

The Development of Communicative Background: Nonverbal Interactions and Speech Acts

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Abstract

Developmental psychologists working on communication often consider that the concept of speech act is suitable to explain the transition from preverbal to verbal communication in children. In this paper I intend to show that this concept, which is useful to classify different illocutionary forces, is not fit to be used within a cognitive theory of communicative development.

Theoretical Framework

Cognitive psychologists working on the development of communication have often shown a remarkable interest for the concept of speech act (Dore, 1974; Bates, Camaioni & Volterra, 1975; Bruner, 1975, 1983; Ninio & Snow, 1996; Snow et al., 1996). The reason for the success of this concept among developmental psychologists is that it is thought to be suitable to explain the transition from preverbal to verbal communication in children.

According to speech act theory (Austin, 1962; Searle, 1969) at the basis of communication there are illocutionary acts. Illocutionary acts are primitive acts where the conventional aspect deriving from language and the cognitive aspect expressed by communicative intentions conflate in a single phenomenon.

The main tenet of developmental psychologists working on communication is that language cannot be reduced to grammar. Even if one accepts the Chomskyan point of view on the acquisition of grammar, one has still to explain how children learn to use language for their communicative goals. The interest of speech acts is then precisely that they include linguistic and communicative features. During the preverbal phase children in their interactions with adults receive "speech act lessons" (Bruner, 1983).

Developmental psychologists who make use of the concept of speech act are not much concerned with all the problematic aspects of this concept which have caused an intense debate in the domain of pragmatics (Levinson, 1983). This, in spite of the fact that the difficulties appear most clearly precisely in the developmental domain: in particular the treatment of indirect speech acts and the relation between speech acts and conversation.

Another important problem is represented by the fact that the acquisition of different speech acts requires different representational capacities (Astington, 1988). Camaioni (1993) has maintained that studies on nonhuman primates and autistic children show that even the interpretation of

proto-imperatives and proto-declaratives¹, the two most basic speech acts, is based on different processes.

I will argue that the concept of speech act is not fit to be included into a cognitive theory of the development of communication for at least three reasons:

- it is a linguistic concept and cannot account for nonlinguistic communication
- it does not allow to give account of the main feature of communication which is sharedness
- it does not allow to distinguish between behavioral and conversational aspects of communication.

Speech Acts and Developmental Pragmatics

Speech acts, according to Searle (1969) are acts characteristically performed by uttering expressions in accordance with sets of constitutive rules. This point has been criticized in AI literature (Cohen and Levesque, 1990; Perrault, 1990). The main argument of these authors is that illocution can be derived from more basic acts. This is motivated by the fact that if felicity conditions are clustered together in an apparently arbitrary way, on the contrary, it is possible to show that such conditions are not independent of each other, but are logically related through general principles of rational action. Moreover, there is no easy way of assigning an illocutionary force to an utterance; therefore, the recognition of an illocutionary act is a very complex task.

Within the field of pragmatics it has been claimed that speech act theory, being a way to analyze and classify illocutionary forces and how they are attached to determined linguistic expressions cannot be regarded as a pragmatic theory (Dascal, 1992). The position has then emerged that the interpretation of speech acts demands their inclusion within a Gricean theory of intentional communication. Searle had granted this for indirect speech acts. However, if speech acts have to be interpreted not in isolation but within conversation, the analysis of communicative intentions is always required (Airenti, Bara & Colombetti, 1993).

Actually, in recent work on the acquisition of speech acts the insufficiency of analysis at the speech act level has been acknowledged. Papafragou (2000) has argued that speech act theory cannot be the basis of a plausible account of developmental data. Ninio and Snow (1996) consider that

¹ There is here a problem of terminology. Declaratives can be assimilated to those acts that in Searle's taxonomy are called representatives.

what is in common between preverbal communication and verbal communication is at the level of social interactions where interpersonal intentions are socially constructed. Snow et al. (1996) in their study on children of 14, 20, 32 months identify and codify communicative intents at two levels: verbal interchange and utterance. The first is a conversational criterion which goes beyond single speech acts: for instance, directing hearer's attention, negotiating immediate activity, discussing joint focus. Their results are in a way surprising: at 14 months no speech act was used by more than a third of children. The 14-month-olds tried to communicate with their parents relatively infrequently, even when gestures and nonverbal vocalization were included. The authors contend that it was only by introducing the distinction between social/communicative activity or context and the specific speech act expressed that the continuity between children's early and later communicative behavior was observable.

These points of view are opposed to the classical one expressed by Dore (1978) who relying on the definition of speech act given within Searle's theory where a linguistic component is included, does not accept the equation between nonverbal communicative acts and proper illocutionary acts. Dore thinks that there is discontinuity between preverbal communication based on gestures, intonation, etc. and linguistic communication.

So in developmental research we remain with three positions. One uses the concept of speech act to postulate continuity between preverbal and verbal communication using a concept of speech act which ignores all the problems that the concept involves, including the fact that a speech act is by definition speech. A second position, takes the definition of speech act in a serious way and denies the possibility of nonverbal speech acts. So it postulates a discontinuity between preverbal and verbal communication. A third position takes the concept of speech act but it includes speech acts within the context of social interactions.

My perspective is that there is no reason to consider this concept at the basis of the development of pragmatics. An alternative approach can be proposed. This approach aims to identify a continuity in the interpretation of the speaker's meaning both in the preverbal phase and in the different stages of the verbal phase.

Nonverbal and Verbal Speech Acts

Speech acts have been introduced to account for the action component of language. Is it reasonable to extend a linguistic concept to nonverbal communication? What is a speech act without speech? According to Searle a speech act is defined by its constitutive rules. These are what, following Bruner, a child acquires before language. But these rules define what a speech act should ideally be. To take the example of a request, we cannot ask for something if we know that the other person could not provide it (preparatory condition), and we can ask for something only if we really want it (sincerity condition). In reality, as any

other speech act, a request is submitted to our communicative aims. For instance, Othello when asking Desdemona to show the handkerchief he has offered to her is not sincere in his request and knows that the request cannot be met. This is a case where the speaker hides his real goal which is to force Desdemona to confess her presumed betrayal. But these two conditions can also be contradicted in an open way. A lover may say "I will get all the stars for you" to communicate a love beyond reality limits, but actor and partner obviously share the knowledge that the conditions of this promise are not satisfied.

Therefore, only if we consider speech acts from the linguistic point of view, i.e. in their literal form and in isolation, we can define them in terms of their constitutive rules. In a sense this is admitted also by Searle (1983) who proposes a distinction between representative intentionality and communicative intentionality, where communicative intentionality is the speaker's intention that the hearer acknowledges that a given speech act has been performed with representative intentionality. This is what allows, according to Searle to give account of deceit. In fact, Othello communicates his intention to represent a speech act of request involving sincerity. He has not to be sincere himself. Then, if we consider speech acts with their constitutive conditions they are not communicative devices; if we put them inside the process of intentional communication, the main point is how speech acts, independently of their constitutive conditions are used for communicative aims. So a distinction needs to be made between the conventional linguistic component and the component devoted to the expression of communicative intentions.

At this point we could make use of a different terminology and state that human interactions are made of communicative acts which at the beginning are nonlinguistic and later can be either linguistic or not. Note that Searle's model of speech acts cannot be simply substituted by Grice's theory of communicative intentions (Grice, 1957). Grice's theory of nonnatural meaning involves higher level representations which children acquire only at four years. Thus again if we want to establish a continuity between preverbal and verbal forms of communication this is not the good path (Airenti, 2003).

So what does a child have to learn? In his taxonomy of illocutionary acts Searle (1979) proposes a number of dimensions of variation in which illocutionary acts differ one from another. Different dimensions refer in fact to disparate aspects of illocutionary acts. But there is a dimension which is basic from a psychological point of view. It is the direction of fit. The distinction is between illocutions which aim to get the words to match the world and others whose illocutionary point is to get the world to match the words. Searle himself says that it would be very elegant if the taxonomy could be built entirely around this distinction but that he was unable to do that. Nonetheless, from a cognitive point of view this distinction is fundamental. Any communicative act is either a way to

share a representation of the world with someone else or a way to involve others in plans aimed at changing some given aspects of it. So when a one-year-old makes acts of pointing with the two different aims of acquiring an object that she cannot reach, or of sharing with an adult the interest for it, she is not performing two different speech acts, as in fact no speech is involved, but is expressing these two main possibilities of communication. But how can this difference be expressed in cognitive terms? Two kinds of explanation are possible. One explanation is based on considerations on the theory of mind. It is proposed by Camaioni (1993) who relying on Baron-Cohen (1991) argues that if the imperative is the use of another person to obtain an object, declaratives involve the capacity to represent others' mental states. To make a declarative a child must be able to represent the other as capable of having mental states like "being interested in something". To me this interpretation has two shortcomings. On one side it involves the necessity to attribute to children as young as one year the capacity to ascribe mental states to others, a point which is disputed by many authors. For instance, Butterworth (1991) argues that the capacity of shared attention of children of this age can be accounted for in a more parsimonious way using ecological factors. Moreover, no clear link is posed between the hypothesis on the development of the theory of mind and the development of communication.

My point of view is that children come to world with a predisposition to communicate and that this predisposition allows neonates to be in communicative situations since their first interactions with adults, before any representation of others' mental states is constructed. Both studies made in laboratory and fieldwork have shown that at a very precocious stage infants engage in communicative games (Bullowa, 1979; Braten, 1998). When the infant acquires a new ability (sounds, gestures, smile, etc.) she tries to share it with the caretaker so that the new acquisition become part of the interaction. This is true also when no immediate need is implied. When a child is two/three-month-old she already has a set of games she plays with the caretaker: the mother tickles the baby who smiles. The mother asks a question and the baby coos. Mother and infant imitate each other (Meltzoff, 1999). In experimental situations if the mother suddenly interrupts the interaction with 6/12-week-old, infants appear perturbed and try to restore the preceding situation (Murray & Trevarthen, 1985).

In particular, the fact that a baby actively participates to an imitative exchange of sounds or gestures with the adult shows that the child has a predisposition:

- to draw the other's attention on her acts, i.e. to share one's experiences with others
- to use to this aim the modality to include one's gestures in the context of alternation

My theoretical hypothesis is that there is a continuum from the first communicative games to adults' ability to interpret what in Gricean terminology can be called the speaker's meaning (Airenti, 2004).

In Airenti, Bara & Colombetti (1993), a theory of Cognitive Pragmatics has been proposed. From this standpoint the speaker's meaning is the product of inferences that are based on shared knowledge structures called behavior games. This means that the participants in an interaction produce and interpret communicative acts relying on a shared (or thought to be shared) representation of the interaction itself. The behavior game is defined by the actions that each partner has to perform and by its conditions of validity. The game is the structure constraining the set of all the possible inferences which can be elicited by a communicative act. To give a very simple example, the utterance "For tomorrow sun is forecast" is interpreted as the proposal of a bicycle ride in a situation where two friends in sunny days normally make bicycle rides.

In fact, adults' ability to interpret the meaning of communicative acts using their shared knowledge of typical interactions is the result of a long development which starts with the first games between mother and infant (Airenti, 2001). A ten/twelve-month-old child is in the phase of transition toward language. Here is where first speech acts are supposed to begin. What characterizes this phase is the multiplying of interactive situations involving the child, adults and objects, some of which are at hand, others can become accessible through the adult's mediation, others still are inaccessible. It is not useful to reduce the multiplicity of these situations to the acquisition of the conditions of one or two kinds of speech acts. The child in this phase begins to have relationships with different persons and to learn that with different persons different games are to be played. For instance, the arrival of a known person arouses a smile while this is not the case if a stranger appears. Interactions with siblings are different from the ones with parents. The exploration of objects and of interactions proceed together.

Let us consider, for instance, the concept of possession. The child desires to take possession of an object and to maintain it for all the time "necessary" to explore it (touch it, move it, displace its pieces, suck it, etc.). Generally what is considered communicative is the aspect of request the child does, for instance by an act of pointing. But the communicative aspect is not limited to the simple request. There is a bargaining regarding how long the object can be hold, for which kind of use, etc. Once established, the game will become the frame for all successive situations in which the same problem appears.

Moreover the child is able to distinguish games which can be played with different persons. The bargaining about possession will proceed differently if the object in question is a toy of an elder sibling. The child will not ask for her sibling's help to keep possession of what she has been given by her mother but she will try to obtain her mother's help to keep possession of one of the sibling's toy. The normal situation is thus one where the child progressively proceeds toward what characterizes adults' ability: one person knows a certain number of games and knows also with whom they can be played and under which circumstances.

Sharedness

It is widely admitted that the main feature of communication is sharedness. All the theories of communication have to explain how humans achieve that degree of sharedness which allows for comprehension. According to developmental theories of communication relying on the concept of speech act, caregivers through a process of modelling lead the infants to express their intentions in the form of speech acts. So sharedness is seen as the end of a path along which the caregiver has taken the child to agree on the appropriate way to express her intentions. However, to comprehend others' intentions is not reducible to comprehend the literal speech acts they have performed.

If we think of adult interactions this looks obvious. I can stop someone in the street to ask for the time, but not to ask to be invited to a restaurant. So, if I stop someone in the street in Berlin and say: "Fasanenstrasse, please", the person to whom I address this request will not be puzzled about what I want. It is shared that only one interpretation is plausible. I am asking for an information about a location.

The question is how humans acquire this kind of background knowledge concerning the context of communication. According to Searle, humans rely on their Background (Searle, 1978). All our experiences, perceptions and knowledge contribute to construct a background of nonrepresentational assumptions which are at the basis of the interpretation of meaning. This is why in the classical example "The cat is on the mat" I expect that the mat is on the floor and not floating in the air, even if this is not made explicit by the literal meaning. The same happens with the acquisition of pragmatic meaning. In this case what makes it possible to interpret all the implicit features of a situation is the pragmatic Background constituted by the interactive situations – games - we have encountered in our life. This is why, even if the name of a street can be pronounced for many different reasons, in the situation mentioned before the utterance "Fasanenstrasse, please" can be interpreted only as a request of information.

Infants participate in interactions as soon as they are born. It is then plausible that this process starts in children before the acquisition of language. Many studies in developmental research show that infants have the predisposition to participate in interactions and to be aware of the interactive situations (Trevarthen, 1980). In my perspective, from this evidence it would follow that sharedness which is at the basis of understanding the speaker's meaning begins to form with first interactions and contributes to construct the pragmatic Background. The hypothesis can be made that at the start what enters the pragmatic Background are the most basic aspects of communication like how to recognize an interaction and what counts as an interruption, and the main feature of interactions which is turn-taking.

Behavior and Conversation in Communication

In communication there are two components, the behavioral and the conversational one (Airenti, Bara & Colombetti, 1993). When an actor makes an utterance she intends to

have a certain effect on the partner and to this aim she uses the proper conversation tools. The choice of a specific speech act is crucial under this respect. The intentional part of a directive is just to have someone else doing something. The choice of the specific speech act is what defines the kind of game the actor intends to play. For instance, "Shut the door", "Could you please shut the door", "People should shut the door when they come in", "Too much noise disturbs conversation" are the moves of different games. The use of the simple directive can be done to point out a superior position or to attempt to acquire one. Here the game is: - A gives orders and B obeys -. The indirect polite formula indicates a cooperative game - A and B make each her part in the game -. The indirect impolite formula is used to start a conflictual game. The pragmatic meaning is "Do not expect me to be cooperative with you." Finally the most indirect formula is a way to leave open the possibility to retract. The actor, in case of necessity could negate to have performed a directive at all. What is peculiar of speech acts is to have the communicative intention expressed in its conversational form. The two aspects are indistinguishable.

However, this is true only when the accurate use of language is already established. While an infant can actively participate to communicative interactions, only a child who has acquired language and who has the concept of representation can apply conversation rules. Let us come to what are thought of as the first speech acts. A child points to something in the presence of an adult. In terms of speech acts one can only distinguish between two situations. Either the child wants the object and in this case it is an imperative, or the child wants to show the object to the adult to share with her the discovery and in this case the speech act is a declarative. Actually, without language, the main feature of a speech act, i.e. the copresence of behavioral and conversational features disappears. Moreover, not even the development of language is sufficient to enlarge the capacity of the child to use speech acts. It is not before four years that the child becomes able to use a larger set of speech acts according to the necessities of conversation. To choose the right speech act according to the needs of conversation requires the possibility to represent the other, i.e. to have a developed theory of mind (Whiten, 1991). As a consequence, the child has to acquire the knowledge that sharedness cannot be given for granted but has to be attained (Airenti, 1999).

Therefore, if we use the concept of speech act, all we can say is that for a rather long time the child has access to a very limited set of speech acts. On the contrary, if we use the game approach we can see how the child, starting in the first months and all along the first years constructs a rich nonrepresentative Background for communication. To acquire this kind of Background is to learn interactive games ruling communication.

Indirect Speech Acts

In a later phase when language is developed the role of the acquisition of background knowledge is illustrated by the

interpretation of indirect speech acts. The interpretation of indirect speech acts is not particularly problematic for children who have just acquired language. In general the explanation given is that this is due to the child's capacity to react to the context (Sinha and Carabine, 1981). Gibbs (1994) considers that this possibility to use the context for comprehension is a demonstration of the metonymical thinking of children who understand that the reference to an object or an action takes the place of an entire series of events.

Actually, it seems to me that this ability shows that in children as in adults the communicative intention is interpreted on the basis of the link with a behavior game. Children progressively learn to interpret cues, both the extralinguistic ones and the ones linked to the linguistic form. At the beginning the indicators the child can use are very simple as for instance adult happy vs. adult angry. If we use the speech act terminology we can say that the child understands the real illocutionary force. However, this is not the point. The interpretation of the communicative act is made on the basis of the knowledge of interactions that the child already has. The interesting point is how the child refines her capacity to represent interactions. For instance, in the case of the request to perform an action, the typical interaction is one where the adult proposes something to the child to do and the child complies. Thus any situation of this kind is interpreted by the child as a directive. On the contrary the adult knows that the reference to an action of her can be part of different kinds of interactions and uses all the available cues, linguistic and otherwise, to identify the adequate one².

The considerations I have just made concern the comprehension of conventional indirect speech acts. From a developmental point of view there is no symmetry between the processes behind comprehension and production. Actually, while even young children easily understand the communicative intentions of both direct and indirect communicative acts, the production of conventional indirect speech acts is acquired at the age of four (Gordon & Ervin-Tripp, 1984). An explicit and repeated teaching is necessary to convince a child to use formulas like "May I have...", "Could you please give me...", "I would like to have...", etc.

Yet, some indirect forms are among the first speech acts to be acquired. Think of an utterance of the kind "I want cookie". From a cognitive point of view the explanation is rather simple. To express a desire is part of what from a developmental point of view is perhaps the first game between a baby and an adult: the baby expresses a desire, or even before a need, and the adult satisfies it. Therefore, we have here the performance of the behavior game the child knows best.

² A different case is represented by those indirect speech acts of utterances has not to do with communicative maturity but depends on the availability of the knowledge necessary to interpret them (Bara, Bosco & Bucciarelli, 1999a,b).

Another case is the use of indirect speech acts by children who want to avoid to do something they do not like to do. In situations of this kind a child says: "I am so tired" (Perner, 1991). Again what explains the use of indirect expressions here is the fact that they are part of a well-known game. It is very interesting in this respect that, as noted by Perner, the children use this formulas in a rigid way. The utterance "I am so tired" was used by the same child also to avoid to go to bed. Here it appears clearly that what the child had acquired was the game: - Adult making a directive concerning an undesirable act and child saying "I am so tired". The error shows that the child does not analyse the speech act he uses. He has just acquired a typical interaction.

On the contrary, the use of conventional forms of request corresponds to social norms of kindness that children do not utilize spontaneously till when they can understand their meaning or at least their profitableness for them.

Conclusions

The developmental theories of communication use speech acts to give account of the fact that language cannot be reduced to grammar. Grammar, when it appears is framed by the communicative function which cannot be separated from the language structure. According to this approach what we have to explain is the transition from nonverbal communication to language. Once the language acquired, the whole communicative function is supposed to be included in language. In fact, this is not the case. From a pragmatic point of view to understand an utterance is to single out the function it has in an interaction. This is done using both knowledge on shared interactions and knowledge about the conversation rules. This is a specific knowledge pertaining to communication which is not included in the constitutive rules of speech acts. It is this knowledge which is gradually acquired in early childhood.

The standpoint I have presented has several advantages:

- it allows for dealing with all the variety of interactions involving young children;
- it includes preverbal and adult communication within the same framework;
- it explains why the distinction between direct and indirect speech acts, as it is posed by the speech act theory, is not relevant for the acquisition process.

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