. Otherwise, according to the speech act model, it is only on the basis of the combination of both verb mood and contextual characteristics of the situation in which a sentence is spoken that we can infer its illocutionary force. So, according to the context, the two above sentences may merely have a different canonicality degree but convey the same intention (to direct, in a direct or indirect way, the partner's activity).

In the next section we will try to demonstrate that both levels of experience considered (everyday and stored knowledge), leading to different "readings" of the situation, specifically influence the speech act level. We predict that, as regards the addressee's age, there will be: a) some differences involving intentions

relative to a specifically linguistic interaction (e.g., children are asked more questions than infants are), and b) a different level of canonicality. As regards the influence of own child's age, we predict an interaction with the addressee's characterization in determining the type of speech act, so that in some cases speech acts performed, e.g., by MI-Cs are different from both MI-Is and MC-Cs.

We re-analysed the sentences of our list so as to classify them in terms of speech acts. The speech act categories used were: Assertive (Canonical and Non-Canonical), Directive (Canonical and Indirect), Request, and Call for Attention (sentences like "Look at the pretty little box" said when the baby is already looking at the toy, so that they are neither pure directives nor pure comments). In order to have a general picture, we selected two main dimensions qualifying a speech act: directivity (a speech act may convey a more or less directive intention or it may not convey it at all) and canonicality (the linguisitc coding may be more or less canonical with respect to syntactical devices). We scored each speech act according to both dimensions in the following way:
Directivity score Canonical Directive, 4; Indirect Directive, 3; Call for Attention, 2; Non-Canonical Assertive and Request, 1; Canonical Assertive, 0.
Canonicality score Canonical Assertive, Canonical Directive and Request, 2; Call for Attention, 1; Non-Canonical Assertive and Indirect Directive, 0.

In this way we calculate the mean score for each group (total score divided by number of speech acts performed by the group).

Fig.3 shows the mean directivity and canonicality scores for all groups; we observe an increase in both scores when the addressee is a Child (so that our prediction on canonicality is verified). It is interesting to observe the particular behaviour of groups in which own child's and addressee's ages are non-coincident: as regards directivity, they generally have a lower score than coincident-age groups, while as regards canonicality they have a higher score.

The directivity score gives only a very approximate indication about intention; in order to have some more meaningful information we analysed the percentage of occurrence of the specific speech acts. As Tab.2 shows, both MIs and MCs perform more Assertives with Infant than with Child, but this difference is bigger for MCs. Analogously, both MIs and MCs perform more Requests with Child than with Infant (as we predicted), but the difference is bigger for

MIs. The highest percentage of Directives is performed by MCs with Child.

We think that these results, particularly those concerning canonicality, may be connected to baby language understanding and production level. That is, we think that mothers make their own language "easier and better" when children are really starting to understand and really learning to speak (cfr. Lord, 1975: mother's MLU decreases when child starts to produce first utterances).

Fig.4 shows the mean scores in the different contexts; it is quite clear that, besides some common general trends (e.g., high directivity score in Distraction), our groups behave in a different way within the same context. This indication may be clarified by observing the percentage of occurrence of specific speech acts in Fig.5. Again, these differences result partly from the influence of own child's age (there is a format "ready" to be used: e.g., MIs perform some Assertives in Distraction with both Is and Cs, while MCs do so only with Is) and partly from the influence of addressee's age (it appears that in some cases non-coincident group mothers, i.e. MI-Cs and MC-Is, behave according to a more "prototypical" format: e.g., although Manipulation context with Is is in any case characterized by many comments and few directives, MC-Is produce a greater number of Assertives and a smaller number of Directives and Calls than MI-Is).

We think that the different "intention landscapes" characterizing our four groups in the contexts may be linked to the specific representations of context highlighted by the Analysis of Correspondences. Let us compare MI-Is and MC-Is in the Manipulation context. MI-Is identify this context only at the level of the third factor as a context in which the baby acts on the object (as opposed to situations in which he acts on the partner) (cfr.Fig.2). Although comments are prevalent, it is easy to understand the presence of both Directives and Calls for Attention because of a possible attempt to suggest actions or to highlight functional properties of the object. Differently, for MC-Is Manipulation is identified at the first factor and only as a situation in which the protagonist is the baby (cfr. Fig.2). Because of the stress on the baby's autonomous activity, the adult merely comments on the baby's activity or, to a much lesser extent, asks questions, while the percentage of Calls for Attention decreases and Directives are completely lacking. Even more evident differences emerge from other contexts.

CONCLUSION

The most important points revealed by our results may be schematically summarized as follows:

1) some general characteristics of BT are modified according to the addressee's level of development; they mainly concern syntactic implementation;
2) mothers with different levels of experience tend to choose different topics to talk about;
3) the rule "closeness to context" works independently both of addressee's level of development and mother's level of experience, but
4) the attribution of meaning to specific situations is based on different elements that are grasped and given different valencies on the basis of both addressee's level of development and mother's level of experience;
5) we hypothesized that different representations of children, social partner's roles, and the situation as a whole are responsible for the different "context readings"; preliminary evidence on this point is shown by the presence of partially different intentions and types of speech acts in our experimental groups.

We think that our study raises an interesting issue: if mothers already interacting with 2/3 year-old children behave in a different way compared with "novice" mothers, it may be hypothesized that first-born and not first-born babies have different exeriences in interacting with their mothers during their development.

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FRANCO F. and D'ODORICO L. (1985) A pragmatic analysis of parent's speech to prelinguistic children. Paper to be presented at the International Pragmatics Conference, Viareggio, Sept. 1-8.

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Appendix 2

BASIC LIST OF SENTENCES

		SYNTAX	CONTENT
Questa e' una scatolina.	(This is a little box.)	Declarative	IDENTITY OF OBJECT
Guarda la scatolina.	(Look at the little box.)	Imperative	Sentences contain or elicit name of object
Ecco la scatolina!	(Here is the little box!)	Exclamatory	
E' una scatolina questa?	(Is this a little box?)	Y/N Interrogatives	
Che cosa e' questa?	(What is this?)	WH-Interrogative	
Questa scatolina e' bella.	(This little box is pretty.)	Declarative	QUALITY OF OBJECT
Guarda che bella scatolina.	(Look at the pretty little box)	Imperative	Sentences contain or elicit comments on qualitative aspects of object
Che carina questa scatolina!	(How pretty this little box is!)	Exclamatory	
E' bella questa scatolina?	(Is this little box pretty?)	Y/N Interrogative	
Com'e' la scatolina?	(What is the little box like?)	WH-Interrogative	
Dentro alla scatolina c'e' un pupazzo.	(There is a puppet inside the little box.)	Declarative	LOCATION OF OBJECT
Guarda il pupazzo dentro.	(Look at the puppet inside.)	Imperative	Sentences contain or elicit comments on spatial properties of object
C'è un pupazzo dentro!	(There is a puppet inside!)	Exclamatory	
C'è dentro un pupazzo?	(Is there a puppet inside?)	Y/N Interrogative	
Dov'è il pupazzo?	(Where is the puppet?)	WH-Interrogative	
La scatolina si apre.	(The little box can be opened.)	Declarative	FUNCTIONAL CORE OF OBJECT
Guarda che si apre.	(Look at it opening.)	Imperative	Sentences contain or elicit comments on dynamic or functional properties of object
Si apre questa scatolina!	(This little box can be opened!)	Exclamatory	
La scatolina si apre?	(Can the little box be opened?)	Y/N Interrogative	
Che cosa fa la scatolina?	(What can the little box do?)	WH-Interrogative	
Così fai venire fuori il pupazzo.	(That's the way to make the puppet come out.)	Declarative	ACTION OF OBJECT
Tira fuori il pupazzo.	(Take the puppet out.)	Imperative	Sentences contain or elicit comments on infant's activity
Lo tiri fuori proprio bene il pupazzo!	(How well you take the puppet out!)	Exclamatory	
Vuoi tirare fuori il pupazzo?	(Do you want to take the puppet out?)	Y/N Interrogative	
Che cosa fai?	(What are you doing?)	WH-Interrogative)	
Sei stanco.	(You are tired.)	Declarative	SOCIAL
Stai dritto.	(Sit up straight)	Imperative	Sentences contain or elicit comments on infant's state or wishes
Vuoi venire in braccio tu!	(So you want to be picked up!)	Exclamatory	
Sei stanco, vero?	(You're tired, aren't you?)	Y/N Interrogative	
Che cosa c'è, tesoro?	(What is it, darling?)	WH-Interrogative	

TABLE 2

	ASSERTIVE C	ASSERTIVE NC	CALL FOR ATTENTION	DIRECTIVE C	DIRECTIVE NC	REQUEST	?
MI-I	29.6	8.2	21.4	13.3	10.2	13.3	4
MI-C	22.3	4.7	23.5	12.9	8.2	28.2	
MC-I	31.5	10.1	23.6	12.4	9.0	13.5	
MC-C	16.8	4.0	24.7	12.9	15.8	22.8	3

? SENTENCES WITH NO CLEAR MEANING IN TERMS OF SPEECH ACT

(%)

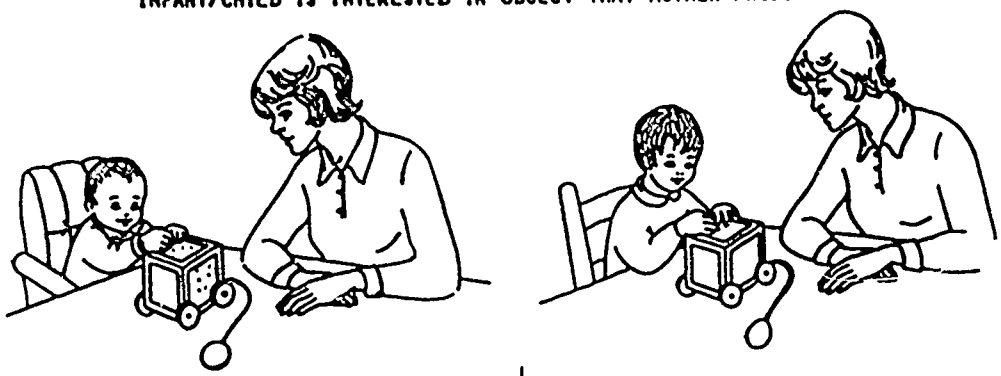
TABLE 1

	CONTENT ANALYSIS	SINTAX ANALYSIS
AGE		
ADDRESSEE		
AGE/ADDRESSEE	**	*
CONTEXT	***	***
AGE/CONTEXT		
ADDRESSEE/CONTEXT	*	*
AGE/ADDRESSEE/ CONTEXT	/*/	
CONTENT (OR SYNTAX)	***	***
AGE/CONTENT (OR SYNTAX)	*	
ADDRESSEE/CONTENT (OR SYNTAX)		/*/
AGE/ADDRESSEE/ CONTENT (OR SYNTAX)	/*/	
CONTEXT/CONTENT (OR SYNTAX)	***	**
AGE/CONTEXT/ CONTENT (OR SYNTAX)		
ADDRESSEE/CONTEXT/ CONTENT (OR SYNTAX)		/*/
AGE/ADDRESSEE/ CONTEXT/CONTENT (OR SYNTAX)		/*/

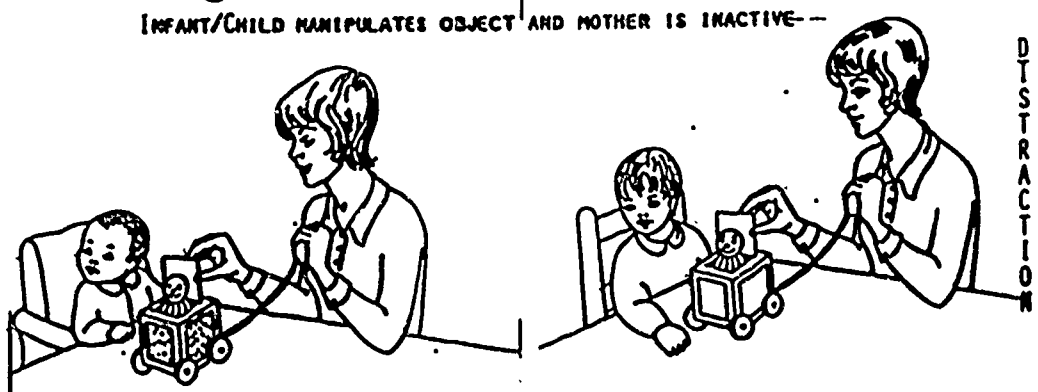
* $P < .05$; ** $P < .01$; *** $P < .001$ /*/ $P \leq .1$

Appendix I

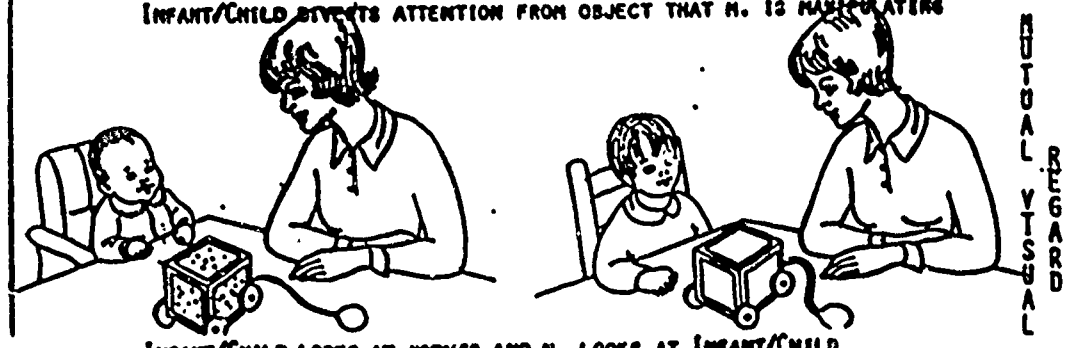
INFANT/CHILD IS INTERESTED IN OBJECT THAT MOTHER PRESENTS



INFANT/CHILD MANIPULATES OBJECT AND MOTHER IS INACTIVE--



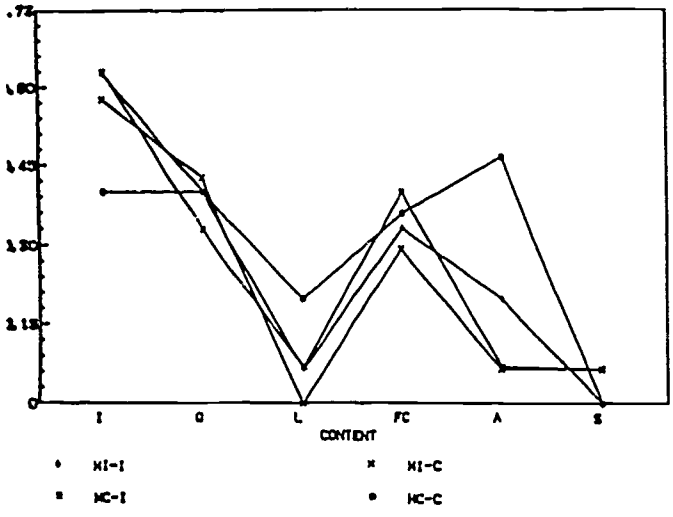
INFANT/CHILD DIVERTS ATTENTION FROM OBJECT THAT M. IS MANIPULATING



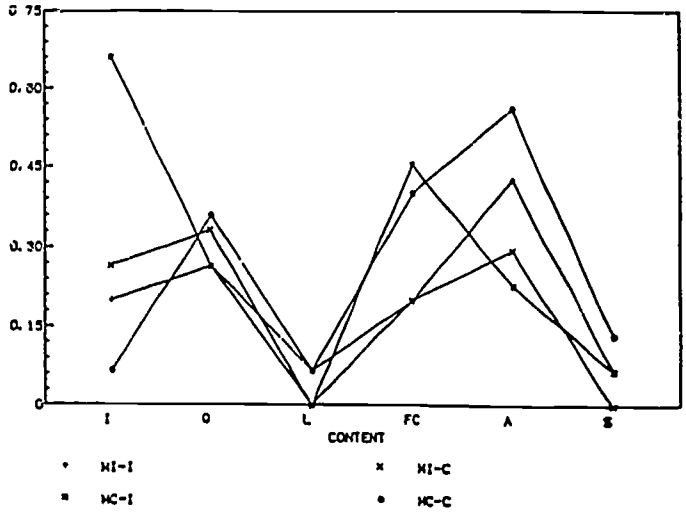
INFANT/CHILD LOOKS AT MOTHER AND M. LOOKS AT INFANT/CHILD

FIG. 1A

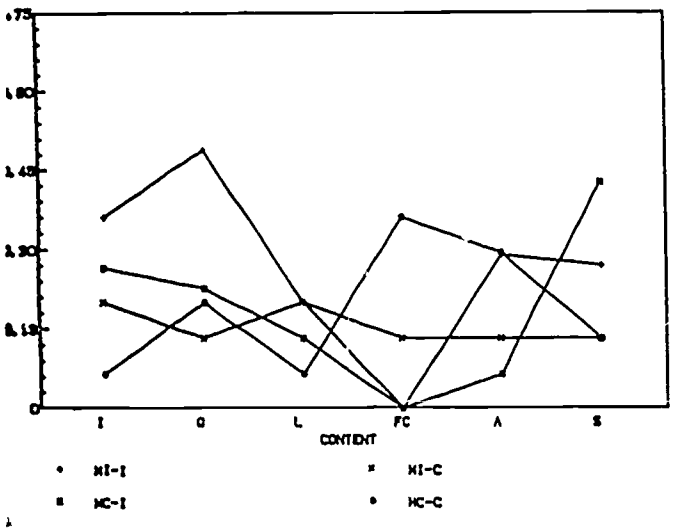
PRESENTATION



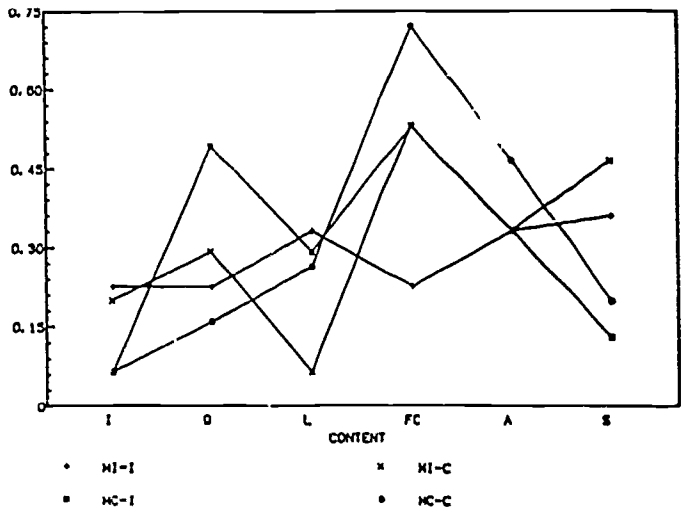
MANIPULATION



MUTUAL VISUAL REG.



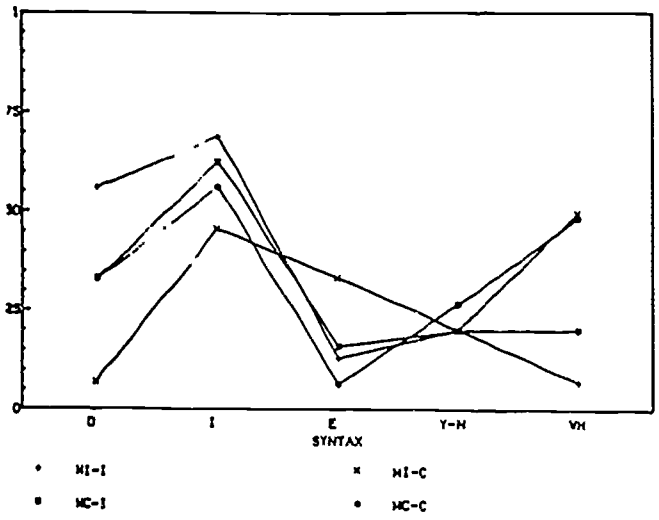
DISTRACTION



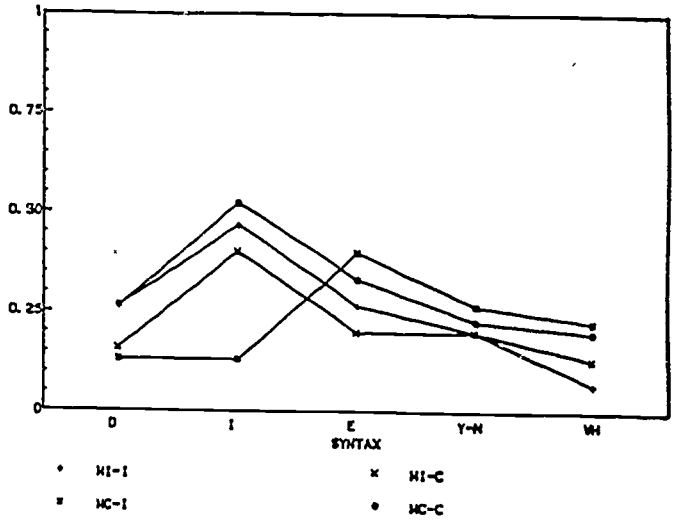
I Identity Q Quality L Location FC Functional Core A Action S Social

FIG.1B

PRESENTATION



MANIPULATION



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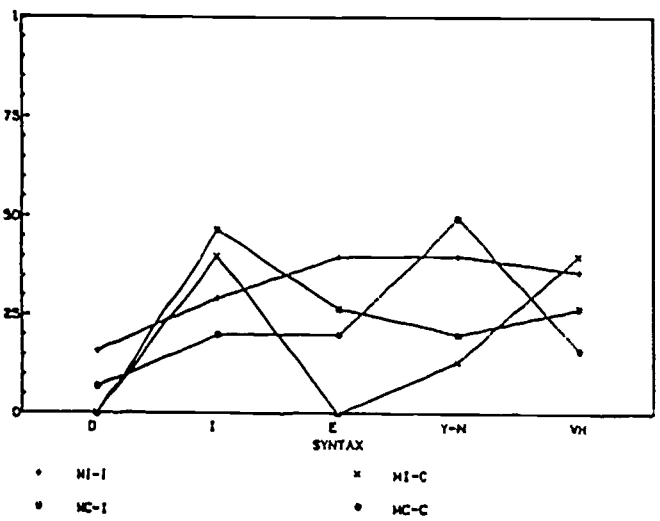
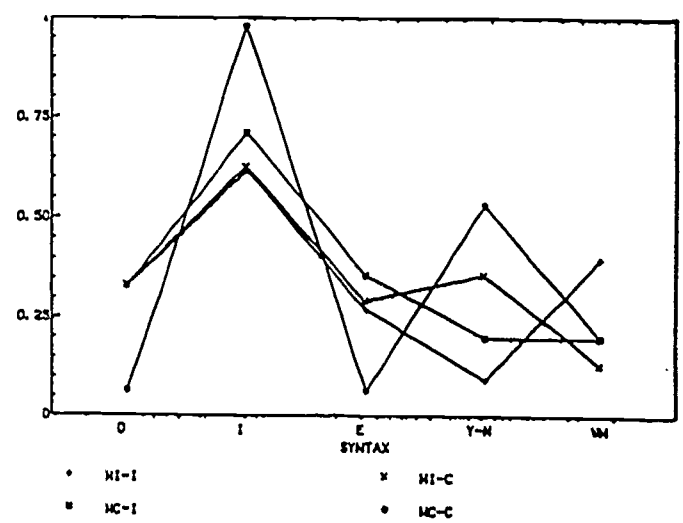


DISTRACTION



D Declarative I Imperative E Exclamatory Y-N Yes-No Interrogative WH WH-Interrogative

FIGURE 2

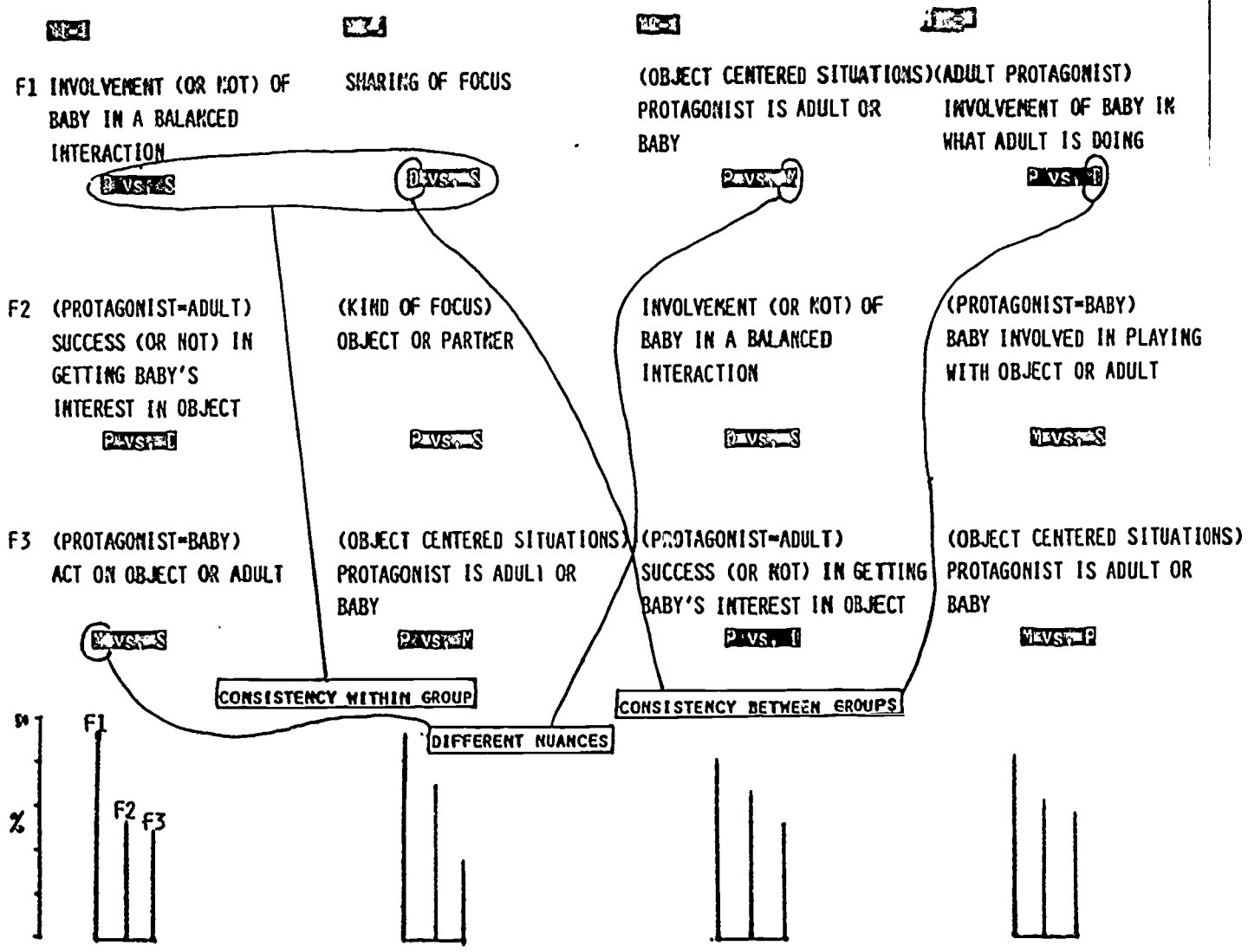


FIG. 3

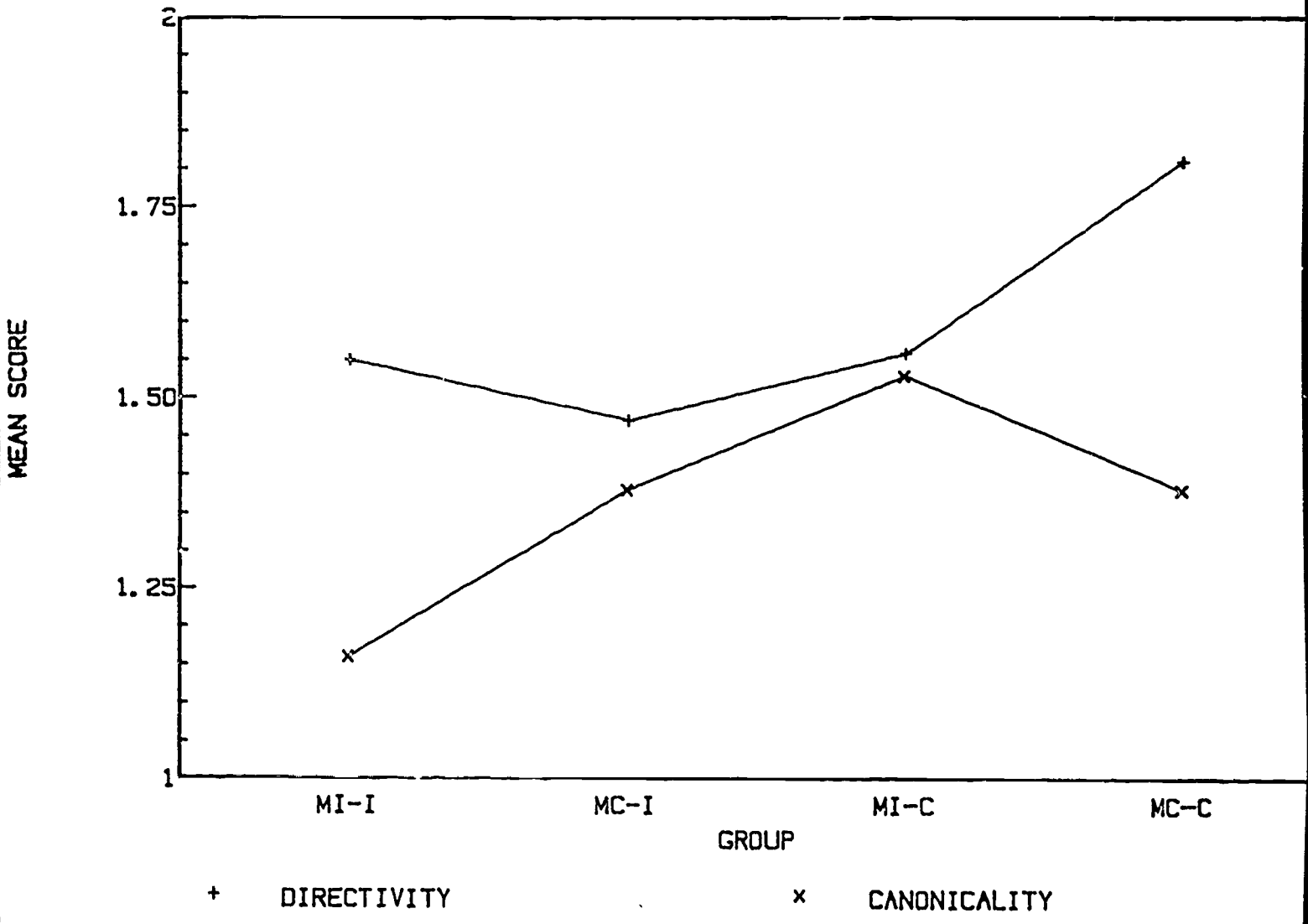

2
1.75
1.50
1.25
1
MEAN SCORE
MI-I
MC-I
MI-C
MC-C
GROUP
+ DIRECTIVITY
× CANONICALITY

FIG.4

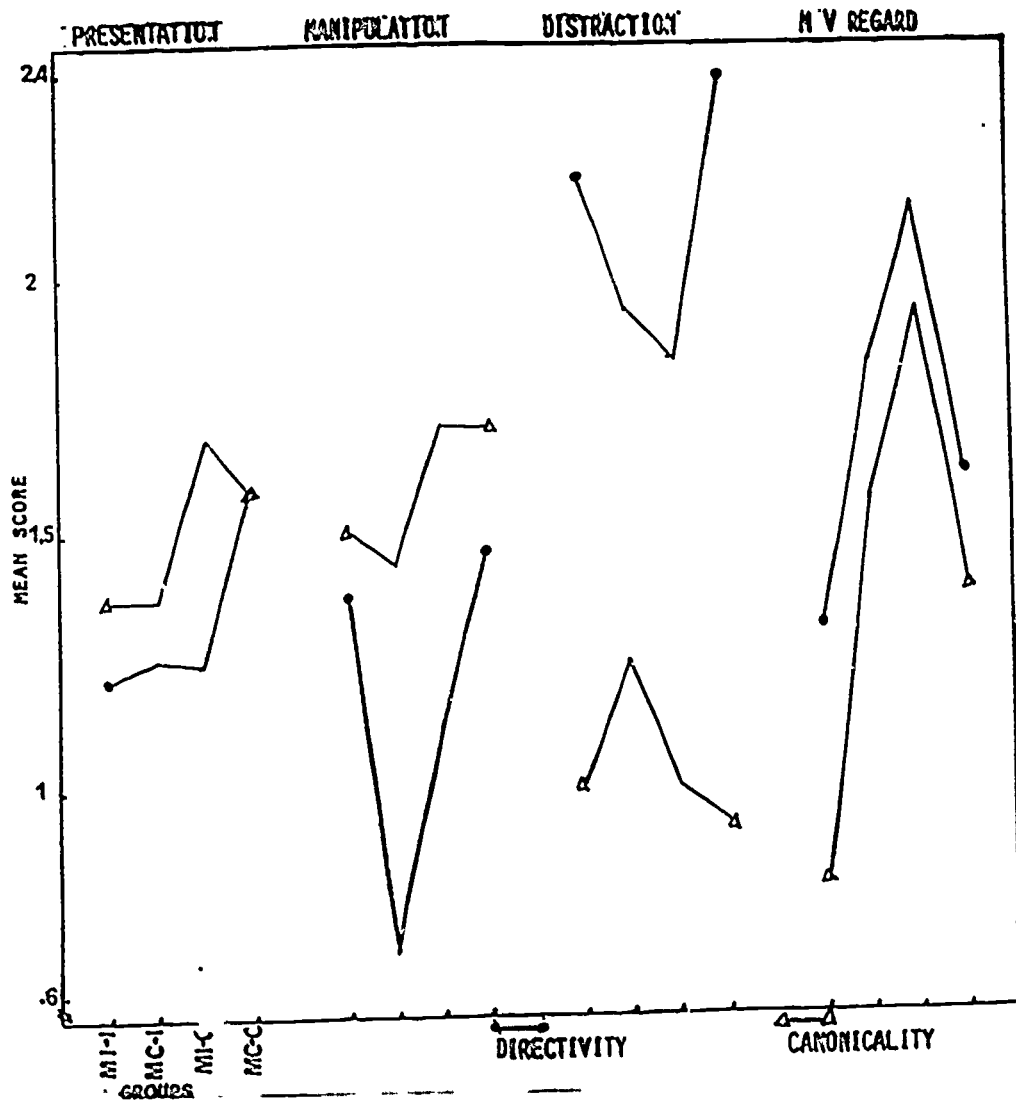
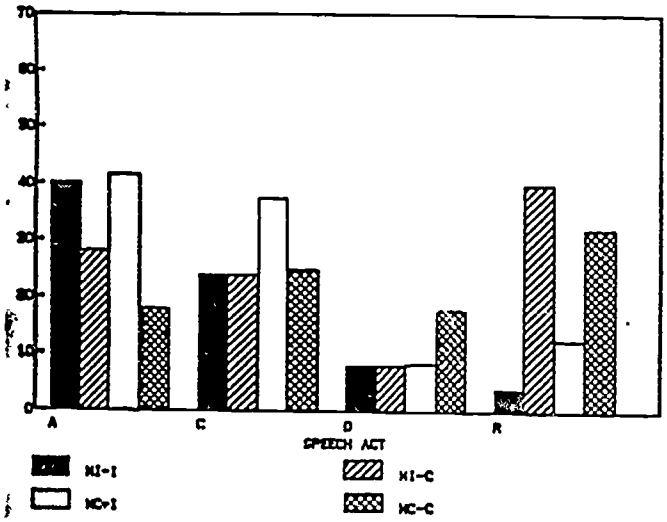
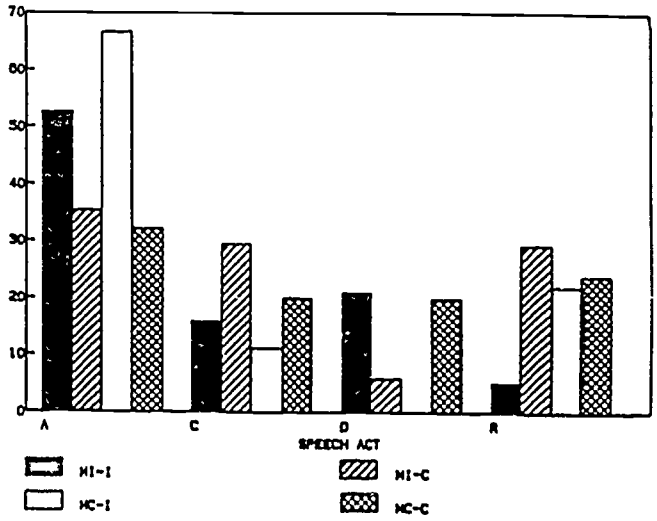

PRESENTATION
MANIPULATION
DISTRACTION
M V REGARD
2.4
2
1.5
1
.6
MEAN SCORE
MI-I
MC-I
MI-C
MC-C
GROUPS
DIRECTIVITY
CANONICALITY

FIG.3

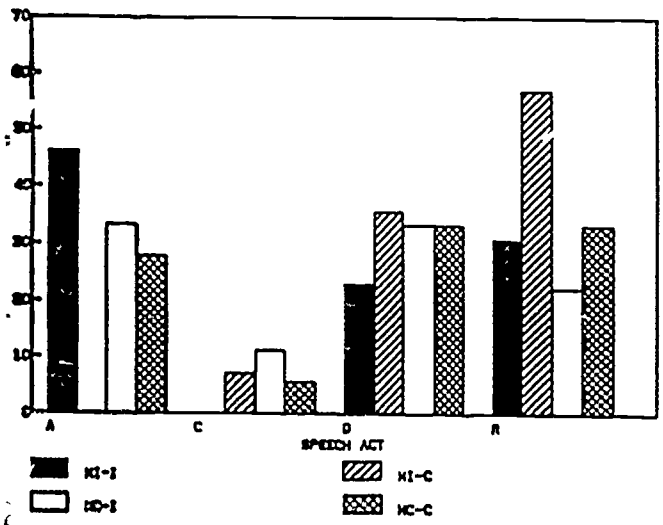
PRESENTATION



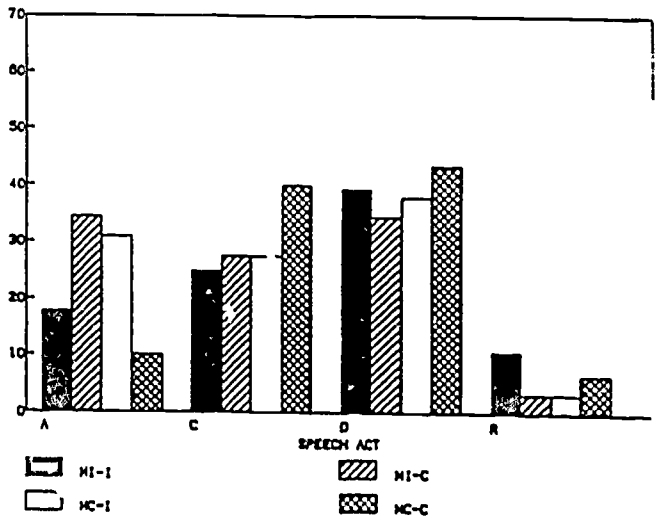
MANIPULATION



MUTUAL VISUAL REG.



DISTRACTION



A Assertive C Call for Attention D Directive R Request