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Communicative Actions

Abstract

Communicative actions – in the broad sense of communication attempts – are special cases of instrumental actions, i.e. actions by means of which one tries to achieve some ends, their differentia specifica being that in the case of communicative actions the speaker expects to achieve her primary (communicative) aim iff this aim is recognized by her addressee. In short, from the speaker's viewpoint communication coincides with understanding, where understanding is to be identified with recognition of the relevant speaker's intentions. This idea is, using some elementary formal machinery from intentional logic, expounded in more detail, related to proposals of Paul Grice's (speaker's meaning), and compared to the alternative approach of classical speech act theory.

1. Introduction

Nowadays the term *communication* covers a wealth of notions. We talk of pipes 'communicating' with each other (i.e. exchanging their liquid contents), increasingly miniaturising office 'communication' (the exchange of data between various types of data storage), and 'communicative' reason (which is directed towards understanding in the sense of reconciling interests). Consequently, *understanding communication* can also refer to a great deal – for example, comprehending the physical principles governing the exchange of liquid caused by pressure compensation, or perhaps the principles of computer science controlling the office software concerned – or indeed the principles which explain why certain social procedures ought to promote consensus.

By contrast, in the following 'communication' is exclusively used to refer to communicative actions in the sense of *attempts at communication*. Examples of such actions include S standing up in order to give his visitor H to understand that he regards the conversation to be over, S raising his right arm in order to signal to the driver H in front of him, who is going to give him a tow, that he can now start, and S frowning in order to show his wife H that he doesn't at all like the way the pianist is playing the fortissimo. We will also use 'S' and 'H' in the following to denote the *communicative agent* (the speaker) and the *communicative addressee* (the hearer) respectively, although it should be noted that the attempts at communication concerned need not necessarily be auditory.

A *communicative action* is thus explained as a certain type of action – and the success or the *understanding of a communicative action* is explained as a certain case of the success or the understanding of an action.

In many respects this is the most important concept of communication. It inevitably comes into play when we address the communicative behaviour of such relatively highly developed creatures as human beings. Taking it as a basis enables an elementary concept of the regular, conventional and linguistic meaning of behaviour and expressions to be simply

derived. Moreover, only this concept allows the phenomenon of 'reading between the lines' (implication) be adequately comprehended.

2. Understanding Actions

In a very ordinary sense it may be said that we understand an action performed by a person X if we know the intention with which X performed the action.

2.1 Using the symbolic notations

> D(X,f) for: X does f
> B(X,p) for: X believes that p
> W(X,p) for: X wants that p

we can roughly define this concept of *intentional action* (i.e. an action performed with such-and-such an intention) as follows:

D1 $I(X,f,p´) :=$ $D(X,f) \& W(X,p´) \& B(X,D(X,f) \rightarrow p´)$
        By doing f, X intends to bring about p´ (= p at time t´), iff X does f, wants p´, and believes that his doing f will bring about p´.

For simplicity's sake let us take several very strong rationalizations for granted. B(X,p) stands for a 'strong', rational belief (conviction as opposed to mere suggestion), where p stands for the proposition (or state of affairs) believed to be true (or to hold); and W(X,p) is to be read as implying that all states of affairs regarded as optimal (and possible) by X are such that p holds true in them. (In D(X,f) f stands for an action type; D(X,f) thus states that, at t, X performs (does) an action of type f.)
       In I(X,f,p´) the state of affairs p´ is what may be called *the aim* or *the end* of X doing f. Seen from the perspective of the time t of f being done, it is a future state of affairs. The action f itself is therefore in X's view one of the means to achieve his end p´. Actions in the sense expressed by I(S,f,p') are known as instrumental actions. We will restrict our explications to instrumental actions in a very narrow sense, namely to cases where X takes f to be the only means to achieve this end – in other words to situations where f is taken to be both a sufficient and a necessary means to this end. (This restriction ought of course to be cast aside at some later stage of the theory; however, for our first steps in describing our model, the reader is kindly requested to swallow this limitation, despite its descriptive inadequacy.) Given this restriction, we can abandon D1 in favor of the following explication:

D1.0 $I(X,f,p´) :=$ $D(X,f) \& W(X,p´) \& B(X,D(X,f) \leftrightarrow p´)$
       By doing f, X intends to bring about p´ (= p at time t´), iff X does f, wants that p´, and believes that p´ if and only if X does f.

More generally:

D1.1 $I(X,f) :=$ $\exists A(I(X,f,A))$
       X´s doing f is an intentional action (in the sense of an action performed with some intention) iff there is a (future) state of affairs A such that by doing f X intends to bring about A.

2.2 Intentional actions as defined may be mere attempts at achieving their ends; they need not be *successful*. In order to be successful, the agent's beliefs about how to attain the respective ends have to be true. And as this is sufficient for their success, we thus obtain:

D2 $IS(X,f,p´) := I(X,f,p´) \& (p´ \leftrightarrow D(X,f))$
         X's attempt to achieve p´ by doing f is successful iff by doing f X attempts to achieve p´ and achieves p´ by and only by means of doing f.

Instrumental actions are directed towards their own success, i.e. they are actions for which the following theorem turns out to be true:

T1 $I(X,f,p´) \leftrightarrow I(X,f,IS(X,f,p´))$

2.3. Let p* be the overall aim of an f action of X's, i.e. the sum of all states of affairs for which $I(X,f,p´)$ holds. Then, writing

$K(X,p)$ for: X knows that p - where $K(X,p) := B(X,p) \& p$, for short,

we can define understanding an instrumental action as follows:

D3 $U(Y,I(X,f)) :=   K(Y,I(X,f,p^*))$
         Person Y understands X's doing f iff Y knows (all) the ends X is trying to achieve by means of his doing f.

In other words, Y understands X's doing f iff Y knows X's overall aim in doing f and what role X believes her doing f plays in achieving this aim.

2.4. As understanding is a kind of knowledge, it implies the correctness of the beliefs involved. This fact differentiates understanding from cases of merely understanding something *as something* or of understanding something to be such-and-such. The latter cases merely amount to something being interpreted as such-and-such or supposed to be such-and-such – where it is an open question whether the object in question really is such-and-such. If it is, then we could say that the object is rightly or correctly being understood to be such-and-such; if not, it is falsely or incorrectly being understood to be such-and-such.

Thus, understanding entails understanding something as being such-and-such. But the reverse only holds for cases of correctly understanding something to be such-and-such. This applies directly to understanding actions. We understand an action when we correctly understand it as an action with such-and-such an overall aim.

2.5. Knowledge should not be confused with merely believing to know. Similarly, we have to distinguish between specifically understanding and merely believing that we understand. However, this parallel is not absolute, for although it is true that:

T2 $K(X,p) \rightarrow B(X,K(X,p))$
         Whoever knows something also believes he knows it

it is not generally true that:

         $U(Y,Z) \rightarrow B(Y,U(Y,Z))$
         Whoever understands something also believes he understands it.

This can easily be seen from the case of understanding an action in the sense explained above in 2.3. It is possible that, although Y understands X's doing f (that is, although Y is aware of all the aims which X pursues by doing f), Y mistakenly believes that X is also pursuing some other aims by doing f, aims of which Y is not yet aware. In that case Y understands X's doing f, but he will mistakenly believe that he has *not* (yet) understood X's doing f (completely).

2.6. The concept of understanding thus explicated postulates knowledge of the overall aim. This postulate is very strong. Alternatively one could start by spelling out a concept of understanding relativized to the knowledge of partial aims. Hence one could say that Y understands X's doing f with regard to the aim A iff it is true that K(Y,I(X,f,A)).

That X's doing f is comprehensible to Y means that there is at least one aim A with regard to which Y understands X's doing f. Accordingly, that X's doing f is entirely incomprehensible to Y means there is not even a single aim A with regard to which Y understands X's doing f.

2.7. X knows what intentions he has when doing f (in the sense of D1.0). And because X will not be mistaken with respect to his intentions, it holds that:

T3 $I(X,f,p') \leftrightarrow D(X,f) \& B(X,I(X,f,p'))$
        Doing something is doing something with a certain intention iff the agent himself believes he has this intention.

Because of T3 it can therefore also be said that we understand an action if we know how the agent himself interprets it. How the subject of an action interprets his or her action (i.e. the intention he or she associates with it) is denoted by Max Weber as the action's *subjective significance* (*subjektiver Sinn*). Thus we might also say, using this terminology, that we understand an action if we are aware of its subjective significance.

2.8. The last two conditions of D1.0 correspond to the subjective significance of an action having the (overall) aim A:

(I) $W(X,p')$
(II) $B(X, p' \leftrightarrow D(X,f))$

These conditions precisely reflect the reasons which X himself has for doing f, and on the basis of which in the end he actually does f, provided that he is rational – for the criterion of rationality relevant for situations of this type ('situations of decision under certainty') requires that an action which will definitely bring about optimum results be performed. But this is acccording to (I) and (II) nothing other than D(X,f) itself – i.e. with the criterion in question, the rationality of D(X,f) directly follows from (I) and (II).

In a more general sense (i.e. not restricting ourselves to intentional actions in the strong sense of I(X,f,p'), and therefore not merely focusing on situations of decision under certainty):

D3.1   An action is understood iff its *rationality reasons* are known, i.e. iff one knows that it was rational for the agent to perform it and is aware of the reasons which made it rational.

To put it more generally, the agent's relevant reasons are those beliefs (subjective probabilities) and preferences on the basis of which it was – depending on the given type of decision situation – rational for him to do what he did.

Thus, 'rational' in this context means the same as rational with regard to the preferences and beliefs the agent actually has. Once again borrowing a phrase of Max Weber's, we could therefore talk about the *subjective correctness* of an action. To summarize, knowing the subjective significance of an action and thus understanding the action means the same as knowing the reasons on the basis of which the action is subjectively (i.e. from the point of view of the subject in question) correct.

2.9. For the sake of simplicity, we shall continue to restrict our attention to the specific case of a decision under certainty. With respect to this case the concept of understanding as defined in D3.1 is identical with the thesis put forward by von Wright (1971) according to which understanding an action means understanding the conclusion of a practical syllogism – provided, however, that firstly the conclusion of this syllogism is the claim that $D(X,f)$ is rational (and not simply $D(X,f)$, as suggested by von Wright), and that secondly premises (I) and (II) are both true, and that finally the state of affairs A covers the overall aim of the action.

2.10. This concept of understanding, which invokes knowledge of the relevant intention and therefore knowledge of the *voluntative-cognitive complex* (I) and (II), is quite general. Within this framework, understanding an action does not imply any awareness of how the agent acquired his intentions. Therefore, it is quite possible for us to understand someone's action while remaining totally in the dark as to how the agent arrived at his relevant beliefs and intentions. A 'deeper' understanding of the action, so to speak, would also comprise knowledge extended accordingly. It ought to be borne in mind, moreover, that the concept just explicated is only concerned with understanding a *concrete action* (an action performed by a certain person at a certain time). This should not be confused with the *action type* realized or exemplified. In order for Y to understand the concrete action of type f performed by X, Y merely needs to know the intentions X associates with doing f at the time of his performing the action. Whether X himself always associates (and whether different people associate) the same intentions with doing f as X does at the time in question is left entirely open by the claim that Y understands X's action. Furthermore, the claim that Y has understood a concrete action does not imply anything either about how Y may have generated the belief he has to hold if he is to be characterized as having understood the action. Finally, understanding must not be confused with accepting: understanding someone's action does not mean condoning it or sharing the underlying preferences or beliefs.

3. Communicative Action

Generally speaking, actions can be what they are even if they are understood by no-one but the agent himself. However, this is not the case for communicative actions: attempts at communication are directed towards being understood. Precisely this is the *differentia specifica* of communication, which I shall now set out to explain using the more general concepts of success and understanding as explicated in Section 2.

3.1. An attempt at communication made by S's doing f, directed towards H, and having the content that H is supposed (by S) to do r (an 'imperative' action), will in the following be represented by $CA(S,H,f,r)$; an attempt at communication with the content p (an 'informative' action) will be denoted by $CA(S,H,f,p)$. Successful attempts of these types will be represented by $CS(S,H,f,r)$ and $CS(S,H,f,p)$.

The *primary communicative aim* of an imperative action CA(S,H,f,r) is that the addressee does what he is supposed to, i.e. D´(H,r); the primary communicative aim of an informative action CA(S,H,f,p) is that H believes that p, symbolically: B´(H,p). We postulate, in other words:

T4   CA(S,H,f,r) → I(S,f,D´(H,r))
T5   CA(S,H,f,p) → I(S,f,B´(H,p))

These communicative actions are therefore only successful if their primary ends, represented by the consequents of the following formulae, are achieved:

T6   CS(S,H,f,r) → D´(H,r)
T7   CS(S,H,f,p) → B´(H,p)

However, that H in fact does r or believes that p is not sufficient for the success of the respective attempts at communication. This would not even be sufficient for the success of I(S,f,D´(H,r)) or I(S,f,B´(H,p)). In order to meet this condition, the primary communicative aims too would have to be generated in the way S expects them to be generated – i.e. via the addressee's understanding the relevant attempts at communication. This is what (for imperative actions) the following necessary condition for communicative action, the condition of *success expectation*, says:

(SE)   B(S,D´(H,r) ↔ K´(H,CA(S,H,f,r)))
        S believes that his attempt at communication made by doing f, directed towards H, and with the content that H is supposed to do r, will be successful if and only if H correctly interprets S's doing f as such an attempt.

3.2. Taken together, our characterizations of the primary communicative aim and the condition of success expectation provide us with the following criterion of adequacy:

(AC)   CA(S,H,f,r)   ↔   (1)   I(S,f,D´(H,r)) &
                            (2)   B(S,D´(H,r) ↔ K´(H,CA(S,H,f,r)))
        S's doing f is an attempt at communication, directed towards H and having the content that H is supposed to do r, iff (1) S intends to achieve by doing f that H does r and (2) S believes he is able to achieve this if and only if H correctly interprets his (S's) doing f as such an attempt.

From this, together with the following principle, which can already be found in Immanuel Kant

(KANT) W(X,p) & B(X,p → q) → W(X,q)
        "He who wants the purpose (given that the reason has a decisive impact on his actions) also wants [according to the agent's belief, G.M.] the means necessary for the purpose." (*Grundlegung zur Metaphysik der Sitten, B 44 f.*)

we obtain the following *reflexivity condition*:

(RC)   CA(S,H,f,r)   →   I(S,f,K´(H,CA(S,H,f,r)))

        S's doing f is an attempt at communication (an imperative action), directed towards H and with the content that H is (according to S) supposed to do r if S, by doing f, intends to make H correctly interpret his doing f as such an attempt, i.e. if S intends H to realize that S's doing f is such an attempt.

Conditions (AC) and (RC) are, as emphasized earlier, conditions of adequacy: conditions, that is, which any definition of communicative action must meet in order to be adequate. Considered as defining conditions, however, they would be of no use, for they are circular. Thus, the central task of an explicative theory of communicative action consists of explaining concepts of communication in a non-circular way so that the conditions (RC) or, stronger, (AC) are fulfilled.

        According to D1.0, moreover, the condition postulated by (RC) contains the following (necessary) condition concerning the *expectation of being understood*:

(EU) $B(S,K´(H,CA(S,H,f,r)) \leftrightarrow D(S,f))$
        S believes that H will correctly interpret his attempt at communication as such an attempt.

3.3. However, there are further important consequences of our reflexivity condition (RC) – for whatever condition will be necessary for the occurrence of an attempt at communication, H will have to regard this condition as being fulfilled if he is to recognize, according to S's intention, that such an attempt is taking place. More precisely:

(RC-1)   If it holds that $CA(S,H,f,r) \rightarrow B$, then also $CA(S,H,f,r) \rightarrow I(S,f,W´(H,B))$

Let B be such a condition necessary for an attempt at communication CA. Then (RC-1) also holds for this further necessary condition itself. But this is to say that given that B, we have not only shown according to (RC-1) that it is necessary that

(I.1) $I(S,f,K´(H,B))$,

but also that

(I.2) $I(S,f,K´(H,(I.1)))$, i.e. $I(S,f,K´(H,I(S,f,K´(H,B))))$

is necessary; but then also

(I.3) $I(S,f,K´(H,(I.2)))$

is necessary and so on. In general we can say that if, given B, condition (I.n) is also necessary for an attempt at communication, then this also holds true for (I.n + 1) (i.e. $I(S,f,K´(H,(I.n))))$. In other words, if we abbreviate the resulting series of intentions by writing $I*(S,f,K´(H,B))$, (RC) results in postulating for communication what may be called its *absolute openness* (with respect to all necessary conditions):

(RC*) If it holds that $CA(S,H,f,r) \rightarrow B$, then also $CA(S,H,f,r) \rightarrow I*(S,f,W´(H,B))$
        S's doing f is an attempt at communication only if, by doing f, S intends with absolute openness to let the addressee know that his doing f fulfills the conditions necessary for an attempt at communication.

3.4. Communicative actions too have aims. Because at least occasionally their aims are pursued and realized in non-communicative ways, the difference between communicative and non-communicative actions cannot be defined in terms of these aims alone. The difference has to do with something else, namely with the *way* these aims can be (and are intended to be) achieved. As we have seen, this way consists of enabling these aims to be recognized by the addressee.

Initial conjectures concerning a characterization of the concept of communicative action along these lines have been put forward by Paul Grice, although he, of course, talks not about communication but about a speaker's meaning something. This gave rise to much and unfortunately widespread confusion. Grice himself describes his proposal as follows:

> "'S meant something by *x*' is (roughly) equivalent to 'S intended the utterance of *x* to produce some effect in an audience by means of the recognition of this intention'" (Grice 1957, 385).

Later he replaces this (with respect to imperative actions) with the more explicit formulation:

> "'S meant something by uttering x' is true iff, for some audience H, S uttered x intending (a) H to produce a particular response r (b) H to think (recognize) that S intends (1) (c) H to fulfill (a) on the basis of his fulfillment of (b)'" (Grice 1969, 151).

3.5. Translated into our terminology as introduced above (and thus already put more precisely), this 'Basic Gricean Model' says:

(BGM) CA(S,H,f,r)   :=   (1) I(S,f,D´(H,r)) &
$\qquad\qquad\qquad\qquad$ (2) B(S,D´(H,r) $\leftrightarrow$ K´(H,(1)))

$\qquad$ S's doing f is an attempt at communication, directed towards H and with the content that H is to do r, iff (1) S intends, by doing f, to make H do r, and (2) S believes that he will achieve this if and only if H recognizes that S has this intention.

For informative actions the Basic Model would accordingly require:

(BGM-I)   CA(S,H,f,p)   :=   (1) I(S,f,B´(H,p)) &
$\qquad\qquad\qquad\qquad$ (2) B(S,B´(H,p) $\leftrightarrow$ K´(H,(1)))

$\qquad$ S's doing f is an attempt at communication, directed towards H and with the content that p iff (1) S intends, by doing f, to make H believe that p, and (2) S believes that he will achieve this if and only if H recognizes that S has this intention.

As these clarifications show, Grice's condition (b) in his Basic Model is redundant, for this condition *follows* from (1) and (2). Grice's conditions (1) and (2) will henceforth be labeled *M-Intention* (to remind us of Grice's "meaning-intention"). An imperative action will be abbreviated by MI(S,H,f,r), an informative action by MI(S,H,f,p).

3.6. Grice's Basic Model is inadequate in two respects. On the one hand, its conditions are far too weak. S does not, according to the BGM conditions, aim at being understood; not even the expectation of being understood (EU) is entailed by BGM. Therefore, the Basic Model does

not fulfill our reflexivity condition. As Peter F. Strawson (1964) observed, Grice overlooks the dimension of what we called the 'absolute openness' of communication.

On the other hand, however, the Basic Model is far too narrow. This emerges when we compare the success expectation (SE) and the BGM condition (2). According to (2), S believes that he has already realized his primary aim if H recognizes that he (S) has this aim. However, according to (SE), S believes that only H's recognition of the fact that S wants to achieve *via communication* – i.e. openly – that H does r or believes that p is sufficient to make H indeed do r or believes that p.

3.7. Inadequate though Grice's Basic Model may be, supplemented by the idea of absolute openness this model is the *via regia* to an adequate explication of communicative action. At first, we take Grice's M-Intention and then we proceed by defining its absolute openness:

D4   a) $MI_1 (S,H,f,r) := MI(S,H,f,r)$, i.e.(1) & (2) of (BGM-I)
       b) $MI_{1+n} (S,H,f,r) := MI_1 (S,H,f,MI_n (S,H,f,r))$
       c) $MI^* (S,H,f,r) :=$ for all n: $MI_n (S,H,f,r)$
       By doing f S M-intends with absolute openness that H does r.

This move already takes us to our target: a communicative action is nothing but an action performed with M-Intentions which are absolutely open. Apostrophized very roughly: communication = Grice plus his absolute openness. To put it more precisely:

D5   a) $CA(S,H,f,r) := MI^* (S,H,f,r)$
       b) $CA(S,H,f,p) := MI^* (S,H,f,p)$

This definition fulfills (as proven in Meggle 1997) the criterion of adequacy (AC) and therefore also our reflexivity condition (RC). Thus, the following theorems hold (which I shall sometimes formulate for imperative actions and sometimes for informative actions):

T8 $CA(S,H,f,r) \leftrightarrow I(S,f,D´(H,r)) \& B(S,D´(H,r) \leftrightarrow K´(H,MI^*(S,H,f,r)))$
       S's doing f is an attempt at communication, directed towards H and with the content that H is to do r, iff S intends, by doing f, to make H do r, and if S believes that he will achieve this if and only if H recognizes that this intention is an absolutely open M-Intention.

Therefore, again in accordance with (KANT), it holds that:

T9 $CA(S,H,f,p) \rightarrow I(S,f,K´(H,MI^*(S,H,f,p)))$
       S's doing f is only an attempt at communication, directed towards H and with the content that p, if S intends by doing f to make H recognize that S intends with absolute openness that H believes that p.

More generally, we can claim again:

D5.1 $CA_{IM}(S,H,f) := \exists rCA(S,H,f,r)$
       S's doing f is an attempt at communication (of the imperative kind) directed towards H iff there is an action r which S, by doing f, asks H to perform.

D5.2 $CA_{IN}(S,H,f) := \exists pCA(S,H,f,p)$

S's doing f is an attempt at communication directed towards H (an informative action in the broader sense) iff there is a state of affairs p such that S tries to indicate by doing f that p obtains.

Where ambiguities cannot occur, we shall henceforth omit the indices in $CA_{IM}(S,H,f)$ and $CA_{IN}(S,H,f)$.

3.8. One more point concerning absolute openness. That communicative action is absolutely open does not imply that lying is not a specific case of communication. Absolute openness is only a condition of the aims an action must anyway have in order to be a communicative action of a certain kind. That the hearer recognizes or even believes that the speaker himself believes what he wants the hearer to believe is not a communicative aim. Moreover, sincerity itself is not a necessary condition of communication. That is to say, as postulated above, it holds that:

T5 $CA(S,H,f,p) \rightarrow I(S,f,B'(H,p))$

but neither that

(ii) $CA(S,H,f,p) \rightarrow B(S,p)$

nor even that

(iii) $CA(S,H,f,p) \rightarrow I(S,f,B'(H,B(S,p)))$.

3.9. Imperative actions are always *at the same time* also informative actions, for it is always true that:

T10 $CA(S,H,f,r) \rightarrow CA(S,H,f,CA(S,H,f,r))$
         $CA(S,H,f,r)$ only if S, by doing f, tries to indicate that his doing f is an attempt at communication with the content that H is to do r.

This leads us to the question of whether imperative actions ought to be characterized as specific cases of informative actions. Our positive answer is this:

T11 $CA(S,H,f,r) \leftrightarrow CA(S,H,f,MI(S,H,f,r))$ & $MI(S,H,f,r)$

And since it is also true for M-Intentions (as for intentions in general) that:

T12 $MI(S,H,f,r) \leftrightarrow D(S,f)$ & $B(S,MI(S,H,f,r))$

we can read T11 as well as follows:

T13 $CA(S,H,f,r) \leftrightarrow CA(S,H,f,MI(S,H,f,r))$ & $B(S,MI(S,H,f,r))$
         Imperative actions with the content that H is supposed to do r are sincere informative actions with the content that S M-intends H to do r, i.e. informative actions where S indeed M-intends that H does r.

4. Understanding a Communicative Action

We understand an action if we know its rationality reasons or its subjective significance. With respect to the simple case of decisions under certainty we are talking about in the present context, this is to say that we understand an action if we know its underlying intention or the aim pursued by the action. And we understand a *communicative* action if we know its *communicative* significance, i.e. the communicative intention behind it. On the basis of the above explications, this can quite easily be explained in more detail.

4.1. Let r* be the totality of actions H is supposed to perform according to an imperative attempt at communication made by S and let p* be everything H is supposed to believe, according to an informative attempt at communication made by S. Then by direct analogy to 2.3. above we can characterize an accordingly strong concept of understanding of a communicative action thus:

D6 (a) $U(Y, CA_{IM}(S,H,f) := K(Y, CA(S,H,f,r^*))$
(b) $U(Y, CA_{IN}(S,H,f)) := K(Y, CA(S,H,f,p^*))$
Y understands the attempt at communication which consists of S's doing f and is directed towards H, iff Y knows (a) everything H is supposed to do, according to S's attempt at communication, and (b) everything H is supposed to believe, according to the attempt at communication.

We recall that in 3.1. D´(H,r) and B´(H,p) were labeled the 'primary communicative aims' of the communicative actions CA(S,H,f,r) and CA(S,H,f,p) respectively. Therefore we might as well say according to D6 that Y understands an attempt at communication if and only if Y knows that the action in question is an attempt at communication (iff, in other words, Y correctly interprets the action in question as an attempt at communication) and if Y is aware of the primary communicative aim of the action.

4.2. This concept of understanding demands the knowledge of everything H is supposed to do or supposed to believe, according to S. Alternatively we could begin with a concept of understanding which has been relativized to the knowledge of merely partial communicative aims. In this case we might say that Y understands the attempt at communication (made by doing f) with respect to the communicative aim A iff it holds that K(Y,CA(S,H,f,A)); hence, that an attempt at communication made by doing f is comprehensible for Y (as being such an attempt) means there is at least one communicative aim with respect to which Y understands S's attempt at communication. Moreover, that S's attempt at communication is entirely incomprehensible to Y (as being such an attempt) means there is no communicative aim with respect to which Y understands S's attempts at communication.

4.3. All general distinctions mentioned in 2.4.–2.5. are also relevant for communicative understanding. Hence we have to distinguish again:
- between understanding a communicative action and thinking of an action (correctly or not) as being a communicative action (of a certain type);
- between understanding a communicative action and (merely) believing that we understand such an action;
- between understanding a communicative action and knowing that one understands it.

Once again we have to bear in mind that although understanding a communicative action is a case of knowledge, and that knowledge generally implies believing to know, it nevertheless does *not* hold that:

(iv) $U(Y,CA(S,H,f)) \rightarrow B(Y,U(Y,CA(S,H,f)))$

Whoever understands an attempt at communication also knows or believes that he understands it.

4.4. Communicative actions are intentional actions. Whoever understands a communicative action will therefore think of it as an intentional action. Yet it is not true that whoever understands a communicative action also understands the intentional action involved. That is, it *does* hold that:

T14   CA(S,H,f) $\rightarrow$ I(S,f)
T15   U(Y,CA(S,H,f)) $\rightarrow$ B(Y,I(S,f)),

but it does *not* always hold that:

(v)   U(Y,CA(S,H,f)) $\rightarrow$ U(Y,I(S,f)).

The reason is that not all aims pursued by an attempt at communication (in short, not all aims of communication) are communicative aims, i.e. ends which are meant to be recognized by the hearer. On the contrary, attempts at communication are sometimes made on the basis of intentions which, in order to achieve their end, must not be recognized by the hearer. To take an example, little Tom (S) wants to get hold of mother's (H's) jam. He can only achieve this if H leaves the kitchen for a while. S knows that H – it is late in the morning – is waiting for the postman, and in order to make H believe that he has just arrived S says (indeed perhaps truthfully): "There's someone at the gate." The primary aim of communication (i.e. the objective which is the reason why S starts his attempt at communication) is in this case that H goes away so that S can get at the jam. The primary communicative aim, by contrast, is that H believes that someone is at the gate, perhaps also that H believes this someone to be the postman, depending on whether S believes that it is mutual knowledge between S and H that H is waiting for the postman. Someone has understood this attempt at communication (as such an attempt) if he knows this primary communicative aim. The whole intentional action, which comprises the communicative action, is understood if in addition to the communicative aims S's aims of communication are also understood. It is obvious that these further aims are such that H is not supposed to know them. In spite of the reflexivity condition

(RC)   CA(S,H,f) $\rightarrow$ I(S,f,U´(H,CA(S,H,f)))

it does not hold that

(vi)   CA(S,H,f) $\rightarrow$ I(S,f,U´(Y,I(S,f)))
       If S's doing f is an attempt to communicate something to H, S intends by doing f that H also understands S's intentional action performed by doing f.

4.5. Like the concept of understanding an intentional action as explicated in Section 2, the concept of understanding a communicative action too is quite general. It does not require that the person who understands the action also knows how the speaker has acquired his expectations of success and of being understood. Hence it is possible to understand a communicative action even if it remains entirely incomprehensible how S developed his expectations of success and of being understood. Furthermore, we are dealing with the topic of understanding a concrete communicative action. Whether S himself always does f, or whether different agents sometimes do f with the same intentions underlying S's doing f at the time in question, is left open by the claim that an attempt at communication made by doing f

is understood. Finally it should be pointed out that the claim that an attempt at communication is understood does not imply anything about the generation of the beliefs necessary to really understand the action.

4.6. Usually, however, a speaker's reasons for his expectation of being understood are the same as those underlying our own expectations of being understood. The action type realized by S has (as S or we ourselves will know) then a regular communicative meaning for us in the following sense: whoever among us does f (in situations of the relevant type) makes an attempt at communication of a certain kind, and it is common knowledge between us that this is the case (that is to say, each of us knows it, and knows that each of us knows it and so on). If an action already has a regular communicative meaning in this sense, the expectation of being understood, and therefore also the understanding itself, results from knowing this regular meaning.

5. Communicative Success and Understanding

Intentional actions are successful if and only if they achieve their aim in the way they have been expected by the agent to do this. This holds true for communicative actions too: they are successful iff they achieve their primary communicative aim in precisely the way the speaker has expected them to achieve this aim, i.e. via being understood.

5.1. More precisely, an attempt at communication is successful iff S correctly has the expectation of being successful:

(SE) $B(S,B´(H,p) \leftrightarrow K´(H,CA(S,H,f,p)))$

D7.1 $CS(S,H,f,p) \leftrightarrow CA(S,H,f,p) \& (B´(H,p) \leftrightarrow K´(H,CA(S,H,f,p)))$
      S's attempt of communicating that p, directed towards H and made by doing f, is successful iff S's doing f is such an attempt and H believes that p if and only if he interprets this attempt as such an attempt.

Correspondingly, for imperative actions we have:

D7.2 $CS(S,H,f,r) \leftrightarrow CA(S,H,f,r) \& (D´(H,r) \leftrightarrow K´(H,CA(S,H,f,r)))$
      S's attempt of communicating that H is to do r, directed towards H and made by doing f, is successful iff S's doing f is such an attempt and H does r if and only if he interprets this attempt as such an attempt.

5.2. Attempts at communication are intentional actions and, like actions in general, communicative actions also aim to be successful. More precisely, and in direct analogy to the above theorem

T1 $I(X,f,p´) \leftrightarrow I(X,f,IS(X,f,p´))$

it also holds that

T16 $CA(S,H,f,p) \leftrightarrow I(S,f,CA(S,H,f,p))$

5.3. S's reasons for expecting to be successful, i.e. S's beliefs underlying his success expectation (SE) can take many different forms; indeed they may be completely crazy. The same goes for the reasons H has, after having understood S's attempt at communication, for actually believing what he is supposed to believe. D7.1 does not demand that the reasons S and H have are the same. Nonetheless, in usual cases of successful communication they will be the same. More precisely, attempts at communication (of the informative type) are normally successful if and only if S believes that H makes the assumption that the *normal conditions of communication* are fulfilled – and if S rightly believes so, i.e. if H does indeed make this assumption. The normal conditions of communication are the conditions of *sincerity* and of the *absence of error.*

(N-1)   CA(S,H,f,p) $\rightarrow$ B(S,p)
      It is not the case that S tries to communicate to H that p, but does not himself believe that p.

(N-2)   B(S,p) $\rightarrow$ p
      It is not the case that S believes that p, but p is in fact not the case.

If H does not anyway believe that p (i.e. without understanding S's attempt at communication), H will, when realizing that CA(S,H,f,p) holds, and assuming that S fulfills (N-1) and (N-2), himself believe that p. And S can assume that this will be so. That H assumes the normal conditions of communication to be fulfilled guarantees the attempt's success, and it is precisely this which normally provides a sufficient reason for S to expect this success. We do not always presuppose sincerity and the absence of error on the part of the speaker. If we do not, his attempts to communicate with us will (normally) not be successful, even if we understand them. S then has not achieved all communicative aimes he had; in particular he fails to achieve his primary aim.

5.4. Communicative action is successful if and only if (a) the addressee understands the communicative action and (b) if on that basis he does or believes what he is supposed to do or believe, according to the attempt at communication. Now, precisely (b) is what distinguishes the concept of successful communication as explicated in this paper from the usual concept according to which (a) alone is sufficient for 'successful' communication.

5.5. This normal broad usage of 'success' has given rise to deep confusions. These can be located most instructively in Max Black's following thesis:

    (B) Aims beyond the success of communication have practical significance, but they are irrelevant for an analysis of the concept of communication (Black 1972/73).

What shall we say? Obviously, this depends on what the "success of communication" and hence what an aim beyond such success are meant to be. According to our explication, thesis (B) is correct if and only if the aims beyond the success of communication are indeed aims of communication, but not communicative aims. In fact only the latter are, *per definitionem*, constitutive of a communicative action. By contrast, Black himself definitely thinks of his thesis in the broad sense of the success of communication, i.e. thus:

    (B*) All aims beyond understanding are irrelevant for an explanation of the concept of communication.

5.6. The difference between the two accounts may also be characterized as follows. According to the idea explicated in this paper, the expectation of success we have already mentioned a few times must hold for any communicative action:

(SE) $B(S,CS(S,H,f,p) \leftrightarrow U´(H,CA(S,H,f,p)))$
        S believes that his attempt at communication will be successful iff H understands this attempt.

But contrary to what (B*) postulates, condition (S) does not hold:

(S) $CS(S,H,f,p) \leftrightarrow U´(H,CA(S,H,f,p))$.

It is true that, according to the theory outlined in this paper, the success of an attempt at communication does imply in particular that the expectation of success (SE) is correct, i.e. that (S) holds. But this, then, is merely a factual, contingent condition, and not, as (B*) demands, an analytical one.

5.7. What consequences would result if indeed one *did* conceptually identify being understood by the addressee and making a successful attempt at communication – in the narrow sense of $CS(S,H,f,p)$, i.e. if one took, as (B*) suggests, being understood for the primary communicative aim? The (absurd) consequence would be that every attempt at communication had the same content, namely that the action in question was an attempt at communication – and nothing else (see Meggle 1997, 7.10.4).

5.8. Being understood is *the* communicative aim. This is true if it means nothing more than being understood by the addressee is an aim common to all attempts at communication, no matter what content they have. This statement, however, in contrast to (B*), cannot be leveled against our above explications; it is instead a demonstrable consequence of them.

6. Alternative Accounts

Communicative actions are, according to the approach explicated in the present essay, special cases of instrumental actions. From the viewpoint of the communicating subject, being understood by the hearer (runs the basic tenet of this approach) is only a means to some further end, and this end determines the content of the act of communication. Alternative approaches reject this fundamental thesis.

6.1. The best known and also the most influential alternative is speech act theory, which was founded by John Langshaw Austin and developed further above all by John Roger Searle. According to this theory, communicative actions are illocutionary acts. These in turn are distinguished from perlocutionary acts in a way that is meant to be exactly the negation of our basic instrumentalistic thesis.
    Perlocutionary acts are acts of bringing-about-something-by-an-utterrance. The states of affairs thus brought about are labeled "perlocutionary effects". Neither Austin nor Searle, however, explicitly defines an illocutionary act; instead such acts are elucidated by way of examples. Illocutionary acts are acts which are performed if one does something such as:

    R) commanding, asking, requesting, thanking, threatening, warning, advising, apologizing, recommending, promising, demanding, claiming etc.

(R) is a list of possible *illocutionary roles* of utterances. Which of these roles an utterance has depends, according to Austin, on certain rules or conventions surrounding the various circumstances of the utterance. Hence, says Austin, illocutionary acts are essentially rule-determined or conventional.

6.2. In order to perform an illocutionary act successfully, one has to be understood; this is also true according to Austin's approach. Therefore, being understood is also in his view an effect a speaker intends to produce. This effect is intended in every illocutionary act, so it is regarded as an illocutionary effect. In order to understand an illocutionary act one has to know two things, Austin says: the illocutionary aspect (the illocutionary role) of the utterance, and its locutionary aspect. In order to know the latter and thus to know what *locutionary act* is involved, one has to know what sounds have been uttered, what meanings they have in the language in question, and what the speaker means by his utterance. More generally, apart from the illocutionary role, one also has to know the content (according to Searle, the propositional content) of the utterance. Hence one has to know, for example, not only that an utterance is a statement or a command; in addition one has to know what is being claimed or what is being asked for (i.e. what state of affairs is being asked to be realized).

6.3. This general characterization seems to be in complete accordance with our instrumental account of communication as outlined above. Indeed, if the illocutionary aspect of an utterance can be interpreted as a qualification of the communicative aspect, the difference is merely due to the *way* of invoking the locutionary act or the propositional content. Whereas the instrumentalistic account identifies the content of communication (for a concrete act) with regard to its primary communicative aim – hence with a *per*locutionary aim – speech act theory identifies this aim by reference to the linguistic meaning of the expressions uttered. This holds for Austin in general, and at least for non-directives for Searle. But at this point an essential limitation emerges in Austin and Searle's speech act theory. In their approach the central question does not address the conditions under which an action (of whatever kind) will be an attempt at communication with a certain content. Instead, they are concerned with the far more specific question of what (communicative) roles an utterance can have, given that the speaker *means* what he *says*. That something is said (i.e. that something is uttered which already has a linguistic meaning) is presupposed. Thus, speech act theory is not interested in communication in general; right from the start its focus is only on linguistic communication.

6.4. Speech act theory assures us that in order to understand an illocutionary act, one has to know two kinds of rules; firstly, rules which do not vary with respect to the different languages, but which determine the conditions an utterance must fulfill in order to have a certain role, and secondly, meaning rules relative to a language by virtue of which the utterance of certain words (when literally meaning what is said) is the performance of an illocutionary act with a certain content. According to Austin, rules of the former type generally refer to conventional effects of actions; hence they presuppose the relevant conventions or institutions. Now, this might be true for his paradigm examples, getting married and being baptized. But it is certainly not true for the illocutionary actions of commanding and informing, which are central to a theory of communication (Strawson 1964 and Schiffer 1972). Austin's thesis of the irrelevance of the perlocutionary dimension for meaning is entirely plausible for his examples (getting married does not have an end determining the meaning of getting married). Since such kinds of actions can be prime examples of illocutionary acts, it is true, of course, that in general there is no need to invoke something perlocutionary in order to explain (or understand) illocutionary acts. But this does

not yet demonstrate the truth of Austin's stronger thesis, according to which one need not in general invoke anything perlocutionary in order to explain (or understand) illocutionary acts.

6.5. Bach/Harnish (1979) made the quite plausible proposal of distinguishing between conventional and communicative illocutionary acts. Austin's concept of illocution fits the former, not the latter. But then most objections from the quarter of speech act theory against an instrumentalistic explication of the latter fail to get off the ground. The first serious steps towards a reconstruction (in terms of a theory of communication) of those concepts of speech act theory which are designed for communicative illocutionary acts can be found in Maria Ulkan (1992). Her radical suggestion is to identify 'illocutionary' with 'communicative', with 'communicative' being characterized exactly as above. Hence illocutionary acts are explained as specific cases of perlocutionary acts, namely as acts which have aims whose realization goes hand in hand with absolute openness. According to this proposal, speech act theory is not an alternative account, but can be identified with the one explicated above. A genuinely systematic discussion (i.e. above all a discussion assessing the pros and cons for the theory of communication and the theory of meaning) of the rule-theoretical account of speech act theory on the one hand, as developed in the meantime especially by Eike von Savigny (1983), and the instrumentalistic variant on the other, is yet to come.

6.6. One of the most influential objections against instrumentalism has been put forward by William Alston (1964, 41). (a) Suppose I know that a certain door is already shut, then I cannot want to bring about that it is shut. Hence, if instrumentalism is correct, whatever I do or say, it cannot constitute a request to shut the door. (b) Yet, if in a situation of this type I say to someone "Please shut the door," this cannot be understood, as I will know myself, as anything but a request to shut the door. (c) Therefore instrumentalism is wrong. Now, premises (a) and (b) may be correct. But (c) does not follow from them. The argument is based on confusion between two different uses of 'request'. Only (a) talks about requests in the sense presently at stake, that is, only (a) refers to CA(S,H,f,r)-actions. In (b), by contrast, 'request' refers to the linguistic form of the utterance. The sentence uttered is neither a question nor an assertion; rather, it is a request, namely – this too is true – a request to shut the door. But this does not mean that every utterance of this request-sentence is in fact an imperative action with the content that H is meant to shut the door. (i) In the situation described in (a) the utterance is not such an action. It is possible that S simply wants H to leave the room. In that case he wants H to *interpret* his utterance as a request to shut the door, but it *is* not such a request. (ii) Furthermore, the utterance would not be such a request either if S knew that H knows that the door is already shut. Suppose there is a third person D, and S would like to let H know – openly between S and H, but concealed from D – that S would like H to leave him (S) alone for a minute with D. In case (ii) premise (b) is false, in (i) it is true. To conclude, we have to distinguish between concrete tokens of requests and requests in the sense of sentences which are normally (but not always) used to make a request. If we do so, Alston's objection loses its point.

6.7. Similar charges against an instrumentalistic theory of communication have been put forward by Karl Otto Apel and, in great detail, by Jürgen Habermas (cf. Apel 1981; Habermas 1981/82; 1984). The theory of communicative action formulated in these works, however, is concerned with communication in a sense much narrower than that employed in our approach. It is concerned with a theory of agreement and of the social process of finding consent. And indeed, the instrumentalistic approach explicated in this paper only contributes a helpful fraction to a theory of this type.

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