

CONVERSATION, ITERATIVE KNOWLEDGE AND INTERSUBJECTIVITY

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»Iterative knowledge« is a general term, covering situations in which someone, S, knows that some audience, A, knows that S knows that A knows that ---, etc. (in some contexts »knows« may be replaced by »believes«). In a film, Peter Ustinov played a spy, who sells to country X the information that p, and then to country Y the information that X knows that p, and then to country X the information that T knows that p, and so on (see Cargile, 1969-70). Radford (1969) made a script for an equally exciting film: A and B are having an affair. C can (without their knowing about it) hear what they say through the wall. A and B have secret access to C's diary when she is at work. So the day-and-night cycle decides who is ahead in knowing. The iterated knowings in the spy scene and the eaves dropper scene are cases of *ping-pong knowledge*, because they involve knowings (beliefs) which 1) are concrete occurrences and not mere dispositons 2) can be expressed in some natural language 3) tap more cognitive resources the more they pile up 4) can only pile up to a limited amount, i.e. the iteration is finite. 1) through 4) are internally connected. Ping-pong knowledge must be distinguished from mutual knowledge, the iteration of which does not tap cognitive resources. Mutual knowledge will be defined later.

Ping-pong knowledge is the dominant explanatory basis of the philosophical position, according to which the individual instance of meaning (what Grice has called »utterer's occasion meaning«) is logically prior to, and simpler than, conventional and literal meaning, i.e. the speaker's communicative intentions decide what his utterance means (Bennett 1976; Grice 1968, 1969). This position is called *meaning-nominalism*. According to the opposite position, *meaning-realism*, the literal meaning of a sentence is the meaning it has in the zero-context, the situation in which there is no contextual information on which to base an interpretation of the act performed by uttering the sentence (Katz, 1981). Meaning-realism claims that literal meanings are the essence of the language system and that the language system is logically prior to language use. Meaning-nominalism tends to translate literal meanings into idiosyncratic, context-based lexicons, meaning-realism tends to translate context-based information into the supra-indivi-

dual, context-free lexicon of the language system, e.g. the transformational grammar's efforts to translate implicit information in the surface structure into explicit information in the deep structure (see Poulsen 1978).

Meaning-realism has been criticized often enough, due to the general anti-positivistic *elitgeist*, and because of its implicit idea of astral-like, impartial, presuppositionless knowledge and corresponding facts, floating around in space. In opposition to this, meaning-nominalism, taking it by and large, has went scot-free. Most modern theories of conversation, philosophical, psychological or linguistic, are meaning-nominalistic, and they have to invoke ping-pong knowledge, when explaining what goes on when people exchange verbal information. I shall contend that meaning-nominalism substitutes ping-pong knowledge for intersubjectivity.

Ping-pong knowledge is a quite exciting subject in itself, due to its poker-game-like intricacy. However, this is not the reason for examining it here. What makes ping-pong knowledge an important matter is the part it plays on the ideological stage when applied in meaning-nominalistic theories of intersubjective reflexivity. After having discussed the most prominent meaning-nominalistic theory on its own ground, I shall argue that it could only appear in a world where the estranged intersubjectivity borrows its self-image from a paranoid spy world. I shall go on to examine the counterpart of ping-pong knowledge, mutual knowledge, and contend 1) that mutual knowledge is the foundation of human conversation, 2) that it is indispensable to the understanding of the psychological ontogenesis of speech and intersubjectivity and 3) that mutual knowledge and egocentric speech must be understood in terms of Hart's concept of »defeasibility« and Austin's concept of »trouser words«.

Grice's theory of meaning

In Grice's works ping-pong knowledge plays a part in two ways, the first of which is often called *Gricean meaning*, the second *implicatures*. Gricean meaning is the definition of: »S meant something by uttering x«: »For some audience, A, S intended his utterance of x to produce in A some effect (reponse) E, by means of A's recognition of this intention«. This is the definition of non-natural meaning, as opposed to the meaning of blushing or panting. There are three fundamental intentions in the definition: i_1 = intention to produce in A some effect, E; i_2 = intention that A recognizes i_1 ; i_3 = intention that A's fulfillment of E is based on A's recognition of i_2 (Grice 1957, 1968, 1969). Strawson (1964) has argued that if Gricean meaning shall work, there are situations where a further intention should be added, i_4 = intention that A recognizes i_3 .

Gricean implicatures are based on Grice's (1975) conversational maxims: Make your contribution as informative as is required, but not more informative than is required. Do not say what you believe to be false or lack ade-

quate evidence for. Be relevant. Be perspicuous. Together these four maxims are called the cooperative principle.

S can generate implicatures by expressing himself in a maximviolating way, *p*, in order to make A understand that *q*. The generation of implicatures only works, however, if the following operation is successful: (1) S knows that he has violated the cooperative principle. (2) A knows that S has violated the operative principle. (3) A knows that (1). (4) S knows that (3). (5) A knows that (4). (6) Before generating the implicature S must believe that A will work out (5). The ping-pong can be defined in another way: A knows that S knows that A can see that S's apparently maxim-violating remark is not maxim-violating after all, when interpreted by A in a certain way. And S must know all this before uttering his remark.

Infinite regress of intentions and knowings

Consider a driving lesson, where the instructor, A, says to the student, B: »Turn left here«. A knows that no particular courtesy is required. He is in a position to issue directives, in fact his is part of the driving lesson institution. Uttered by a hitch-hiker the remark would be odd. B also knows this. A knows that B knows this, otherwise A would have issued his directive less directly, introducing some linguistic component to remind the student of the driving lesson institution. But there is one link more: A knows that B knows that A knows the presupposed institution, otherwise A would still have reason for reminding him of it. So there is an ABA series. But there is also a corresponding BAB series, otherwise B would have been surprised by A's direct directive. Logically, the existence of two corresponding series, an ABA series and a BAB series, implies an infinite -- ABABA -- series, with no beginning and no end. By the simple device: »A does not believe₂ that B erroneously thinks that --, otherwise he would have behaved differently, so A knows that --,« the knowings can always be iterated on a higher level. But what kind of knowings is it that is iterated here? It is the same kind of knowing that is involved when you absentmindedly step from one room into another. You know that the floor is there, but it is a knowing, the only substance of which is that you act in accordance with a non-expectation that your will fall into an abyss.

When we are tacitly relying on a presupposed, intersubjectively accepted framework, the iterated knowings involved are called *mutual knowledge*, a phrase coined by Schiffer (1972). The distinction between the knowings involved in mutual knowledge and the knowings involved in ping-pong knowledge (as exemplified in the Peter Ustinov film) is firmly based, but often overlooked (see Harder & Kock, 1976; O'Connor, 1975, p. 29-33; Poulsen, 1976). Mutual knowledge is the essence of intersubjectivity. It rests on the guileless reliance in the fact that we are living in the same world, and that other persons are basically sincere, rational and trustworthy.

In contrast to ping-pong knowledge, the infiniteness of mutual knowledge does not tap cognitive resources, and the infinite regress is harmless. Infinite regress of ping-pong knowledge, on the other hand, would be vicious, and Grice (1969; 156) has admitted that his theory of utterer's meaning runs a risk of infiniteness. The ping-pong in Gricean meaning has to be finite, since S cannot intend A to recognize something that S knows to be beyond A's capacity. Nevertheless it became necessary to put further restrictions into the Gricean meaning by demanding that more refined sub-intentions be added to the other S-intentions, in order to cope with non-standard ways of utterer's meaning. The natural consequence would have been to distinguish between standard and non-standard ways of utterer's meaning something in saying something, but this would have jeopardized the whole point of meaning-naturalism. Grice never took this consequence. Instead he added a stopper to the series of S-intentions: »There must be no inference-element E, such that S utters x intending both (1) that A's response should rely on E and that (2) that A should think S to intend (believe) that (1) befalse«. Indeed a scotch for twisted minds!

But how much can iteration of ping-pong pile up? A study of the iteration tables designed by Harder and Kock (1976) shows that the ping-pong starters par excellence, »insincerity« and »misunderstanding« are responsible for the iterations that pile up more than two steps of replicative knowing. This corresponds to the observations by the Laing-group, who have also described insincerity and misunderstanding as the causes of the more complicated ping-pong games (Laing, Phillipson & Lee, 1966).

The many discussions about the maximal amount of iterative knowledge (e.g. Cargile 1969-70; Radford 1969; Searle 1969) usually have the flaw that no clear distinction is made between ping-pong and mutual knowledge. The net result, however, seems to be that two or three steps of ping-pong are the maximum, preceded and succeeded by mutual knowledge. This corresponds to the phenomenology of bluff game like poker or dicing. If your opponent is capable enough, you have no chance of guessing whether he will rely more on the fourth step in the iteration than on the second. If he is not capable enough he will never reach the fourth step.

In general, it reduces the intricacy of the iteration tables that links which are essentially composed of »belief that the other person is rational and sincere« are usually part of mutual knowledge, which makes it pointless to include them in the ping-pong table. They do not tap the participants' cognitive resources until aberrations in the dialogue demand their being lifted up into the ping-pong domain. This point will be developed later in connection with the catch-word »no ping-pong without an aberration«.

Does knowledge cause acts?

It is generally agreed among psychologists and philosophers that knowled-

ge is not the cause of acts, and that causes of acts, if acts can be said to have causes at all, somehow lie outside the responsibility of the agent. My discovery that I have got the mumps does not cause my going to bed. My knowledge is the *rationale* for my going to bed. If my going to bed is caused by anything, it is caused by the disease. My discovery itself may make me hypochondriac, which is not an act. What causes my whimper is either the pain itself or my sopiness.

The Gricean intention to »produce in A some effect E, by means of A's recognition of this intention« can only work, if knowledge itself can have effects. It is as if the definition is made for situations where there is no responsible person, no agent, between the effect E and A's recognition of the intention.

Philosophical subtleties apart, there is something counterintuitive about this »Gricean mechanism«, as it is usually called. Consider this situation: You are coming home late together with your wife. You stop at your doorstep, rummaging in your pockets for your keys. You say: »I haven't got my keys«. Now, what is your intention: That she produce her keys via her recognition of your *intention* that she produce the keys? Or via her recognition of the *fact* that you haven't got your own keys? It seems obvious that the last description covers the standard situation better. I cannot think of many situations where the first description is more adequate. For if your intention is that she produce her keys *not* via her recognition of the fact that you haven't got yours, but via her recognition of your *intention*, it must be because you want to rule out the possibility of distrust of some kind? Isn't it usually enough that the result comes about, that she produces her keys? Is it not more straight to say that there is a standard situation, where you do not care much about the effect of your communicative act, because you simply trust your partner to act according to the demands of the situation? That she as a partner is perfectly capable of taking steps – given the necessary information?

It is as if the Gricean mechanism »intention that A's reaction takes place via A's recognition of S's intention« has been added to the primary intention because of a basic distrust in the partner's rationality (but not in his intelligence). What is wrong with a more straightforward definition for indicative-type utterances of the standard kind: »The intended effect is to make A aware of the fact that so-and so is the case« – except that the definition is redundant? I can only see the Gricean mechanism as an effort to regain the intersubjectivity that meaning-nominalism has lost from its birth.

Bureaucratic and spontanistic theories

The difference between meaning-realism and meaning-nominalism does not only pertain to the theory of meaning itself. It can be found in the general theory of instruction as well, as a difference between pedagogical me-

thods favouring what Bruner has called »learning-out-of-context« (Bruner, Olver & Greenfield 1966) and methods favouring »learning-by-doing«. The distinction may be called a distinction between bureaucratic and spontaneous approaches (Poulsen 1981a, b), because the (non-existing) extreme versions of the theories or approaches differ in this way: Development can only be instigated from above (bureaucratic theories, favouring learning-out-of-context and the learning of universal concepts) or from below (spontanic theories, favouring learning-by-doing and the learning of personal and particular concepts, the concepts that Vygotsky called empirical concepts).

Olson (1977) showed the historical trend towards bureaucratic approaches in the theory of instruction and demonstrated its connection with theories of meaning as a movement of the industrialized world from »utterance« to »text«, a movement from context-based meaning to meaning *eo ipso*.

It seems that the arguments (philosophical and empirical), favouring this movement, have turned since World War II, and the ideological stage is now being crowded by spontanistic theories like meaning-nominalistic theories of meaning, deschooling movements, finding a powerful artistic expression in Pink Floyd's song »We don't need no education«, and political grassroot movements.

The lost intersubjectivity of meaning-nominalism

Bureaucratic theories of meaning, instruction and politics do not find much room for the significance of intersubjectivity. In this they may be claimed to mirror the human situation of the modern world (Poulsen 1981b).

It is probably true that meaning-nominalism on the other hand is an effort to reintroduce intersubjectivity into the theory of meaning, but meaning-nominalism throws out the baby with the bath water.

Ironically enough, intersubjectivity is lost, not because it is forgotten, but because it is introduced as ping-pong knowledge, as intended recognitions of intended recognitions, rather than as mutual knowledge. In meaning-nominalistic theories, intersubjectivity is made possible *via* the reflective cogito, it is the focus of the participants' attention. Therefore the theories have to state the mechanisms of intersubjectivity in crooked ways: »I wish to regard the meaning-intended effect common to indicativetype utterances as being, not that the hearer should believe something (. . .), but that the hearer should *think that the utterer believes something*« (Grice 1968). This turn is necessary in meaning-nominalism, where meaning is explained in terms of S-intended effects in A, for without the turn there would be no difference between sincere and insincere occasion meaning. But where is the world that the utterer is peaking about? Has S no intentions about A's relation to this world? Are all his intentions only intentions about A's relation to S's beliefs and intentions? When preparing for a walk, S says: »It's rai-

ning«. Is it really S's intention that A should figure out that it is raining, via A's belief that S believes that it is raining? Does A think: »Aha, he thinks that it is raining. Then it is probably raining«. This is absurd. And does S think: »I want him to think that I think that it is raining«. Even more absurd, except in poker games, spy novels, or cases of paranoid intersubjectivity.

One funny thing is that meaning-nominalism, when basing meaning on utterer's intentions about A's reaction, has to add sincerity conditions and rationality conditions in order to rule out non-standard ways of utterer's meaning, as if standard ways of meaning are more intellectually demanding than non-standard ways of meaning.

Another funny thing is that meaning-nominalism, when describing A's understanding of the message as beliefs about S's situation, rather than as a changed relation in A to the fact spoken-about, probably is making a good guess about a fundamental difference between human and animal communication. When animals communicate, they are giving information about their own situation. People sometimes intend this too, but sometimes they just intend to give information about the world. This second intention *presupposes* intersubjectivity, defined as mutual knowledge. But there are non-standard ways of S-meaning and A-understanding, where doubt is cast upon part of the mutual knowledge, lifting it up into the ping-pong domain.

No ping-pong without an aberration

It is difficult to describe the mutual knowledge and the shared context, where intersubjectivity resides, without doing the error of changing it into ping-pong knowledge. This is probably because meaning-in-context must be described as a »defeasible concept« as Hart called it (1949-50), and intersubjectivity as a »trouser-word«.

Austin (1962) called »real« a trouser-word, because »with real(...) it is the *negative* use that wears the trousers. That is, a definite sense attaches to the assertion that something is real, a real such-and-such, only in the light of a specific way in which it might be, or might have been, *not* real«. And: »The function of »real« is not to contribute positively to the characterization of anything, but to exclude possible ways of being *not* real« (1962, p. 70). And about the use of the word »freely«: »While it has been the tradition to present this as the positive term requiring elucidation, there is little doubt that to say we acted »freely« is to say only that we acted not unfreely. . . »free« is only used to rule out the suggestion of some or all of its recognised antitheses« (Austin, 1961).

Trouser-words cannot be defined through a listing of their attributes. The possible ways of being unreal or unfree are innumerable. Still it is perfectly all right to state that »He did it on purpose«. But only when an aberration

in the situation calls for a description. This is the rationale of Austin's catch-word: »No modification without an aberration«. The oddity of statements like »He deliberately took the second set« or »He kissed her on purpose« shows that we have to invent peculiar aberrations in order to make up contexts that make the statements »in order«.

The connection between Hart's concept of defeasibility and Austin's trouser-words is usually overlooked. In his analysis of responsibility and freedom of acts Hart wrote: ». . . our concept of an action . . . is a defeasible concept to be defined through exceptions and not by a set necessary and sufficient conditions, whether physical or psychological«. He continued that the statement »It was Smith who beat her« is not a composite statement, partly about a physical event, partly about a mental event making Smith responsible.

Intersubjectivity depends on mutual knowledge. In conversation this mutual knowledge rests on the guileless reliance in the fact that we are facing the same world, that we are playing the same language game, and that the participant is sincere, rational, and trustworthy. We can call this mutual knowledge the basic trust of conversation. This basic trust of conversation is not lifted up in the ping-pong domain unless there are aberrations in the dialogue. »The mutual knowledge of conversation« as a trouser-word, and it only functions to exclude possible flaws in the basic trust of the conversation. It is »distrust followed by ping-pong knowledge« that wears the trousers. But the basic trust is logically prior to the distrust, like being responsible for an act or free is logically prior to being not responsible or to being unfree. Without responsibility and freedom an act is not an act. Without mutual knowledge or common context a spoken message is meaningless. The criticisms of meaning-realism have taught us this. This means that our concept of the meaningfulness of the speech act is a defeasible concept, for the necessary and sufficient conditions for the message to be meaningful, i.e. the mutual knowledge, cannot be stated. It has to be defined through exceptions, aberrations, or flaws in the mutual knowledge. The necessary and sufficient conditions for the utterance »colourless ideas sleep furiously« to be meaningful cannot be stated. But in most cases the utterance will be meaningless, because the flaws in the mutual knowledge will be too many. This led Chomsky, like other meaning-realists, to believe that the sentence itself, the proposition, is meaningless *eo ipso*.

Meaning-nominalists were right in looking for utterer's occasion meaning as the residence of meaning. But they should have looked for conditions of meaninglessness, because speech acts are defeasible. And meaning-realists were right up to a point in looking for meaning in »timeless meaning for an utterance type«, but only because the mutual knowledge and shared context of a language community is immense.

The ideological stage today presents this dilemma at full speed. On one hand we see meaning-nominalist theories placing meaning in the personal

meeting between people, but making mutual knowledge part of reflective, iterative knowledge, thereby giving reflexion and subjectivity ontological priority to intersubjectivity. On the other hand we see meaning-realist theories, departing from meaning *eo ipso*, which find no room for intersubjectivity and which, as Bruner (1976) convincingly has demonstrated, are unable to explain first-language learning.

Gricean implicatures and conversational maxims

In his famous lectures, published in 1975, Grice apparently changed his theory of conversation, so a distinction between standard and non-standard (implicature-generating) cases of utterer's meaning could be made.

While it is futile to define meaning in terms of ping-pong knowledge, conversational implicatures, on the other hand, are real ping-pong starts, because they are intended to direct A's attention towards presuppositions of the speech act, intended to lift up part of the shared context into the ping-pong domain. Here we have cases where it is meaningful to talk about S-intentions like: »I want A to detect an aberration in my utterance, and I want him to realize why, so that he figures out that. . .« This intention looks much like the S-intention in Grice's original definition of S-meaning, but now the ping-pong has returned to where it belongs, in the implicature-generating operation.

Unfortunately Grice chose to describe the implicatures by means of a description of four maxims governing the standard exchange of information. These maxims are intended to be descriptions of necessary and sufficient conditions of the rationality of speech acts. He even ascribed cognitive content of the resource-tapping ping-pong kind to the maxims, as they function in the standard cases: S knows that A believes that S speaks in accordance with the maxims. According to Grice, these maxims are learnt in childhood.

Once again the ping-pong is invoked where it is not needed. Trying to give positive descriptions of the rationality presuppositions of speech acts (or any other act for that matter) in standard situations, i.e. when no maxims are violated or »exploited«, is to do the same thing that Austin and Hart warned us against. The rationality presuppositions of speech acts (but not the intelligence, of course) belong to the intersubjectivity of conversation, and the relation between the meaning of the speech act and the rationality presuppositions is a relation of defeasibility. Ascribing positive cognitive content to the rationality presuppositions of conversation is to give logical priority to reflexion and subjectivity in relation to intersubjectivity.

The ontogenesis of intersubjectivity

In the phenomenological tradition the prereflective, the »horizon«, is desc-

ribed as the always-already-presupposed (see Katzenelson, this volume). Phenomenology characterizes the »horizon« as common knowledge. The »horizon« of human conversation corresponds to mutual knowledge, without which there would be no meaningful message.

Bernth (this volume) argues that there is a growing tendency to claim that this individual instance of knowledge presupposes common knowledge, and that this is reflected (etymologically) in the word »consciousness«, a sense that is lost in the German word »Bewusstsein«. From an etymological point of view, however, the German prefix *be-* comes from *bei-*, which means almost the same as the Latin *con-*, so there may still be some connection, though etymological arguments should not be taken too seriously in this matter.

Bernth gives a survey of the last ten years' empirical studies of the ontogenesis of intersubjectivity. There is a striking resemblance between trends in the empirical study of the mother-infant interaction and the philosophical arguments offered here. Philosophical arguments that the intersubjectivity of conversation has logical priority to reflection and subjectivity is one thing, empirical and psychological arguments another. The subject matter of philosophical arguments differs from the subject matter of empirical studies. But I have the obstinate belief that the truer the two lines of investigation, the more they will converge.

The infant demonstrates his capacity for sociability in many ways. Kaye (1977) has showed how the infants and mothers learn to »give and take turns« already during the first weeks and argues that this turn-taking may be the first step in the learning of the alternation-of-comments-upon-a-common-topic discussed by Bruner (1975). There is common agreement that the infant, in this first stage, is mainly interested in the most frequent caretakers, or the mother for that matter. At about 3 months the infant starts to lose interest in the mother, often to the mother's regret.

At about 5 months the infant starts to introduce things into the »conversation«, but there is no triadic situation. The motives of perceiving and using things are not integrated with the motives of communicating with persons. This integration starts at 9 to 10 months. Until now the child has only been interested in the *process* of communication, now it is getting interested in the *content* of communication. The most powerful devices in this development are *reference* and *joint action*, which the child is now practising (Bruner, 1976). Now the child delights in creating, together with the adult, a shared context of communication. Now the child can point and follow the gaze direction of adults. The basic trust of conversation, guileless reliance on common context, has been created. Trewarthen (1977) calls this stage secondary intersubjectivity. From now on decontextualization, messages giving *new* information about the world, can start to develop.

This does not mean that the basic trust of conversation has been actually *learned* during the first year. The point is that it has not been unlearned,

not been disappointed too much. It has its roots in the basic trust described by Erikson, Basic trust is there from the start, from the symbiotic relation between child and mother, but it has to survive some nasty shocks. The basic trust of conversation may develop after each shock it gets, i.e. every time a common definition of a new situation has been agreed upon.

This means that the egocentric speech of the small child is not autism, but basic trust in the mutual knowledge of conversation. The older child learns a technique to take a temporary moratorium from the communicative tasks of the situation, engaging in a new kind of egocentrism where speech is being used intrasubjectively. Reflection starts from here. But without the preceding intersubjectivity the child would have nothing to say to himself.

There are 4 kinds of egocentricity: The first kind of egocentricity has its roots in the symbiotic relation between mother and child and develops from basic trust. It survives through the object-oriented period from 3-5 months, and the period from 5-9 months where the communicative and object-directed needs of the infant are not integrated. It survives the period starting from 9 months, because the mother structures the infant's world in such a way that it gets communicable, so intersubjectivity is not lost. This first egocentricity, this guileless reliance, is the *conditio sine qua non* in the adult language community, and without it here could be no instigation of development from above.

The second kind of egocentricity is reflection, the temporary moratorium from the communicative demands of the situation. This is the egocentricity that Vygotsky described.

The third kind of egocentricity is general incapacity or unwillingness to see the world from the other side. This is either stupidity or a disease.

The fourth kind of egocentricity is the paranoid situation of the modern Robinson Crusoe, living in a world inhabited by aliens, spys, and anonymous bureaucrats. This is basic distrust in the common context of the conversation, it is lost intersubjectivity. Meaning-nominalism and meaning-realism are opponents, but both of them stand on Robinsonian ground.

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