

COMMUNICATING SPATIAL REFERENCE

Leonor Scliar-Cabral
Universidade Federal de Santa Catarina/CNPq, Brazil
Arceloni Volpatto
Universidade do Vale do Itajaí, Brazil

In this paper we will discuss how children free themselves from the immediate extralinguistic context to communicate spatial reference to an addressee. Emphasis will be put on deictic processes.

FROM DEMONSTRATIO AD OCULOS TO DEIXIS AMPHANTASMA

Bühler (1950) was the first scientist who developed a theory about deixis. He explained that language begins with the act of pointing to objects (*demonstratio ad oculos*) which are in the immediate surroundings (the field to which the speaker points to, or *Zeigfeld*). Gradually, it develops in the direction of symbolized forms: linguistic expressions acquire stability and autonomy and become self-referentiated (*Nennfunktion*). The same point of view is shared by Lyons (1975, p. 82): “Deixis is, in general, the source of reference”.

Pierce (1931-1935, p. 58), although he uses a different label (index), also makes clear the difference between deictics and self-referential words: “That a word cannot in strictness of speech be an index is evident from this, that a word is general – it occurs often, and every time it occurs, it is the same word and if it has any meaning as a word, it has the same meaning every time it occurs; while an index is essentially an affair of here and now, its office being to bring the thought to a particular experience, or series of experiences connected by dynamical relations. *A meaning* is the association of a word with images. An index has nothing to do with meaning, it has to bring the hearer to share the experience of the speaker by showing what he is talking about. The words *this* and *that* are indicative words, they apply to different things every time they occur”.

Another way of signalling the difference between deictics and self-referential words is the concept of reification which only the last group of words carries. D’Aquili (1972, p.10) defines “conceptualisation as the process by which the attributes of an object (including internal feelings) are reified, or by which a plurality of similar external objects are affirmed to be identical in some way and this identity is comprehended by a symbol”.

Fillmore in his lectures given in the Summer of 1971 defines deixis as “the manner in which the socio-spatial-temporal anchoring of a communicational act motivates the form, or provides material for the interpretation, of the utterance that manifests that act” (1982, p. 35).

In addition, Vernay (1974, p.53) points out that “Expressions which function inside the *Zeigfeld* always need accordingly the aid of an extra-linguistic support.”¹

ONTOGENETIC EMERGENCE OF DEICTICS

Among deictics, spatial ones are the first to emerge. Strictly speaking, they are not true deictics, since they emerge before persons of discourse are established: by definition, deictics must relate either to the 1st and/or 2nd persons of discourse.

Although Brown (1973, p. 171) reviewed the emergence of both “this” and “that” together in some children (for instance, Miller and Ervin’s and Bloom’s corpora) no child in the reviewed material showed a contrast between “here” and “there”. There is a discrepancy between the data mentioned here and those collected by Scliar-Cabral (1977), from the Brazilian child Pá (1;8,21): the child’s 1319 collected utterances showed neither the contrast between “here” and “there” nor between “this” and “that”: only nominations (Brown’s label, 1973, p. 170-2) that pointed towards objects near the child were used besides “here”.

Miller and Ervin’s and Bloom’s data must be reinterpreted, since the use of “that” opposed to “this” and the use of “there” presuppose the opposition between the 1st and 2nd persons of discourse and the knowledge of “shifting” (*embrayeurs* in French), which certainly children do not possess at this age. As Clark (1993) affirms, “children occasionally come up with complete mismatches to adult word-meanings”.

Shifting was for the first time examined by Jespersen (1922, p. 123): a “class of words which presents grave difficulty to children are those whose meaning differs according to the situation, so that the child hears them now applied to one thing and now to another”.

The intrinsic difficulty of using “shifters” goes along with cognitive and linguistic constraints to deal with space categories by children, since, according to Piaget and Inhelder (1947, p. 60), there is a lag between space representation and space perception, since mental representations are reversible, while concrete actions are irreversible.

In the present study we will not comment on the emergence of spatial categories dependent upon the notions of verticality and horizontality, because we are dealing more specifically with how children learns to control deixis and thus free themselves from dependence on contextual setting in order to communicate.

METHOD

Subjects

Three Brazilian subjects from 5;5,29 up to 8;0,8; from 5;0,17 up to 8;2,18 and from 5;10,7 up to 9;0,8 years old were interviewed for three years starting in 1994 when children began pre-school. All were monolingual native speakers of Brazilian Portuguese, belonging to the low social economic level with the exception of one child (MSEL) and attending the same public school, supervised by UNIVALI (a university on the city of Itajaí, in the coast of Santa Catarina).

Materials

For one setting, Mercer Meyer’s Frog story was used to elicit oral and written stories. In another setting a portable Motorola telephone was used.

Two other settings consisted of a factual narrative and spontaneous conversation. Interviews were recorded using a Panasonic RN – 104 and videotaped (firstly we used a Cannon 8mm and later a JVC/VHFC, for better resolution).

Procedure

Participants were interviewed in the presence of an interviewer, and the researcher and sometimes in the presence of their relatives, with the exception of the telephone setting, where there was another absent interviewer.

For the factual narrative, the elicitation sentence was: “How did you spend last weekend?” A specific elicitation sentence for eliciting the use of deixis was: “Where does your live?” Written material elicited from Frog story began to be collected only on October 1995, when the children had become more proficient in writing.

The corpora were transcribed using the CHAT and CLAN programs.

Main findings

We will exemplify our findings commenting on some samples extracted from the corpora. Since the purpose of the present study was to examine deixis, the following categories shown in Table 1. were settled:

TABLE 1. Categories of Deixis

| Meaning | Code |
|---------------------------------|------------------|
| Speaker | P ₁ |
| Addressee | P ₂ |
| Space | E |
| Time | T |
| Sharing E and/or T | C |
| Not sharing E and/or T | NC |
| Factual reference | A |
| Fictional reference | I |
| Prolocatives | L |
| Pointing to space (gestures) | G |
| Lexicalised space | Lx |
| Near the speaker | PP ₁ |
| Near the addressee | PP ₂ |
| Static | Et |
| Dynamic | Dn |
| Knowledge about space and time: | |
| by the speaker | C ₁ |
| by the addressee | C ₂ |
| by both | C ₁₊₂ |

*Ignoring the fact that the addressee
does not share the same space (P,NC)*

Example (1) shows that the child, while speaking on the phone, does not take into consideration the fact that the addressee does not share the same space. The use of the 1st personal pronoun, which would be effective at the face to face communication does not work:

Setting: Phone conversation

(1)
FILE: PAM003tf
AGE: 05;02,08
*CHI: Hello!
*ADU: Who is it?
*CHI: Me.²

Five months later, in Example (2) the same child improves her communication:

(2)
FILE PAM005tf
AGE: 05;07,11
*ADU: Who is it?
*CHI: Pamela.

*Ignoring the fact that the addressee
does not share the same spatial knowledge*

In the following example, the child shows adherence to the contextual setting and lacks the ability to communicate spatial experiences to someone who has not shared that experience:

Setting: Factual narrative

(3)
FILE GAB004pr
AGE: 05;10,23
*ADU: And where is the circus?
*CHI: It is here, nearby, you go over there, here and there, near the supermarket, very close to it.
%com: pointing in its direction.
(The addressee does not know which supermarket is the child referring to).

This is a typical example of *demonstratio ad oculos*, since the child is using prolocatives and gestures instead of self-referential words: he depends upon a here-and-now grammar (Bühler's sympractic grammar).

The same child does not show any improvement during the period in which we collected the samples (as can be seen in Example (4) when the child was 06;11,19 years old and example (5) when she was 08;06,04 years old):

(4)

FILE GAB009pr

AGE: 06;11,19

*ADU: Where is it?

*CHI: You go straight ahead; turn on over there at, over there, I don't want anymore.

(5)

FILE GAB018pr

AGE: 08;06,04

*ADU: Hum and where did she lived then?

*CHI: She lived over there at...hum

*ADU: Don't you remember anymore?

*CHI: Near the bus wash.

*ADU: Oh! Is it near the bus wash? And where is that, Gabriel?

*CHI: Hum?

*ADU: And this, where is it? Is this far?

*CHI: No.

*ADU: No. Is it near by? How do you get there, Gabriel?

*CHI: You go that way.

%com: Child points in front of him.

*ADU: Hum.

*CHI: Next you turn at... at the 2nd street.

*ADU: Hum.

*CHI: This one is the first and the second is over there.

%com: Child points in front of him.

Learning to communicate new spatial information

Examples (6) and (7) of oral fictitious narrative of the same story from the same child show her evolution in a period of almost four months, although in the second story there is still some dependence upon situational context deictics, namely the expression "like that". Observe that the first narrative begins with given information, *i. é*, with the anaphoric "he", without any previous reference, as if the child thought that the addressee already knew who it was. In addition, observe the use of prolocatives which do not allow the possibility of recovering spatial reference. It must be pointed out that when the eliciting stimulus is a picture or series of pictures, as in the case of Frog story, younger children tend to describe them, pointing to them, instead of telling a story, the characteristics of which require the linguistic reporting of the setting (Hymes' (1968) contextual function):

Setting: Oral fictitious narrative (*Frog Story*)

(6)

FILE PAM012fso

AGE: 06;11,13

*CHI: He was calling, then, he called: "Bratty frog!", "Bratty frog!"

Then, the deer picked him up, then he... too... (him) there and threw him here. He said: “Shhh” to the dog. Then he went there and saw... then he saw the first two. They took them to the little cabin.

(7)

FILE: PAM012fso

AGE: 07;02,27

CHI: Once upon a time, there were a boy, the dog and the frog. They were in the bedroom. Then the boy and the dog went to sleep. Then the frog went out from the little jar. Then the boy went searching, searching, searching and he didn't find (it). Then he went to hit the dog, the dog hit a bee hive, out came a bunch... a bunch of bee(s), then (they) almost got the dog and the boy, (they) almost got the boy too. Then (they) went to search in a stone... I don't know, yeah, well... how it is, the deer, yeah, and he got them by their legs... and (he) threw the two dog(s) in the lake. Then the boy said like that: “Pst, I hear a frog's noise, then he said like that. Then he said like this. Then (he) did like this. Then he saw a bunch of small frog(s), then the bratty frog gave (him) a little frog, and he, and they lived happily ever after.

The third sample of the same story told by the same subject shows other developments, namely: title, proper names given to characters, characters' direct speech, internal mental states and planning, specific words and, for the purpose of this study, lexicalisation of space and time, instead of using deictics, in such a way that reference may be recovered by an absent addressee:

(8)

FILE: PAM018fso

AGE: 07;11,27

CHI: The frog and the boy

Once upon a time, the... the three... the three little pets and the boy were in the bedroom observing a frog that (he) had found. They... they continued observing until mid-night, then the boy went to sleep, then the frog didn't like to stay inside... inside the little jar, so he decided to get out and when the boy yeah got up he saw that the little frog go out and he became quite scared. He searched through the window, searched, searched, searched and did not find (him). Then his little dog fell down with the pot on his head. He got very angry with his little dog. So he asked his little dog to look over there... look for yeah his little frog with him. And he called called through the forest and he did not find (it). He looked in a little hole, looked and didn't find (it). He called, called and guess who showed up? A squirrel. The squirrel bit the boy's little nose and the nosy dog wanted to eat the... wanted to catch the bees. The boy called, called, called, called, his little frog Raphael and he did not find (him). His... his dog continued yes, his dog dropped the hive, hive. Then his... his very nosy dog yeah messed up the bees and the bees almost got him. The boy fell down from the tree, Mrs. Owl showed up and he climbed a stone to see if he could find his little frog Raphael. He called, he called, he called, then, Mrs... the owl said: “Yes, Mr. Raphael, yes Mr., yes Mr. André, You don't need to call your friend, only look for (him). Then he climbed the stone and he hung from a branch. He thought it was a brunch, but right afterwards he perceived that it was a deer. He and his dog fell under the water.

*ADU: uau!

*CHI: But he did not regret (it). He heard a little frog noise. He said to the dog: “Pst, pst” (%com: signaling with his finger over lips)). Then he look around and hung from a branch and he saw two tiny frogs: “How beautiful!” Right, then he wants the tiny frog that had run away. He had already made a bunch of... of... of tiny frogs. So they decided to give him a tiny frog as a gift and the lived happily ever after.

CONCLUSIONS

In this paper our aim was to explain why due to cognitive and linguistic constraints younger children are unable to hypothesize the point of view of an addressee, who shares neither the same space of reference nor spatial experience. So they use the prolocatives “here”, “there” and “over there” as if communicating face to face or as if the addressee already knew the places referred to: they are still dependent upon what Bühler (1965, p. 51) called a sympractic grammar and need to point to objects which they are talking about.

Note

¹ “Les expressions fonctionnant à l’intérieur du champ monstratif ont donc toujours besoin d’un apport indicatif extra-linguistique.”

² During the *CLRF on Space in Language*, H. H. Clark argued that “Me” is a possible expected answer adults normally give to a phone question “Who is it?”. We counter-argued explaining that this answer would pragmatically fulfill a felicitous condition only if the interlocutors could identify their respective voice qualities, being the last ones paralinguistic cues.

References

- BROWN, R. (1973) . *A first language. The early stages*. Cambridge, Mass.: Harvard University Press.
- BÜHLER, K. (1950) . *Teoría del lenguaje* [Language theory]. Madrid: Revista del Occidente.
- CLARK, E. (1993) . *The lexicon in acquisition*. Cambridge: Cambridge Univ. Press.
- D’AQUILI, E.G. (1972) . The biopsychological determinants of culture. *An Addison-Wesley module in anthropology*. Reading, Mass. : Addison-Wesley, Serial No. 13.

- FILLMORE, C. (1982) .Towards a descriptive framework for spatial deixis,
In Jarvella, R. & Klein, W. (Eds.) *Speech, place and action. Studies in
deixis and related topics*. New York : John Willey & Sons.
- HYMES, D. (1968) . The ethnography of speaking. In Fishman J. (Ed.)
Readings in the sociology of language. The Hague : Mouton.
- JESPERSEN, O. (1922) *Language, its nature, development and origin*,
London: Georges Allen & Unwin,.
- LYONS, J. (1975) . Deixis as a source of reference. In Keenan, E. (Ed.)
Formal semantics and natural language . Cambridge : Cambridge
Univ. Press.
- PIAGET, J. & Inhelder, B. (1947). *La représentation de l'espace chez
l'enfant* [The child's representation of space]. Paris: PUF .
- PIERCE, C. S. (1931-1935) . *Collected papers*. Boston: Belknap, Harvard
Univ. Press.
- SCLIAR-CABRAL, L. (1977) . *A explanação lingüística em gramáticas
emergentes* [Linguistic explanation of emergent grammars].
Unpublished doctoral dissertation. Universidade de São Paulo, Brazil.
- VERNAY, H. (1974). *Essai sur l'organization de l'espace par divers
systèmes linguistiques* [Essay on different language systems
organization of space]. München: Wilhelm Fink Verlag.