
What is Communicative Success?

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I Introduction

In most of our communicative transactions we are confident of success. We read the newspaper and are normally pretty sure that we have understood the text. We usually think we understand what is said in the TV broadcast and in casual conversation, and only rarely do subsequent events make us revise our judgment that we did.¹ But that we are confident of success, even if we are right, and even if we are both right and justified, does not mean that we have a clear idea of what success consists in.

Ideas about successful communication have had a prominent place in the philosophy of language in recent decades, mostly as a step on the way to meaning theoretical claims. This has been the case with philosophers like Wittgenstein, Quine, Davidson, Dummett, and Evans. Mostly, the discussion of communicative success has been of limited extent, serving as a subordinate part of some longer argument. I follow

1 In conversations on more abstract matters the confidence rate, and presumably also the success rate, is lower. In Pagin (2006) I argue that a high rate of verbal agreement (assent to the same sentences) provides a good reason for believing that there is a high rate of communicative success and agreement in belief.

this tradition of giving communicative success a central role in theorizing about meaning, but I mostly disagree with the ideas that over the years have been offered in it.² In fact I am going to defend what I call *the classical view* of communicative success, a view that I attribute both to Locke and to Frege (see section II). I am going to defend it against modern views of a behaviorist/pragmatist character, views that impose a requirement of knowledge, or of reliability, and views by which public language semantics must be in place before communicative success can be accounted for.

Before proceeding, I will pause for a brief methodological interlude.³ As with many other basic notions in philosophy, when we are trying to come up with a general account, it is not so clear what the success conditions of the account itself is. Moreover, as with many other basic notions, it is not obvious that we can come up with neutral and generally agreed upon criteria of adequacy that are separate from the competing accounts themselves. On the contrary, often a dispute about what is the best account involves a dispute over criteria of assessment, and I don't expect things to be different in the present case. I shall simply state what I take the criteria to be.

First, I do not think that there is a well-defined pre-theoretic concept of communicative success that is available as object of conceptual analysis. What we have is a common sense practice of judging communicative success or failure in vernacular terms such as 'He did not understand,' 'She misinterpreted him,' 'He got the message,' etc. As speakers of English we do have intuitions about the correctness of such utterances with respect to various scenarios, even if we have much poorer intuitions about the exact content of the judgments expressed, about the evidence that is appropriate for making them, or about the extent to which the judgments are supported by the evidence used. I do take it, nevertheless, as a general criterion of adequacy, that the rate of success, as judged by the defined concept of the account should be roughly equal to the rate of success as judged by the standards of the pre-theoretic practice. We should, I think, by default attempt to provide a systematic reconstruction of the common sense standards by which communicative success is usually judged. If there is a significant difference between the two, then either there is a conceptual difference between the account and the common sense practice, or we have to

2 Also, I think it is high time to recognize the topic of communicative success as a topic of importance in its own right. That it is emerging as a topic is shown by Paul (1999), a monograph on success in referential communication.

3 This is prompted by a question from an anonymous referee.

ascribe a high rate of error to the practice from the theoretical point of view. The second alternative is not acceptable unless we have strong independent reasons for believing both that the proposed account is correct and that its concept of communicative success is in line with notions employed in common sense. Without such reasons, it is a criterion of adequacy that the rate of success as judged by the theory matches the rate of success as judged by the standards of common sense.

There is, however, a further question whether common sense standards are reasonably constant or whether they shift between contexts, perhaps because of variations in interest. I think that we have one default method for answering that question, and that is to use our own common sense intuitions about understanding, and therefore, to the extent that such context dependence is not revealed in common sense intuitions, there is no reason to assume one. So far, I have not seen any reason to bring context dependence into the account.

Still, there is one crucial parameter. Speaker intention (or speaker mental content) and linguistic meaning sometimes, and perhaps even usually, come apart, because of the use of semantically context-dependent expressions, and because of other pragmatic features, like implicature. I take it that in common sense judgments we *usually* care most about getting mental content right, and usually also make it explicit when we don't. However, that is theoretically controversial. In section VII, I provide a theoretical argument for taking agreement in mental content to be more basic than agreement in linguistic meaning: to the extent that semantics is *based* on providing an account of communication, we must take communicative success to be defined independently of assumptions about linguistic meaning. Otherwise, semantics must be based on something else, and there is no better basis. Cf section VII. End of methodological interlude.

I now turn to locating the issue of the nature of the success relation among a range of related issues. First, I prefer to use the term 'communicative success' rather than 'successful communication,' since it helps us focus on the question of success conditions, given background ideas of what communication *is*, whereas the term 'successful communication' is more appropriate for an inquiry into the nature of communication in general, including the issue of success. Still, the question of success cannot be posed independently of background assumptions about communication in general. In fact, in this paper I shall concentrate on an issue that is located in between that of communication in general and a more specific question of *standards* of success. I distinguish among the following:

1. What is a communicative event?
2. Which are the relata of the success relation?
3. Which are the standards of success?

Here the third question presupposes an answer to the second, and the second an answer to the first. The topic of this paper will be the second question, but before proceeding with it I shall sketch ideas about the first, and also indicate some alternatives as answers to the third.⁴

Communication, as I shall use the term, is something that takes place in individual communicative events.⁵ In a communicative event there is a sender, a signal, and a receiver. The event is a process that starts with some inner state of the sender and ends with some inner state of the receiver. In between a signal is transmitted between sender and receiver. The relevant inner state of the sender takes part in causing the signal, and the signal in turn takes part in causing the relevant inner state of the receiver.

This is not sufficient for a definition of communication, but it indicates essential ingredients. It is consistent with ideas both in animal communication studies and in engineering science. In general, and for several reasons, I prefer to keep basic notions broad, and to introduce what is specifically human, and what is specifically linguistic, as *differentia* rather than to impose them as essential parts of the general notions themselves. Partly as a result of this, my use of ‘communication’ will diverge from the everyday use of the action verb ‘to communicate.’ For instance, I shall not require of a communicative event that the sender *intends* to communicate; the sender may be a machine, an animal or an unsophisticated human that lacks any concept of communication, or doesn’t have intentions regarding inner states, or doesn’t have any

4 Although the general distinction between successful and unsuccessful communication makes sense, not every theory will allow for the latter. For instance, if you think that the hearer’s recognition of the communicative intentions of the speaker is necessary for communication to take place, and also that this recognition is sufficient for success, then you count the very idea of communicative failure as inconsistent. The idea of the securing of *uptake* was introduced into speech act theory tradition by J.L. Austin (Austin 1975, 117), but in general the contribution of the hearer has not been of great concern.

5 Grammatically, ‘communication’ is a mass term (taking mass determiners like ‘much’ rather than count determiners like ‘many’), but this feature is shared by other activity terms which nevertheless have individual acts or events in its extension, like ‘speaking’ and ‘jumping.’

intentions at all. The same goes, *mutatis mutandis*, for the *understanding* on the part of the receiver.⁶

Further, I shall not require that the receiver of a successful event is the receiver that is *intended* or *preferred* by the sender. Since this is irrelevant from the point of view of assessing whether someone has understood a message it is better not to complicate matters by adding that requirement.⁷ I shall also say that where there are several receivers, there are also several communicative events, even though they all have the same sender, and at least partly the same signal.

Similarly, I shall not require that the receiver be distinct from the sender. A person, an organism or a device can receive a message or signal from itself. However, this possibility doesn't trivialize the idea, since the receiving inner state must be caused by the signal. It cannot be identical with the sending inner state, which isn't caused by the signal, and therefore there cannot be any 'vacuous' communication.

I said that the communicative event starts and ends with inner states. To require that the communicators have inner states is a way of ensuring that they are at least minimally complex organisms or devices. By 'inner' I don't mean that the states must be mental, or private, or unobservable. Rather, I suggest that to be called 'inner' a state is only *indirectly* involved in normal causal interaction with the environment. Without such a restriction, it would be admissible to count any causal interaction between two entities as communication, and this would trivialize the idea. An inner state of the relevant kind may be, for instance, a dispositional state, i.e. a (physical or mental) state such that an organism or device in that state has a particular disposition. The disposition in turn may be a disposition to send a particular signal under certain circumstances, and the signal may cause the creation of a similar dispositional state in the receiver.

What has been said so far can do at best for a rough and ready sorting of events into communicative and non-communicative, but it does serve to indicate essential aspects of the concept. In order to have a

6 Still, I think there has to be some communicative *purpose* served by the respective inner states of sender and receiver, for otherwise it doesn't make sense to distinguish between success and failure. The existence of such a purpose is explained in different ways for different communicators, e.g. by appeal to sender and receiver intentions, by appeal to biological functions or by appeal to design.

7 Interception and successful decoding by the British of German coded submarine signals during WWII therefore counts as part of successful communication. What matters for success here is that the British got the signal and figured out what the message was. For present purposes it is beside the point that in other contexts we wouldn't want to say that the Germans 'communicated' their plans to the British.

complete account much more elaborate constructive work would be needed. However, since I shall here be concerned specifically with human linguistic communication, I shall simply draw on prior understanding of what inner states may be involved, rather than attempt a complete general definition.

Still, the idea is general, and the subordinated idea of inner state end points provides the immediate background for the distinction between success and failure. The general *idea* of success is this: a communicative event is successful just if the terminal state *corresponds to* the initial state. What the correspondence is to consist in will depend on the type of communication in question. For instance, in the case of monkey alarm calls, a kind of animal communication, we might say the following: The calling monkey *S* has perceived a predator and the perception has caused an emotional state *e* in the monkey. State *e* triggers escape behavior and the combination of being in state *e* and of perceiving conspecifics nearby triggers an alarm call *u*. A receiving monkey *R* perceives *u*, and an emotional state *e'* is caused in *R* by *u*. It is now natural to count the event communicatively successful if *e* and *e'* are of the same *type*. Sameness of type of emotional state would plausibly be judged at least partly by behavioral criteria. Thus, *R* would enter into the same dispositional state as *S*, making *R* ready both to escape and to give an alarm call in turn. However, we can also count communication successful if the type of the end state is somewhat different, for instance if the emotional state caused in *R* just triggered escape behavior and did not make *R* disposed to give alarm calls in turn. Plausibly, an analysis of ecological and evolutionary factors should decide what to say in such cases.⁸

It is natural to think that in human communication, and in linguistic communication in particular, we are concerned with the communication of thought contents, and of attitudes to thought contents.⁹ The inner states in question are then states, or episodes, of thinking, i.e. an occurrent mental state of a person at a particular time.¹⁰ By attitudes to a thought content I mean the traditional kinds of propositional attitudes, i.e. believing, wishing etc. For instance, a speaker *S* might express the

8 For an informative account, see Cheney and Seyfarth (1990).

9 Much of human and animal communication amounts to conveying attitudes, such as friendliness or directed anger, as well as non-directed emotional states. I shall not here be concerned with such communication, even though I intend the general conception to cover this kind, too.

10 As is often pointed out, we have many beliefs that are latent: we seldom, if ever, think about their contents but would judge them true.

hope that the milk in the refrigerator is fresh, and the communication is then successful just if the hearer *H* enters into a state with the corresponding content, i.e. that the (same) milk in the (same) refrigerator is fresh (at the same time), and in some way or other recognizes that *S* was hoping rather than, say, believing, wondering or simply desiring. Exactly what this second part, the attitude kind recognition part, involves, is not easy to say. Among sophisticated speakers it is often a matter of explicit awareness of the kind of attitude expressed, but I think this need not always be the case.¹¹ In this paper, however, I shall restrict attention to the first part.

The restricted natural assumption, then, concerns only the communication of thought content. It is on the whole analogous to the basic idea of the mathematical theory of communication, as developed by Claude Shannon:

The fundamental problem of communication is that of reproducing at one point either exactly or approximately a message that has been selected at another point. (Shannon, 1949, 31)¹²

11 There is a legitimate worry, raised by a referee, that I cannot specify the attitude recognition part of success conditions without requiring that the hearer possess psychological concepts, like the concept of intention, a requirement I argue against later on. Although the issue cannot be addressed in full here, I think the difficulty can be handled. To illustrate, using the contemporary 'box'-jargon due to Schiffer 1987 (concerning the belief-box), we might take the hearer to have a small number of recognition boxes, such as a constative-recognition-box and directive-recognition-box, and a few more, and that it is part of success conditions that the hearer's mental representation of content is activated in the right recognition-box. Although this may sound initially implausible, I think it fits well e.g. with the distinction between proto-declarative pointing ('Look at that!') and proto-imperative pointing ('Get me that!') that is applied to infants in contemporary child psychology. It is plausible to ascribe to small children discriminative reactions to declaratives and imperatives, long before they have any explicit conception of the difference. This is merely a hint at a part of the full account that needs to be spelled out, but which falls outside the scope of the present paper.

In modern speech act theory, by contrast, following and extending Grice's work, there is a tradition of requiring communicators to have very complex communicative intentions and recognitional beliefs. I think this is largely exaggerated, and empirically false of at least some linguistic communication. See Pagin (2004), and Glüer and Pagin (2003).

12 Shannon is quick to point out that in the engineering treatment of communication the semantic aspects are left out. That is, it is a matter of reproducing a physical message at the receiving point of the communication channel, regardless of the meaning or content of that message. Still, reproducing a physical message amounts to instantiating a type that is either the same or suitably related to the type of the original message, and this description still applies to the semantic aspects.

The idea implicit in this passage is that communication has succeeded if the message produced at the end point is an exact (or approximate) reproduction of the initially selected message. Translated into psychological terms, the natural assumption is that communication succeeds when the content of the hearer's terminal state is the same (or approximately the same) as the content of the speaker's initial state. This view can be separated into three components:

- a) The first component is that thought contents can be *shared*. That is, it is possible for two persons to have thoughts with *the same* content. Contents are intersubjectively accessible (hence not e.g. *mental*, in the sense of 'mental' in which a particular mental state cannot obtain in more than one mind). The terminal state can 'reproduce' the initial state in the sense of having the same content.
- b) The second component is that what matters for success and failure of communication is whether the content of the terminal state stands in some suitable *relation* to the content of the initial state. That is, success conditions are to be stated in terms of a relation between thought contents. These two first components make up what I shall call *the classical view* (a label to be justified in the next section). It has been heavily criticized within analytic philosophy, and I shall discuss this critique, and competing alternatives, later on.
- c) The *third* component of the natural assumption about communicative success is that the appropriate relation between thought content is the *identity* relation. To select the identity relation is to choose a particular *standard of success*, i.e. to select a particular answer to question 3.¹³

To ask for a standard of success is — in case the answer to question 2 is that of the classical view — to ask how the content of a thought *e* is to be related to the content of the thought *e'* in order for a communica-

13 Strictly speaking, before we can distinguish between identity and non-identity between thought contents, we need a conceptual framework for individuating them. One such framework is provided by possible worlds semantics: two thoughts then have the same content just if they are true with respect to exactly the same possible worlds. One can also prefer a more fine grained individuation, for instance by assuming that contents have structure, so that two contents with the same truth conditions can nevertheless be distinct because of having different structure. This issue is discussed in greater detail in Pagin *submitted*.

tive event with e and e' as end points to be successful. To require the identity relation is to require that the content of the hearer's thought is the same as the content of the speaker's thought. But that is not the only option. It might be enough that the contents are only approximately the same, i.e. that there is a sufficient degree of *similarity* between them, for instance because very marginal differences would matter to communication only under extreme circumstances that will in fact never obtain (this seems to me the correct alternative). Other kinds of deviation from the identity standard than a similarity requirement are possible, as well. But this is a topic for another occasion.¹⁴

II The classical view

Above I gave the title 'the classical view' to the view that, first, thought contents are intersubjectively shareable, and, second, what matters for success and failure of a linguistic communicative event is whether speaker thought content and hearer thought content stand in some particular relation. This label is appropriate, for I think this view can be correctly attributed both to Locke and to Frege. Locke writes, in Book III of *Essay Concerning Human Understanding*:

[Words, in their immediate signification, are the sensible signs of his ideas who uses them.] The use men have of these marks being either to record their own thoughts, for the assistance of their own memory or, as it were, to bring out their ideas, and lay them before the view of others: words, in their primary or immediate signification, stand for nothing but the ideas in the mind of him that uses them, how imperfectly soever or carelessly those ideas are collected from the things which they are supposed to represent. When a man speaks to another, it is that he may be understood: and the end of speech is, that those sounds, as marks, may make known his ideas to the hearer. (chapter 2, section 2)

And a little later he adds:

First, *They suppose their words to be marks of the ideas in the minds also of other men, with whom they communicate*: for else they should talk in vain, and could not be understood, if the sounds they applied to one idea were such as by the hearer were

14 In *Pagin submitted* I argue at length that an identity standard is too high, and that a similarity standard motivated by explanatory role is the adequate standard of success.

It may be noted here that the repeated criticism, in the writings of Jerry Fodor and Ernie Lepore (Fodor and Lepore 1992, 1999) of the idea of intersubjective similarity of content does not really offer any argument against the similarity view itself, but rather of the *content internalism* with which intersubjective similarity is combined in works of Paul Churchland.

applied to another, which is to speak two languages. But in this men stand not usually to examine, whether the idea they, and those they discourse with have in their minds be the same: but think it enough that they use the word, as they imagine, in the common acceptation of that language; in which they suppose that the idea they make it a sign of is precisely the same to which the understanding men of that country apply that name. (chapter 2, section 4)

I shall here disregard differences between Locke's notion of an *idea* and modern notions of thought content, and simply understand Locke's notion as belonging to the family of conceptions of thought content.¹⁵ Then, I think it is reasonable to attribute to Locke the following three views: First, ideas are shareable. It is possible for two persons to entertain the same ideas. Second, whether or not communication succeeds depends on the ideas entertained by speaker and hearer. Third, communication succeeds just in case the speaker idea is the *same* as the hearer idea.

Of course, the first and second of these views are entailed by the third (together with the tacit premise that communication sometimes does succeed). The third, in turn, is attributable to Locke on the basis of the second passage, where he distinguishes between two cases: in the first case speaker and hearer associate the same ideas with the same words, and in the second they associate different ideas. In the first case, they speak the same language and in the second they speak different languages. Locke is explicit about the second case, but I think the first case is implicit in the text. Finally, it is natural to think that Locke thought that when two persons communicate using the *same* language, they communicate successfully, and with different languages (same words, different ideas) unsuccessfully. Only when we speak the *same* language, in this sense, i.e. associate the same ideas with the expressions used, do we communicate successfully. Thus, I think it on the whole fair to take Locke to represent the classical view.¹⁶

The second classical representative of the classical view is Frege. In 'Über Sinn und Bedeutung' Frege explicitly stresses the first and most basic point, that contents are shareable:

15 In fact, Locke's view that ideas are mental conflicts with the view that ideas are shareable, but I think this is a real conflict in Locke's thinking about ideas, not an indication that he didn't think that ideas are shareable.

16 Note that Locke's *further* claim that words refer to, or stand for, ideas in the minds of speakers is not part of what I call the classical view, and not part of what I endorse. Still, the consequences of this semantic theory for the possibility of communication are not as easy to determine as many seem to have thought.

Both the nominatum (*Bedeutung*) and the sense (*Sinn*) of a sign must be distinguished from the associated image (*Vorstellung*). If the nominatum of a sign is an object of sense perception, my image of the latter is an inner picture arisen from memories of sense impressions and activities of mine, internal and external. ... The image is subjective; the image of one person is not that of another. Hence, the various differences between the images connected with one and the same sense. A painter, a rider, a zoologist probably connect very different images with the name 'Bucephalus.' The image thereby differs essentially from the connotation (*Sinn*) of a sign, which latter may well be common property of many and is therefore not a part or mode of the single persons's mind; for it cannot well be denied that mankind possesses a common treasure of thoughts which is transmitted from generation to generation. (Frege 1892, 201. I have added the German originals)

Frege emphasizes that images are subjective, and therefore unshareable, while senses can be shared. It is not clear, although probable, that Frege at this time thought that all senses are shareable, but it is clear that he thought that no mental image is.¹⁷

Frege does not say much in 'Über Sinn und Bedeutung' about conditions of communicative success, but his remark in footnote 2 indicates that the relation between senses attached to expressions by speaker and hearer is at least an important factor. He notes that speakers might associate different senses with words, such as with the name 'Aristotle.' This impairs understanding, but is 'tolerable' as long as reference is the same (Frege 1892, 210, n2). How this should be related to the present terms of 'success' and 'failure' is not completely clear.

Frege comes back to the question 26 years later in 'Der Gedanke.' He then provides an example of two speakers communicating about a third person, presented to each of them in a different mode:

Suppose further that Herbert Garner knows that Dr. Gustav Lauben was born on 13th September, 1875m in N.N. and [that] this is not true of anyone else; against this, suppose that he does not know where Dr. Lauben now lives nor indeed anything else about him. On the other hand, suppose Leo Peter does not know that Dr. Lauben was born on 13th September 1875, in N.N. Then, as far as the proper name

17 In the immediately following paragraph, Frege goes on to consider an objection to this division between subjective images and intersubjective senses: 'While, accordingly, there is no objection to speak without qualification of the sense in regard to images, we must, to be precise, add *whose* images they are and at what time they occur. One might say: just as words are connected with different images in two different persons, the same holds of the senses also. Yet this difference would consist merely in the manner of association. It does not prevent both from apprehending the same sense, but they cannot have the same image. *Si duo idem faciunt, non est idem*. When two persons imagine the same thing, each still has his own image. It is true, occasionally we can detect differences in the images or even in the sensations of different persons. But an accurate comparison is impossible because these images cannot be had together in one consciousness' (Frege 1892, 201).

'Dr. Gustav Lauben' is concerned, Herbert Garner and Leo Peter do not speak the same language, since, although they do in fact refer to the same man with this name, they do not know that they do so. Therefore Herbert Garner does not associate the same thought with the sentence 'Dr. Gustav Lauben has been wounded' as Leo Peter wants to express with it. (Frege 1918, 25)

Frege here uses the same contrast as Locke, that between speaking the same language and speaking different languages (same words, different senses), and it is reasonable to think that as applied to this example, this distinction coincides with that between success and failure of communication. Frege similarly distinguishes between associating the same thought and associating different thoughts with the same sentence. Since a thought (*Gedanke*), in Frege's terminology, is something that is or can be the sense of a sentence, this is again a matter of associating senses with linguistic expressions. However, Frege also held that *thoughts*, in his sense, are what is *grasped* in thinking (Frege 1918, 22). So, the most reasonable interpretation is that a Fregean thought serves both as the meaning of a sentence and as content of the thought (in my sense) expressible by that sentence.¹⁸ Putting this together, we have a justification for ascribing to Frege the view that success and failure of communication is a matter of the relation between thought contents of speaker and hearer.¹⁹

18 This interpretation is reinforced by considering Frege's doctrine, in 'Über Sinn und Bedeutung,' of indirect reference. In the sentence 'Leo believes that Dr. Lauben is wounded' the embedded sentence, according to this doctrine, refers to its own sense. Since it is used here to say what someone believes, i.e. to refer to the content of a belief, we have a further reason for identifying sentence meaning with thought content.

19 This picture of Frege as representing the classical view must be somewhat modified because of his views on indexicals, and especially 'I.' Because of indexicals we must distinguish between linguistic meaning and thought content, for the meaning of

(1) I am wounded

is constant, although what is expressed by it is different when used at different times and by different speakers. More importantly, however, Frege held that some exceptional thought contents are not shareable. What Dr. Lauben expresses by (1), given the normal use of 'I,' is something that cannot be grasped by anyone else than Dr. Lauben himself (Frege 1918, 26), since every person is presented to him/herself as to no one else (and since sense, according to Frege, is what contains the mode of presentation of the referent). This, however, is a marginal exception to Frege's general view that senses are shareable (I think Frege did make a mistake in this case), and I shall continue to count Frege as representing the classical view, despite this aberration.

In the remainder of this paper I am going to defend the classical view, mainly by criticizing the non-classical alternatives. I shall begin by presenting the objections to it.

III Objections and alternatives to the classical view

The classical view has been seriously criticized in 20th century analytic philosophy. The common ground of the criticisms I have in mind is that *intersubjectivity* is more basic than *subjectivity*. That is, according to the common part of these views, what is intersubjectively accessible, in the sense of being equally knowable by all persons that can know it at all, is more basic than what is subjectively accessible, in the sense that one person has some privileged epistemic access to it. By normal conceptions, this distinction coincides with that between the non-mental (physical and abstract) and the mental: no one has any privileged epistemic access to the physical or the abstract, while each person has a privileged access to his or her own mental life. Hence, this is a trend of anti-mentalism, i.e. a trend of opposing the idea that in philosophy we can take facts about the mental (including Cartesian, first-person facts) as an unproblematic starting point of inquiry.

This general stance on the subjective and the intersubjective has in particular been applied to language and linguistic meaning. In this case, this amounts to the view that language — more specifically, linguistic meaning — is *public*. This view has a metaphysical and an epistemological version (cf. Pagin 2000; Stjernberg 1991; Føllesdal 1995). On the metaphysical version it is the nature of linguistic meaning to be intersubjectively accessible in the previous sense: what a person means by his or her words depends on facts which are as accessible to others as to the speaker. The most well-known, and perhaps most extreme example is Quine's linguistic behaviorism, according to which 'there is nothing in linguistic meaning beyond what is to be gleaned from overt behavior in observable circumstances' (Quine 1992, 37-8).²⁰

Briefly, Quine argues to linguistic behaviorism as conclusion from the premises that we manage to learn to speak a language from others and that (because of the truth of empiricism) our learning depends only on what we can observe through our senses:

In psychology one may or may not be a behaviorist, but in linguistics one has no choice. Each of us learns his language by observing other people's verbal behavior

20 Quine's views are, however, motivated by epistemological concerns. See Pagin (2000).

and having his own faltering verbal behavior observed and reinforced or corrected by others. We depend strictly on observable behavior in observable situations.... There is nothing in linguistic meaning beyond what is to be gleaned from overt behavior in observable circumstances. (Quine 1992, 37-8)

The conclusion, that knowledge of meaning (i.e. of what others mean), depends precisely on observation of the behavior of others, needs the additional premise that linguistic behavior of others is the only part of observable reality that is relevant for such knowledge. On my construal, then, Quine argues for metaphysical conclusions about linguistic meaning from premises that are epistemological in character.²¹

This connects Quine's criticism with the epistemological strand of publicness, which has been pressed most explicitly by Michael Dummett. On Dummett's view, it is not enough for success in communication that our thoughts in fact have the same content. We must also *know* that they do. Or more accurately: we must know that we understand the linguistic *expressions* in the same way, for on this view, success conditions should be stated in terms of public language semantics rather than in terms of mental content. Speakers must know that they attach the same reference, or the same sense, to the sentences they are using. From this point of view Dummett criticized Frege. On Dummett's view, the objectivity of sense is not enough, for it is part of communicative success that we can also be certain that we do attach the same senses to our words. In a characteristic passage, Dummett states:

If language is to serve as a medium of communication, it is not sufficient that a sentence should in fact be true under the interpretation placed on it by one speaker just in case it is true under that placed on it by another; it is also necessary that both speakers should be aware of the fact. (Dummett 1980, 132)

Similarly, Dummett claims:

The objection to the idea that our understanding of each other depends on the occurrence in me of certain inner processes which prompted my utterance, the hearing of which then evokes corresponding inner processes in you, is that, if this

21 Cf Pagin (2000), 164-70. In his reply, Quine explicitly rejects my construal of his argument, but appears to take the rejection back in the last sentence of the same paragraph: 'We next find Pagin eliciting and appraising an argument from the intersubjectivity of linguistic meaning to linguistic behaviorism. I should have expected the reverse: linguistic behaviorism can accommodate only intersubjective meaning. In support of linguistic behaviorism itself I expect no deductive argument. The doctrine rests only on our observation of language acquisition and the empirical implausibility of supplementary channels such as telepathy' (Quine 2000, 421).

were so, it would be no more than a hypothesis that the sense you attached to my utterance was the sense I intended it to bear, the hypothesis, namely, that the same inner processes went on within both of us. If such a hypothesis could not be established conclusively, if it were in the end an act of faith, then thought would not be in principle communicable: it would remain a possibility, which you could never rule out, save by faith, that I systematically attached different senses to my words from those you associated with them, and hence that the thoughts you took me to be expressing were not those I understood myself to be expressing. (Dummett 1978, 102)²²

Although these passages leave some exegetical uncertainty, it is reasonable to interpret Dummett as demanding of communicators that they know that they understand the expressions used in the same way, or at least that they know that their respective meaning assignments yield the same truth value.

In both Quine's and Dummett's case I think a plausible condition on successful communication has been stated. It is plausible that all our external information about what others mean comes through the senses. To that extent, the doctrine of linguistic behaviorism seems correct, but only a weak version of this doctrine can be justified this way.²³ Similarly, it is plausible, at least, that speakers in a linguistic community should know, or at least be able to know, that they are communicating successfully. To that extent, a knowledge requirement is justified. However, I think that in both cases the application of the condition is mistaken, for in both cases the individual communicative event is the wrong unit to state it for. Such conditions may apply to communication overall, or to a means or *method* of communication, but not to the individual event. This point will be made repeatedly.

In the remaining sections I shall briefly discuss the following views on success:

1. Behaviorism / pragmatism
2. The knowledge requirement
3. The reliability requirement
4. The order of explanation

The third item on this list, reliability, is a requirement that communicative success cannot take place by chance: the process must be *reliably*

22 Cf. Dummett 1989, 201-3.

23 In Pagin (2000) I argue that the version that can be justified by appeal to intersubjectivity is too weak to support the claim of indeterminacy of translation.

successful. This requirement, too, adds something that is not part of the classical view. The fourth item concerns the more general question whether a semantic theory must be in place first, before we can answer questions about communicative success or failure, or whether, on the contrary, questions of communicative success or failure are more basic and must be understood independently.

IV Behaviorism / pragmatism

In the second chapter of *Word and Object* Quine stated desiderata for a translation manual in terms of preservation of stimulus meaning, stimulus synonymy, observation sentence status etc. (Quine 1960, 68). Perhaps because of becoming aware of several problems involved in making intersubjective sense of stimulus meaning, Quine later, in *Pursuit of Truth*, switched to a less technical, but still largely behavioristic statement of success conditions:

A pioneer manual of translation has its utility as an aid to negotiation with the native community. Success in communication is judged by smoothness of conversation, by frequent predictability of verbal and nonverbal reactions, and by coherence and plausibility of native testimony. It is a matter of better or worse manuals rather than flatly right or wrong ones. (Quine 1992, 43)

It should be stressed that here, as well as in *Word and Object*, Quine states the terms of evaluation for the translation *manual*, not for the individual linguistic exchange. In general, I shall distinguish between the *event level* and the *method level*, where conditions applied to the method level are conditions on translation manuals, interpretation strategies, languages or other signal systems, etc., as opposed to conditions on individual transactions. If we want to apply behavioral conditions of success at event level, we must understand success as amounting to some particular relation between the behavior of the speaker and the behavior of the hearer, typically behavior that takes place after the communicative event itself. Such a relation would probably amount to some kind of coordination in behavior, like meeting or delivering/receiving.

However, that such an account is false is easily seen from ordinary cases of misunderstanding. It is a common experience that misunderstanding can go unnoticed for some time, without disrupting smoothness of conversation and without frustrating expectations of verbal and non-verbal behavior. Sooner or later such expectations will be frustrated — or else the misunderstanding will not be detected — but that might happen because of a later exchange.

To give a simple example, suppose Paul mistranslates Pierre's French word 'ouest' into English as 'east,' where the correct alterna-

tive is 'west.' Pierre and Paul agree to meet outside the station building, in front of what Pierre calls 'l'entrée oueste,' translated by Paul as 'the eastern entrance.' At the station Paul goes to the eastern entrance, where he happily meets with Pierre, since Pierre has mistaken it for the western entrance. Only at a later occasion is the systematic mistranslation of the word detected, and then the earlier communication failure can be inferred. Had the first exchange been judged by the behavioral criteria solely on its own merits, it would incorrectly have passed as successful. Similarly, if Paul does translate correctly but Pierre still has his mistaken belief about the entrances, then communication seems to be successful, but action coordination will not take place, since Paul goes to the western and Pierre to the eastern entrance.²⁴

So, applying behavioral criteria to the individual event is definitely wrong. For the same reason, a *pragmatist* account (even without behaviorist implications), according to which a communicative event is counted successful if it leads to the coordination of action of the communicators, is wrong as well.²⁵ On the other hand, applying the proposed criteria at *method* level, like for the sake of evaluating a *manual*, as Quine proposed, is plausible. Even if you are not a behaviorist, you can regard the overall behavioral (or practical) success of communication as a reason for belief in the existence of mental states and for the frequent occurrence of successful communication, now conceived of in more mentalistic terms. You would say that it was *because* two speakers had thoughts with the same content that they managed to coordinate subsequent actions. That they did have thoughts with the same content is, in turn, to be causally explained by the antecedent occurrence of linguistic exchange. Hence, coordination of action is explained by successful linguistic communication, i.e. by coordination of thought content through linguistic exchange.

Of course, even though behavioral criteria can be accommodated this way by the mentalist, they will be used as characterizing *evidence* for communicative success, while the Quinean uses them for defining success itself. The Quinean objects to switching to mentalistic vocabu-

24 Here I have assumed that both speakers identify the entrances descriptively (they may have agreed to meet in a city where neither has been before). It would be different if Pierre were acquainted with the eastern entrance and had it in mind, while falsely believing of *it* that it faces west. Then it could be intuitively claimed (whether or not the behaviorist could claim so) that communication in the first case was successful, since both speakers thought of the eastern entrance, the one by acquaintance and the other by description. But this is not the intended scenario.

25 This is in effect proposed in Paul (1999, 158-63), under the title 'an action-based account.' For a discussion, see Pagin (2002).

lary. The problem with this position, in the present context, is that it becomes exceedingly difficult to make sense of communicative success at event level at all. Since we cannot apply behavioral criteria directly to the individual event, it must be done indirectly. We could say that an individual communicative event counts as successful if, and only if, the communicators in that event make use of a (possibly homophonic) translation manual which satisfies overall behavioral criteria, i.e. provides coordination in by far most cases. This does provide a definition of success at event level, but the definition itself does not make good sense in all cases. For what will success amount to in cases where action coordination fails (as in version two of the station example, where Paul translates correctly)? By the definition it only amounts to instantiating a pattern of communication that *in most other cases* yields success by simple behavioral criteria. But that is like saying that you played better than me in this particular game of chess, despite the fact that I won, just because you *normally* beat me. Or again, it is like saying that this word in the crossword puzzle really fits the corresponding clue, despite the fact that it intuitively doesn't, just because it is part of an overall solution where *most other* words intuitively do fit their clues. Neither makes sense.

To avoid this outcome, the behaviorist could speak of communication as inducing changes in *dispositions* to act. Successful communication at event level would then consist in the induction in the hearer of a corresponding disposition, similar to the disposition that on the speaker's side gave rise to the utterance. However, in the cases where coordination fails despite communicative success, similar dispositions yield dissimilar actions in the two speakers, because of differences in *other* dispositions. Pierre and Paul may both be disposed to select a particular entrance if, and only if, they 'believe' that it faces west, and this similarity of dispositions may have been achieved by linguistic exchange. Still, if Pierre 'believes' of the eastern entrance that it faces west while Paul 'believes' it of the western, coordination will not take place. These 'beliefs,' in turn, are simply further complex dispositions, consisting in part in dispositions to apply direction terms in relation to the use of maps and compasses. The combined behavioral effect of Paul's two dispositions is different from the combined effect of Pierre's. For the behaviorist to accommodate this possibility, he will have to acknowledge that dispositions come in systems, and that these systems have a certain holistic nature: in general, only several dispositions together determine the behavioral outcome. But this makes it impossible in general to understand a disposition as an input-output relation. In effect, it goes some way towards treating dispositions as mental states.

The problem here is not that the simple conditional analysis of dispositions fails, for this analysis can fail for different reasons, e.g. finkish-

ness in dispositions (cf. Lewis, 1997). The problem is that there are not even any *candidates* for the antecedent and the consequent of a dispositional analysis when it takes more than one disposition to yield an input-output relation. Effectively, the step has been taken from dispositional states proper to *functional* states, as understood in functionalism (cf. Loar, 1981). And whether or not we can plausibly identify mental states with functional states, some properties of mental states that are essential for understanding conditions of communicative success are shared by functional but not by dispositional states.²⁶

The conclusion is that it is very difficult to make good sense of communicative success at event level without coming at least close to talking of contentful mental states. Behavioral criteria of success are both too strong and too weak: communication can succeed without action

26 Then why not consider sameness of *functional state* as the condition of success, rather than sameness of thought content? This is a complex question, involving a number of possibilities. For instance, the suggestion might mean that other functional states, beside those with propositional content, are to be held relevant for success. This, and several other issues, cannot be discussed in this context. For the main point, we need to note the dividing line between functionalist or conceptual role theories which are aimed at providing an account of what it is to have a thought with a particular propositional content, and theories which aim at replacing or complementing propositional accounts.

Theories of the first kind (e.g. Harman, 1974, 1987) do not offer an alternative to my account of the success relation, but an elaboration of some of its ingredients. Theories of the second kind (e.g. Block, 1986, which is of the complementing kind, proposing a conceptual role account of 'narrow content,' unrelated to truth conditions) do provide material for an alternative to my account. The idea would be that communication succeeds if speaker and hearer end up in the same narrow functional state, or in suitably related narrow functional states.

However, this idea is virtually a non-starter. Given some account of narrow functional states along familiar lines, there is an enormous problem of establishing criteria of intersubjective sameness, or even similarity, of functional states. These criteria must, if I have understood things right, be based on an idea of intersubjective sameness of behavior and intersubjective sameness of perceptual state. Sameness of behavior must then *not* depend on sameness of agent intention, in particular not on sameness of propositional content of intentions. Rather, it must be a relation between behavior as characterized in a meager vocabulary, such as similarity of bodily movement. But the same bodily movement can achieve different goals in different contexts, in a variation without end, and the variation of goal, from context to context, will nearly always be relevant to success or failure of communication, as judged by common sense standards. I don't think anyone will ever have an idea of how to compensate for this discrepancy — between behavior as individuated for the functionalist theory and behavior as individuated in relation to communicative success — by adding sophistication to the functionalist theory itself. The idea of intersubjective sameness of perceptual state and its application to communication is no less problematic.

coordination and it can fail despite coordination. Behaviorism cannot provide plausible conditions of communicative success at event level. Maybe the behaviorist wants to reject the very notion of event level success, but that only makes the position irrelevant to present concerns.

V The knowledge requirement

The knowledge requirement, imposed by Dummett and others, comes in several varieties: first, we can apply the requirement at event level or at method level. Second, we can apply it to mental content and to public language semantics: on the one hand there is a requirement that speaker and hearer know that their respective thought contents are related in the appropriate way, e.g. that they are identical. On the other hand there is the requirement that speaker and hearer know that they attach the same (or, alternatively, suitably related) semantic properties to the linguistic *expressions* used by speaker. This latter version is Dummett's requirement. According to Dummett, we must *know* that we assign the same interpretation to the sentences used. Third, we can distinguish between a requirement of actual knowledge possessed by the communicators, and a requirement of potential knowledge, i.e. of the availability of *evidence* that certain conditions are met.

These three subdivisions provide the possibility of eight different combinations. I shall argue that we can only accept an evidence requirement, and only at the method level.

Let us first focus on the distinction between actual and potential knowledge. In order to have *actual* knowledge of success-underlying facts, speaker and hearer must command concepts of such facts. If success requires that the contents of the speaker's thought is the same as the content of the hearer's thought, then for knowing this speaker and hearer must, *inter alia*, command the (relevant) concept of *thought content*. If, alternatively, success requires that speaker and hearer interpret the speaker's expressions the same way, or assign the same meaning, or reference, to these expressions, then for knowing this speaker and hearer must command the concepts of *interpretation*, or of *meaning*, or *reference*. If such knowledge is required for success, then unsophisticated language users who lack the needed conceptual command, cannot communicate successfully at all. If you don't have the concept of interpretation, for instance, because you are a five year old child, or developmentally delayed, or don't have the insights of a philosopher or literary scholar (depending on which concept of interpretation one is required to grasp), then you aren't communicating successfully with anyone about anything. But this is clearly absurd. By any reasonable pretheoretic standard of success, normal five year old children do com-

municate successfully, both with each other and with more sophisticated speakers. Any account of communicative success that aims at reconstructing and systematizing common pretheoretic notions must acknowledge that much.

The requirement of actual knowledge (of success-making facts) must therefore be dropped. What we can require is at most that there is sufficient *evidence*. Those who have the required conceptual resources can then convert awareness of this evidence into the relevant knowledge. Still, as long as this condition of success is applied to the individual communicative event, it is too strong.

By common sense standards, there are many successful linguistic exchanges where sufficient evidence is lacking, because of particular features of the situation. For instance, after having asked for directions, I may be justifiably unsure whether my rather incommunicative informant understands English. Maybe the pointing gestures he responds with have no rational relation to my query. In fact, however, they do, and after interpreting them by standard rules, and following them according to this interpretation, I arrive at my desired location. Even at this point, however, I do not have enough evidence for ruling out that this successful outcome was just lucky (maybe the guy just pointed randomly to be rid of me). Nonetheless, it is utterly implausible to conclude that, because of this uncertainty on my part, communication was unsuccessful. The informant understood perfectly well what I asked, and his response, intended to be interpreted in a standard manner, was both appropriate to the question and correct.

Examples like this one, where interpretation is correct, but where there is justified uncertainty, or unjustified certainty, are easily multiplied. We are here free to assume that the communicative process is sufficiently *reliable*. The speaker reliably uses a standard means of expression in the normal way and the hearer reliably interprets such utterances also in the standard way. It is just that speaker and hearer may lack sufficient evidence for knowing that much about each other. They can *initially* be justified only in *assuming* that the other is reliable. But to the extent that they do make the assumption, common sense standards will count almost all such cases as examples of success. Moreover, precisely this situation is frequent in a society where much linguistic interchange takes place between people that lack prior knowledge of each other. Counting all such exchanges as communicative failures would be again to deviate substantially from common sense notions of success. Requiring sufficient evidence at event level is too strong.²⁷

27 Dummett's view (1978, 102, quoted in section III) that communication cannot rest

As is well illustrated by such examples, the context-of-discovery / context-of-justification distinction applies here. It is perfectly true that any particular interpretation I make of an utterance is subject to justification. But that does not imply that the justification must be used, or even be immediately available, at the time of the interpretation itself. It can come later, in particular from evidence provided by further exchanges with the speaker. How the hearer managed to hit on the right interpretation is irrelevant to the success of communication, just as it is irrelevant to the truth of a theory how the theorist came to believe in it. This issue should simply be kept distinct from the question of what justifies the belief in success, or the belief in a theory.

Nonetheless, a further reason for requiring event level evidence has been provided by Gareth Evans (1982), and, following Evans, Richard Heck (1995). Evans made the idea of *information transfer* the basis for evaluating communication. On Evans's view, 'communication is *essentially* a mode of the transmission of knowledge' (Evans 1982, 310). This idea, Evans reasoned, 'should debar us from certifying anything as successful communication which is *intrinsically* incapable of conveying knowledge' (1982, 320). But Evans also drew the considerably stronger Dummettian conclusion that it is not enough to interpret correctly, and that if the hearer 'is to be credited with *understanding*, he must *know* that it is the right interpretation' (1982, 310).

However, no further reason for this inference is provided by Evans, and *prima facie* it looks like a conflation. It is one thing to require knowledge that interpretation is correct in order for knowledge transfer to take place, and another to require such knowledge already as a condition for communicative success. If your knowledge that *p* is to be transferred to me via your utterance of sentence *s*, then — if knowledge requires good reasons — it is plausible to require not only that you intend to express the proposition that *p* by means of uttering *s*, and that I interpret you accordingly, but also that I *know* that this interpretation is correct. But this does not even make it plausible that such knowledge is needed for communication to succeed in the first place, especially since it is plainly false that knowledge is transferred, in this sense, whenever (fact stating) communication succeeds.

Heck (1995) followed Evans in arguing for an event level knowledge requirement. The reasoning, in a nutshell, is this: The purpose of communication is the transfer of knowledge. And knowledge is transferred

on an act of faith is controversial anyway. No matter how public the criteria of understanding, we always face the problem of induction concerning the expectations of verbal and non-verbal behavior that are associated with interpretation. Lacking a solution to it, we go on faith.

from speaker to hearer if, and only if, the hearer knows that reference is preserved in the transition from the speaker's to the hearer's interpretation of the sentence. Thus communication succeeds only if the knowledge requirement is met (Heck 1995, 90-4).²⁸

The claim that transfer of knowledge is 'the purpose of communication' strikes me as a piece of metaphysical speculation (even more than Evans's claim about essence), but even if it were accepted, it would not follow that the knowledge requirement should be imposed at event level. Rather, one might as well say that if communication succeeds, then a necessary condition for knowledge transfer is met, namely that the contents of speaker and hearer thoughts are the same. For knowledge transfer to occur some further conditions must be met as well. This is compatible with the loose idea that successful communication serves 'the purpose' of communication, i.e. (by assumption) the transfer of knowledge. Bringing in considerations of knowledge transfer does not provide a good reason for demanding event level evidence.

On the other hand, the (potential) knowledge requirement *is* suitable at method level. For instance, it is arguably plausible that a natural language serves the function of a social device of communication only if its speakers are in a position to *know* that they most often understand each other. For a language wouldn't be a good communicative device unless speakers of the same language standardly and reliably succeeded in getting each other right when using it. And it wouldn't be a good communicative device unless speakers, by common sense standards, had frequent evidence of success, in the form of 'smoothness of conversation ... frequent predictability of verbal and non-verbal reactions, and ... coherence and plausibility of native testimony,' to borrow Quine's phrase. But if speakers have frequent evidence of success, and reliably succeed when having it, then they also have sufficient evidence that they standardly succeed. They need only reflect on the rate of success by common sense standards. Since the likelihood of achieving such a success rate by sheer behavioral coincidence is negligible, speakers are in a position to know that they standardly succeed.

The conclusion is that the knowledge requirement is too strong at event level, in any version. The weaker form of an evidence requirement is appropriate only at method level.²⁹

28 For similar ideas on the relation between communication and information transfer, see McDowell (1980).

29 While the requirement of evidence for success is more appropriate than that of actual knowledge, making an analogous move for success itself is inadequate. The analogy would be to require not that the hearer actually thinks the same thought, or a similar thought, as the speaker, but only that this thought is, in some way or

VI The reliability requirement

Above, I made assumptions about reliable processes in the individual communicative event, in order to provide a convincing counterexample against the event level requirement of evidence. This is in accordance with widespread conceptions, for many people have the intuition that communication cannot succeed by mere luck; there must be some (at least fairly) reliable process involved.

This question whether a communicative event can succeed by luck is not, I think, of central theoretical importance. I agree with Matthias Paul that it is best, methodologically, to keep the issue of success and failure conceptually separate from the issue of reliability and chance,³⁰ since this simplifies the account. We will in any case need a basic independent

other, *available* to him. Although their text is not straightforward on this point, a version of that view seems to be proposed in Sperber and Wilson (1995). According to their definition of *ostensive-inferential communication* (1995, 63)

the communicator produces a stimulus which makes it mutually manifest to communicator and audience that the communicator intends, by means of this stimulus, to make manifest or more manifest to the audience a set of assumptions [I].

According to S&W, a fact is manifest to an individual at a given time iff he is capable at that time of representing it mentally and accepting its representation as true or probably true (1995, 39). Moreover, in a 'mutual cognitive environment,' for every manifest assumption, the fact that it is manifest to the people who share this environment is itself manifest (1995, 41-2). Under such circumstances, manifest assumptions are 'mutually manifest' (1995, 42).

If we disregard the appeal to a multiplicity of thought contents (assumptions) and the appeal to propositions about intentions and the sharing of assumptions, a crucial feature of this conception of communication is that the hearer is not required to have any occurrent thought, only to be *capable* of certain thoughts and beliefs. Intuitively, this falls short of communicative success, since the hearer may well be capable of having the appropriate thoughts while actually having only inappropriate ones. Moreover, it also intuitively falls short of being communication at all, since the speaker may well have made the hearer capable of having the appropriate thoughts, even though the hearer does not react by thinking anything.

It still is unclear how to interpret S&W. On the one hand they discuss the comprehension process extensively, going through various modes of inference involved, and on the other hand, it is not referred to in the definitions of communication. It should be noted, however, that Carston (2002, 47), working within the Relevance Theory of S&W, says that 'communication is deemed successful (that is, good enough), when the interpretation derived by the addressee sufficiently resembles the thoughts the speaker intended to communicate.' Carston's view agrees pretty well with that of the present work.

30 See Paul (1999, 64). Byrne and Thau (1996, 148) also claim that understanding may be achieved by luck.

distinction between the hearer's getting it right and his getting it wrong, for any process or method is reliable if success is *defined* by what the process or method almost invariably delivers. There seems little point in adding an extra layer of success, over and above getting it right, for the sake of bringing reliability into the definition. However, a methodological preference is decisive only where the issue is empirically open.

I think that as far as intuitions go, the question is open, or at least not decided in favor of the reliability requirement. Considerations of several kinds of examples suggest that this requirement, at event level, is too strong. For instance, we have cases where the hearer compensates for noise by guessing at the distorted speech segment, and on top of this we have the subsequent parts of dialogue which would count as misunderstanding had the guess been wrong (say, 'Sweden' instead of 'Switzerland'). Sometimes such guesses go right, sometimes not. When they go right, it is often at least partly by luck, and often partly by general pragmatic competence. Further, there are the cases of egocentric speech, where the hearer correctly but unreliably guesses whom the speaker has in mind e.g. when uttering some sentence with a personal pronoun, even though the speaker hasn't provided enough background material for an effective identification. And so on. Such cases, together with common sense standards, provide a strong empirical reason against the requirement. A fair bit of actual communication relies, as Davidson has put it, on 'luck, wit and wisdom' (Davidson 1986, 446), with non-negligible chances of going wrong. That doesn't by itself make it unsuccessful.

The examples I adduced are mixed between luck and interpretative skill. It is more difficult to produce intuitively convincing examples of success where the hearer gets it right by a completely random process. Still, unless there are good reasons to rely on intuitions by which such examples are to count as failures (and I don't think there are), there is nothing to lose and something to gain, in simplicity and generality, by accepting them as examples of success. In particular, given that success by pure chance is bound to be extremely improbable, and thus extremely rare, accepting the idea cannot significantly affect the rate of success as judged by the resulting standards.

VII The order of explanation

The last issue concerns the proper format of success conditions. Should they be stated in terms of a relation between thought contents, as in the classical view, or should they better be stated in terms of public language semantics, as e.g. Dummett prefers? In the latter case we could have as a standard of success that the hearer assigns the same truth

conditions to the entire sentence as the speaker, or that he assigns the same reference to each component part of the sentence, etc.

At first sight, this question may seem concerned with technical details, but that impression is misleading. What is at stake is nothing less than the choice of basic strategy in meaning theory. If you choose the classical view, then you can appeal to the systematic role of linguistic expressions *in successful communication* when you attempt to account for basic semantic concepts. For instance, you can say that it is because there is a certain *correlation* between simple linguistic expressions and objects and properties in the world that speaker and hearer manage to communicate successfully by means of new sentences, i.e. by means of sentences which consist in new combinations of expressions that have already been used. *Reference* is precisely such a correlation between word and world. On this view, the reference correlation, and its role in a compositional semantic theory, can be used for predicting that, and explaining why, communication by means of new syntactic combinations succeeds.

This strategy takes some notion of thought content as basic, and introduces more specific semantic concepts, such as reference, via empirical assumptions about successful communication.³¹ Obviously, the strategy is *not* available if communicative success is already defined in terms of public language semantic concepts, including that of reference. If public language semantics has priority over concepts of thought content in the order of explanation, then a very different meaning theoretical strategy must be used.³²

In this matter of choosing between basic meaning theoretical strategies, there is no quick and decisive argument. The (mentalistic) strategy of starting out from thought content and proceeding via communication faces the general problem of assuming too much about the semantics of the mental, thereby begging the question. This is a problem that I think can be overcome. At present, however, I would like to draw attention to a problem that is shared by programs that have adopted the alternative strategy.

31 This approach is spelled out in more detail in Pagin (2003).

32 This is not just a terminological question. Of course, it is possible to use the strategy I propose with, say, the more primitive concepts of getting it right and getting it wrong as basic, and then, when reference and other linguistic concepts are in place, go on to define a more definitive notion of communicative success in terms of them. And it is a terminological choice to define 'communicative success' in this way, but this is irrelevant. For if you don't think that it is appropriate to take a mentalistic notion of communicative success as basic, you shouldn't think it appropriate to take the mentalistic notion of getting it right as basic either.

In the mentalistic strategy, appeal is made to the principle of semantic compositionality, since it is by means of a compositional theory that communicative success can be explained. This *explanatory* value of the compositionality principle, however, justifies the claim that the principle is valid for natural language: we are justified in claiming that a natural language has a compositional semantics because some compositional semantic theory can explain the communicative success of the use of new sentences. We also have a prior justification for believing that there is such a compositional semantics, since there is much linguistic communicative success that cannot plausibly be explained in any alternative way.

By contrast, if we don't assume communicative success at the outset, but require the semantic concepts to be in place before it can be defined what success amounts to, and accordingly that a semantic theory must be in place before we can judge whether some particular linguistic communication is successful or not, then we cannot appeal to communicative success for justifying the compositionality principle. The semantic theory, which is usually held to be compositional, e.g. by Davidson and Dummett, is in place already *before* questions of success and failure can be raised. The two remaining options are, on the one hand, to simply *postulate* compositionality as a valid principle, and, on the other, to find some alternative justification. The first alternative amounts to giving up on philosophical aspiration. The second alternative, however, will not be easy. In fact, there are reasons to believe that the task of finding an alternative justification cannot in principle be solved.

For instance, the argument from *learnability* says that it would not be possible to learn an entire natural language unless it had a compositional semantics. Even if that were correct, it would not provide an argument for compositionality.³³ For we would need a reason for believing that the meanings of complex well-formed expressions that have not yet been used still already have a well-determined meaning. And the only plausible reason for believing that is that our language has a systematic semantics. Hence, the learnability argument is almost circular, and other traditional arguments fare no better.³⁴ By contrast,

33 It is in fact not correct, since it is possible for a language to have a non-compositional semantics which nevertheless makes it possible to compute the meanings of new complex expressions.

34 In Pagin (1999) I have argued at length that if you take only the ideas of radical interpretation, and the accompanying *principle of charity*, as your basic ideas for selecting semantic theories, then no justification of compositionality is forthcoming. This is directed against Davidson's early meaning theory, with the conclusion that Davidson's only option is to postulate compositionality dogmatically as valid

with the mentalistic conception of communicative success we have a way of correlating contents and expressions — content ϕ successfully communicated by means of uttering expression e — that does not require any assumption about the semantics of the expressions.

If this is right, we have a fourth reason for preferring the classical view over modern alternatives. It remains to be seen whether the meaning theoretical strategy I have suggested in conjunction with the classical view can be carried out.

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for natural language. Although the details would be different, basically the same objection is valid against Dummett, who follows Davidson in the requirement of compositionality of semantic theories (e.g. in Dummett 1976, 47). Quine, too, states without much argument that a translation manual must proceed by analytical hypotheses about e.g. word translation (1960, 68), or that it shall provide a recursive, or inductive, specification of a translation relation (1992, 48). In Quine's case, a justification is available, since it can be claimed that only a recursively specified translation manual offers translations of new sentences that meet behavioral criteria of success. As noted before, however, these criteria operate only at method level.

In Pagin (1999) I argue that neither the holism of belief content, nor underdetermination, nor any regularity requirement, can justify compositionality. I also argue that *non-compositional* theories would be selected by the charity principle, simply because one can normally assign a higher rate of truths among the beliefs of an interpretee if one can choose more freely—unhampered by the constraints of a compositional semantics—what meaning to assign to his sentences. So, if anything, the proper result would be that natural language is non-compositional.

This conclusion is not overturned by Davidson's reply (Davidson, 1999). Among other things, Davidson loosely appeals to commonsense for justifying compositionality, without spelling out the commonsense assumptions that provide the justification.

The general question of the justification of compositionality is discussed in Pagin *in preparation*.

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