Misunderstandings in Verbal Communication[1]

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This is a postprint (author's final draft, after refereeing). The paper was published as:

Allott, N. (2016). Misunderstandings in verbal communication. In A. Rocci & L. de Saussure (Eds.), *Verbal Communication* (pp. 485–507). Berlin: Walter De Gruyter.

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Abstract:
There is no dominant theory of misunderstanding, perhaps because causes of breakdown in communication are too disparate. Moreover, there are sharp theoretical and methodological differences between research traditions. Work in cognitive pragmatics, drawing on philosophy of language, has shown that a) the linguistic material uttered serves as a clue to what is communicated, and does not determine it; b) what is communicated can be broken down into several components, including the proposition expressed, implicatures and illocutionary force. It follows that communication is inherently risky, and that there are many ways to misunderstand. Work with a more sociological orientation has focussed on misunderstandings that are due to cultural differences, and on strategies for repair. There is consensus that a) speakers maximise their chance of being understood by tailoring utterances to the hearer, anticipating and trying to head off problems; b) participants in a conversation demonstrate that, and how, they have understood, and monitor each other's comprehension.

keywords: communication, pragmatics, relevance theory, inference, Conversation Analysis, misunderstanding, repair, 'uh' and 'um', linguistic underdeterminacy, Grice

1 Introduction

1.1 Theoretical perspectives on misunderstanding

Research in several areas is relevant to the study of misunderstanding. This paper draws on three, each of which is broad and internally varied:

I) work on the nature of speaker meaning and communication in linguistic pragmatics and philosophy of language (e.g. Grice, 1957; Grice, 1975; Sperber & Wilson, 1986);

II) work on miscommunication and repair strategies in the 'talk-in-interaction' and Conversation Analysis (CA) framework (e.g. Gumperz, 1982a; Schegloff, 1987; Dascal, 1999; House, Kasper & Ross, 2003) plus related work on miscommunication and culture (e.g. Gumperz, 1982b; Pride, 1985; Di Luzio, Günthner & Orletti, 2001);

III) work in cognitive psychology and psycholinguistics on communication, including work by Clark and colleagues on communication as joint action, informed by research in traditions I and II (e.g. Clark, 1994; Clark, 2002); also other psycholinguistic studies that show how communication can break down, such as those on the 'Moses illusion' (see §2.3 for

1 The author would like to thank Eline Busck Gundersen, Timothy Chan, Anders Nes and two anonymous referees for helpful comments on a draft of this paper. The opinions here and remaining mistakes are the author's own.
This paper was written at CSMN, University of Oslo, and the author's research is supported by the Research Council of Norway (project 213068/F10: *The Reflective Mind*).

references).

In communication theory, discussion of misunderstanding has tended to focus on the second of these strands, with attention also devoted to misunderstandings in specific situation types (e.g. in medical communication or in education: see below for references).[i] However there is consensus with much work in psychology, linguistics and philosophy that i) communication is an inherently risky business; and ii) participants in conversations are adept at providing each other with clues to their intended meaning and about what they take each other to mean.

1.2 What is misunderstanding?

This section sets out the boundaries of the topic that this paper is concerned with. Misunderstanding is not identical to communication failure, since to say that there is misunderstanding implies there is *apparent* understanding. To misunderstand is to think, or assume, that one understands, while not doing so, i.e. to come to a wrong understanding.

Conceptually there is a three-way contrast – and in practice, presumably, a continuum of cases – between i) understanding (correctly), ii) misunderstanding and iii) complete failure to understand (Hirst, McRoy, Heeman, Edmonds & Horton, 1994: 215; Weigand, 1999: 769). In looking at misunderstanding we are dealing with cases where communication has failed at least to some degree, but where it seems, at least for a moment, and at least to the hearer, that it has succeeded.

Misunderstandings can also be categorised in another way: into those that are accidental – not intended by the speaker – and those that are intentional – where the speaker tries to induce a misunderstanding in the hearer[ii]. Searle's famous example of an American captured by Italian soldiers in the second world war is of the latter type (Searle, 1969: 44). The American utters a sentence of German poetry that he remembers which literally means 'Do you know the land where the lemon trees bloom?', hoping that the soldiers will not know enough German to understand, but will recognise or guess that the language is German and wrongly infer that the soldier is German (and therefore let him go).

Such cases might seem to present some conceptual difficulty. The speaker intends the hearers to reach a certain interpretation of the utterance, and the hearers do indeed reach that interpretation, so we might wonder whether there is – strictly speaking – any misunderstanding here. But note that it would be natural for a hearer, on learning all the facts of the case, to say that he had been tricked into misunderstanding. One reason for this is that he ends up – as the speaker intends – with a false belief.

But the utterance is also deceptive in a deeper way. Consider a slightly different example: now the speaker is a real German amusing himself by playing a trick on the Italians, and they come to believe, truly, that he is German. Both in this case, and in the example as Searle presents it, the speaker wants the hearers to come to a certain conclusion *for the wrong reasons*, and thus they are cases of deceptive speech, notwithstanding the speaker's success in getting the hearers to believe exactly what she intended.[iii]

Such examples fall into the category of deceptive and manipulative speech, which is dealt with in a separate paper in this volume (Ch 29: Deceptive and uncooperative verbal communication). Therefore this paper focuses mainly on the more normal case of accidental misunderstanding.

We could say that misunderstanding *in* (verbal) communication is broader than misunderstanding *of* (verbal) communication – because not all misunderstandings in communication are misunderstandings of something that the speaker aimed to

communicate.[iv] When we engage in verbal communication, we often infer more than the speaker's intended meaning. For example, I may infer from your manner or your way of speaking that you are nervous, or from Canada. Normally these would not be things that you intended to communicate in that way. In relevance theory this is called 'accidental information transmission' (Wilson & Sperber, 1993: 4), and it is sharply distinguished from intentional communication. Now the hearer of an utterance might, hearing the speaker's way of speaking, *wrongly* infer that she is angry, or from the USA. It would not be straining the expression too much to a call this a misunderstanding *in* verbal communication, but, if we accept the distinction between communication and accidental information transfer, we should not count it as a misunderstanding *of* verbal communication, since what was misunderstood was something that the speaker was not attempting to communicate. Searle's example exploits this borderline. The American hopes that the Italians will come to the conclusion that he is German as though he had given that fact away (by speaking in German) without intending to communicate it.

Theorists working in Gricean and post-Gricean pragmatics mostly make a clear distinction here. For example, according to relevance theory, there is a principle that governs the interpretation of utterances, the Communicative Principle: speakers try to tailor their utterances so that they are optimally relevant to the addressee. This principle guides the recovery of intended utterance meaning, but not the task of working out what else the speaker's behaviour/way of speaking might unintentionally imply. Here the hearer is on his own, as it were, without the help of the dedicated mental machinery for utterance comprehension ('the pragmatics module'). Inferences about information accidentally given away in communication will be on a level, in terms of the cognitive processes involved, with inferences about non-communicative actions. Misunderstanding is certainly possible here: e.g. thinking that someone is sitting down when she is reaching for something she dropped.[v]

Some other theorists, including most of those in the tradition of talk-in-interaction, do not draw such a sharp line between communication and accidental information transfer[vi], and this is reflected in work on miscommunication in these traditions, which does not explicitly distinguish misunderstanding what the speaker intended to communicate from other misunderstandings that may arise in (or through) communication. In the rest of this paper we will mainly be concerned with misunderstanding of the speaker's meaning, but cases in which the misunderstandings are more general ones about the speaker or the communicative situation are not ruled out of the discussion.

In summary, we need to be aware of the following distinctions:

1) between a) misunderstanding, b) (correct) understanding and c) total communication failure

2) between a) accidental misunderstanding and b) speaker-intended misunderstanding.

3) between a) misunderstanding in verbal communication and b) misunderstanding in a general sense.[vii] (The former is a special case of the latter.)

4) between a) misunderstanding of what the speaker intended to convey and b) other misunderstandings that arise in communication.

1.3 Misunderstanding and theories of communication

There is no generally accepted theory of misunderstanding, and recent papers continue to propose radically new taxonomies both of the types of failure that occur in communication (e.g. Bosco, Bucciarelli & Bara, 2006) and of their causes (e.g. compare Bazzanella & Damiano, 1999 with Weigand, 1999).

It might be that there is no theory of misunderstanding to be had, distinct from whatever turns out to be the true theory of communication, just as there is no theory of optical illusions distinct from theories of visual processing. It is certainly the case that theories of communication have implications for the study of misunderstanding. If we know more or less what has to go right for an utterance to be understood, then we have some guide to what may be going wrong in cases where an utterance is misunderstood.

Equally, examining misunderstanding will often shed light on how utterances are interpreted in cases where everything goes as it should. Zaefferer claims that "in all sciences having to do with systems it is a well-known fact that if one wants to get insight into how a system works, it is more revealing to regard instances of small malfunctions than examples of perfect functioning." (1977: 329).[viii] It may be that, just as the study of optical illusions has been key to the study of visual processing, the study of misunderstanding will turn out to be vital for theories of communication.[ix]

Section 2 of this paper summarizes the consensus in linguistic pragmatics (tradition I above) on what communication is and discusses the implications that current theories of communication have for what can go wrong. Section 3 turns to work on misunderstanding in talk-in-interaction and cross-cultural communication and to the research of Clark and colleagues (traditions II and III above) and sets out what has been established here, in particular about the way that participants in verbal interaction engage in near-constant maintenance and repair.

2 Cognition and misunderstanding in communication

Contemporary work in pragmatics treats communication as the implying – by the speaker – and inferring – by the hearer – of what it is that the speaker intends to convey. On this account, normally the best explanation for the speaker's production of a utterance is that she intended to convey certain propositions and attitudes. Thus each utterance is a deliberate clue to the speaker's meaning-intentions, and the hearer's task is to infer those intentions, working back from what has been uttered. This picture of communication derives from the philosopher Paul Grice's work on speaker meaning (1957) and on conversational maxims and implicatures (1975), and is shared in its essentials by most work in linguistic pragmatics in recent decades, including neo-Gricean accounts (e.g. Horn, 1988; Levinson, 2000), relevance theory (Sperber & Wilson, 1986; Carston, 2002), some psycholinguists such as Clark (1996), and influential philosophers of language: e.g. Kent Bach (2004) and François Recanati (2010).

2.1 The code model and the inferential model

Sperber and Wilson (1986: 1–15, 24–28) have pointed out that Grice's work is a radical break with what they call the 'code model' of communication. According to the code model, communication is simply a matter of encoding, transmission and decoding. The speaker has in mind some content that she wants to communicate, and utters a sentence that linguistically encodes it. The hearer decodes this linguistic material and recovers the content. The fundamentals of this model are subscribed to, often implicitly, in a vast range of research, from work in the mathematical theory of information (Shannon, 1948) to the semiotic programme which has been influential in various humanities disciplines (e.g. de Saussure, 1974: 16; Leach, 1976: 10; both cited at Sperber & Wilson, 1986: 7).

If verbal communication were accurately described by the code model, then misunderstanding could only occur as a result of: a) lack of a shared code; b) noise in the channel so that the message is not transmitted accurately; or c) an error in encoding or decoding. Conversely, if the code is shared, and the message is encoded properly, received by

the hearer as it was sent, and decoded properly, then (according to the code model) misunderstanding cannot occur.

Some studies of misunderstanding have adopted one version or other of the code model. Its influence can be clearly seen in Pierre Bourdieu and colleagues' study of linguistic misunderstanding and power in university education, when they write that "Learning implies acquiring both knowledge itself and the code of transmission used to convey a particular body of knowledge. The code cannot be learnt except through a progressively less unskilled decoding of messages." (Bourdieu, Passeron & de Saint Martin, 1994: 5). In Zaefferer's work on misunderstanding, his definition of full understanding (Zaefferer, 1977: 331) entails a sophisticated version of the code model, according to which each sentence-context pair conventionally encodes the full meaning that is communicated. (See Sperber & Wilson, 1986: 26–7, 174 for criticism of such variants of the model.) Thus, according to Zaefferer, misunderstandings that are not due to simple mishearing can only be due to a mismatch between the encoding and decoding languages, or a misidentification of the context[x] (Zaefferer, 1977: 332).

The inferential model, in contrast, claims that communication is inherently risky, because it involves uncertain (non-demonstrative) inferences. On this account, verbal communication is, conceptually, a two-stage process. Language is a code, so the hearer of an utterance must decode the sentence uttered. But that does not end the hearer's task, because the sentence uttered does not in general fully encode what the speaker intended to convey: rather, it serves as a structured clue to the speaker's meaning. So the hearer has to infer what is the best explanation of the fact that the speaker has uttered a certain sentence, in a certain way, in certain circumstances. According to this picture, although verbal communication (by definition) involves natural language, which is a code, it is fundamentally an inferential process. The argument, briefly, is that a) purely gestural, code-free communication is possible, and b) in verbal communication, what is meant generally outstrips what is encoded. It follows that human communication requires inference but not codes. Of course, the use of natural language as a code allows much more precise communication and communication about topics that would be difficult or impossible in its absence (Sperber & Wilson, 1986: 174–175). Still, in utterance interpretation, linguistic decoding is in principle just an input to the main task, namely inferring the speaker's intended meaning.

According to relevance theory, this inferential model implies that there is a cognitive process of trial-and-error search for a satisfactory interpretation. The hearer – or, it is perhaps better to say, the part of his mind which deals with utterance interpretation: his 'pragmatics module' (Wilson, 2000: 130–136) – has to entertain a hypothesis about what the speaker intended to convey and accept or reject it. If the initial hypothesis is rejected, then another must be generated and evaluated, until one is accepted or the attempt is given up and no interpretation of the utterance is found. There can be no guarantee that the hypothesis that the hearer accepts will be correct. As Deirdre Wilson writes:

> Precisely because utterance interpretation is not a simple matter of decoding, but a fallible process of hypothesis formation and evaluation, there is no guarantee that the interpretation that satisfies the hearer's expectation of relevance will be the correct, i.e. the intended one. Because of mismatches in their memories and perceptual systems, the hearer may overlook a hypothesis that the speaker thought would be highly salient, or notice a hypothesis that the speaker had overlooked. Misunderstandings occur. (Wilson, 1994: 47)

2.2 Components of utterance meaning

Wilson argues that there are four types of information that speakers intend to convey, and

which hearers, therefore, must in general infer in order to correctly understand an utterance: i) what proposition the speaker intended to express (for example, what she intended to assert, in the case of utterances that are assertions); ii) what the speaker intended to imply; iii) what the speaker's attitude was to what she expressed and implied; and – most fundamentally – iv) what contextual assumptions the speaker intended the hearer to entertain. These components of what speakers communicate are explained in turn below. Misunderstanding can involve failure on any of these components and any combination of them.

2.2.1 The proposition expressed

In recent years there has been a great deal of work on "ways in which encoded linguistic meaning may underdetermine the proposition a speaker expresses by her utterance of a particular linguistic string" (Carston, 2002: 28), where the term 'proposition' is used in the philosophers' sense: something that is true or false. In the case of an assertion, the *proposition expressed* by the speaker is whatever it is that she claims to be true. For example, the speaker of (1a) below might have intended to claim that she has produced a kind of box for her addressee's cricket bat. But since both 'make the case' and 'bat' are ambiguous, the sentence could also be uttered with the intention of claiming that she has argued in favour of the hearer's proposal to keep a mammal of the order *Chiroptera* as a pet. (Since there are two loci of ambiguity, there are at least four possible interpretations, the remaining two of which are left to the reader as an exercise.) Given that there is more than one possible interpretation for the sounds uttered, we can say that the utterance 'underdetermines' the intended interpretation: that is, it does not fix an interpretation, but it does provide some constraints or guidance on possible interpretations.

Lexical ambiguity is only one possible reason for linguistic underdeterminacy; and it is controversial how best to categorise the different types of case. The list that follows is partly based on one at (Carston, 2002: 28). Each type is discussed below, with an example or examples, and the terminology used in the list is explained.

There is no unique proposition encoded:

1. ambiguity
2. indexical references
3. 'missing' constituents

There is a proposition encoded (arguably) but it is not the proposition expressed:

4. quantifier domain restriction
5. free enrichment
6. word(s) used to express *ad hoc* concept

When the linguistic material uttered falls short of determining the proposition expressed then there must be inferential work to do, so each of the six types of case listed above is an opening for potential misunderstanding. They are briefly illustrated here, in order.

Ambiguity

A sentence as spoken (/written) is a string of sounds (/graphemes), and the vast majority of utterances in verbal communication are of ambiguous strings. Whether the ambiguity is lexical (both 'case' and 'bat' are lexically ambiguous; 'make' is polysemous) as in (1a), or structural as in (1b), the potential problem is the same. The hearer has to disambiguate – i.e. infer which sense was intended – and may get it wrong.

1a) I've made the case for your bat.

b) Do you see the man eating fish over there? (Zaefferer, 1977: 333)

Indexicality

The second kind of underspecification is the use of *indexical* terms: that is words and phrases such as 'she', 'over there', and 'that time', whose role is to allow the speaker to refer to different people, places, times etc.. An indexical does not encode its referent, in contrast to a name or description (e.g. compare the indexical, 'he', with 'Simon Rattle' and 'the principal conductor of the Berlin Philharmonic'), so the hearer has to infer to what or to whom the speaker intended to refer. Schegloff gives an attested example where this goes wrong:

2)

A: Which one::s are closed, an' which ones are open.

Z: ((pointing to map)) Most of 'em. This, this,

this, this

A: I don't mean on the shelters, I mean on the roads.

Z: Oh!

(Schegloff, 1987: 204)

The problem here is that Z misunderstands what A intended to refer to by 'ones' in his first utterance.

'Missing' constituents

The sentences in (3) exemplify the third source of underspecification. They do not determine a proposition even after disambiguation and reference assignment. In interpreting (3a) the hearer has to infer what paracetamol is better than, in the speaker's opinion. With (3b) the question is 'Too young for what?' In both cases it is as though the sentence were missing a part or 'constituent'.

3a) Paracetamol is better.

b) He is too young. (Carston, 2002: 22)

Quantifier domain

Quantifiers are words such as 'all', 'some', 'most', 'everyone', 'somewhere' and 'nothing'. The *domain* of a quantifier is the class of entities that it 'ranges over', that is, the ones that are in consideration, in some sense. For example, 'I've got nothing to wear' might be used to mean nothing *suitable* to wear, in which case the domain of the quantifier is 'restricted' to suitable things and does not range over absolutely all things. Conversely, when Parmenides said 'Nothing comes from nothing' he presumably intended the quantifiers to range over absolutely all types of thing: their domain was unrestricted.

When a speaker uses a quantifier, the hearer has to infer the intended domain, or misunderstanding will result, as illustrated by one of Schegloff's recorded examples, (4):

4) A: Well I'd like tuh see you very much.
B: Yes. Uh
A: I really would. We c'd have a bite,
en (ta::lk),
B: Yeh.
B: Weh— No! No, don't prepare anything.
A: And uh— I'm not going
to prepare, we'll juz whatever it'll be, we'll
B: No!
I don't mean that. I min— because uh, she en I'll prob'ly uh be spending the day togethuh, so uh:: we'll go out tuh lunch or something like that, -hh So I mean if you:: uh have a cuppa coffee or something, I mean that uh that'll be fine. But uh
A: Yeah Fine.

(Schegloff, 1987: 205)

When B tells A not to 'prepare anything', A seems to understand that as 'preparing something fancy' (Schegloff, 1987: 205). But this is a partial *mis*understanding, as B's response makes clear, because what B meant was that A should not prepare anything more special than a cup of coffee. Another possible interpretation (which may have been the one A entertained, *pace* Schegloff: it's difficult to tell from the evidence of the transcript) would be to take the quantifier as unrestricted: that is, A may have thought that B meant *Don't prepare anything at all*. Either way, the restriction of the domain of 'anything' that A inferred was not the one intended by B and there was misunderstanding (soon repaired).

Free enrichment

There has been much debate about cases such as (5):

5) I've often been at the Japanese ambassador's parties, but I've never had sushi. (Modelled on an example at Wilson & Sperber, 2002: 611.)

This could be uttered to convey that the speaker has never had sushi *full stop* or to convey that she has never has sushi *at the Japanese ambassador's parties*. In the second case, the proposition expressed seems to have been 'freely enriched': it has a component (for the place

of eating) for which the sentence has no corresponding constituent. The analysis of such examples is controversial, and some theorists prefer an account in terms of unpronounced indexicals in the linguistic structure, so that, for example, the pronounced 'have had sushi' would be accompanied by unpronounced variables for time, place and perhaps manner of eating, each of which must be assigned a value. Whether what is involved is 'free enrichment' or the assignment of a value to a tacit variable, the hearer has to work out which interpretation was intended, since in either case the information is not explicitly present in what is uttered by the speaker.

Ad hoc concepts

The last of the varieties of underspecification listed above is illustrated in (6). Here the speaker uses a word ('ten' in 6a, 'saint' in 6b) intending to convey an occasion-specific meaning (or '*ad hoc* concept': Carston, 1997; Sperber & Wilson, 1998) different from the concept that the word encodes.

6a) The train leaves at ten.

b) John will carry your bags: he's a saint.

In loose use the concept conveyed is less specific than the encoded concept. For example, the hearer of an utterance of (6a) needs to work out whether the speaker actually meant *ten sharp*, or (more likely) something looser, and how loose.

The *ad hoc* concept analysis has also been applied to metaphor (Carston, 1997; Bezuidenhout, 2001), as in (6b), where the speaker has to work out what the speaker meant by 'saint' – surely not the literal meaning, but something like *an individual who is helpful to an unusual, perhaps self-sacrificing, degree*. There is great scope here for partial misunderstanding. A hearer of (6b), for example, is unlikely to be able to work out what degree of 'sainthood' the speaker intends, or whether the speaker wants to communicate something precise or something vague.

2.2.2 Implicatures

'Implicature' is the generally-accepted term (coined by Grice, 1975) for intentionally implied utterance content. Consider something that Margaret Thatcher said in an interview while she was British prime minister, (7):

7) I always treat other people's money as if it were my own. (Wilson, 1994: 39)

As Wilson says, what Thatcher intended to *say* is clear enough, but a crucial part of what Thatcher wanted to communicate was what she intended to imply: that she treats other people's money with great care, is parsimonious with it etc. However, her utterance can easily be misunderstood as implicating that she spends other people's money on herself.

What the hearer will take Thatcher to implicate here depends on what assumptions he adopts. If he assumes that she treats her own money with great care then he will reach her intended interpretation, while other assumptions will lead to misunderstanding.

2.2.3 Attitudes

The hearer also has to work out what the speaker's attitude is to the proposition expressed and to what she implicates:

> Is she endorsing these propositions or dissociating herself from them; is she asserting that they are true, wondering whether they are true, perhaps wishing or hoping that someone will make them true? To a certain extent, these attitudes can be linguistically encoded (e.g. by declarative, interrogative or imperative syntax), but … in this aspect of interpretation as in any other, what is communicated generally goes well beyond what is linguistically encoded. (Wilson, 1994: 41)

For example, it may be part of what the speaker intends to communicate in uttering (8) that she means it as a promise (rather than, say, a threat, or a prediction)[xi]. This is a difference in *illocutionary force*, a term coined by Austin in work (1962) which drew attention to the different types of actions that could be performed in making an utterance; illocutionary force has been the focus of the majority of subsequent work on speech acts (e.g. Searle, 1969; Searle, 1976; Bach & Harnish, 1979).

8) I'll be back later.

In irony, the speaker says (or seems to say) something which she does not endorse – which in fact she finds ridiculous. As a result, it is notoriously easy to misunderstand ironic utterances. For example, the sentence in (9) could be uttered ironically or meant sincerely:

9) What a lovely shirt!

In such cases, intonation or non-verbal cues (Wilson & Sperber, 2012: 123, 128) may help, and what the hearer knows about the speaker's beliefs and preferences may – but may not – make it clear whether the utterance was intended sincerely or ironically.

The speaker's attitude to implied utterance content has not received as much scholarly attention. Wilson discusses the following example:

10) a. Peter: Is John a good cook?

b. Mary: He's English. (Wilson, 1994: 11)

Mary expresses the proposition that John is English and implicates that he is a bad cook – relying on widely available contextual assumptions about the quality of English food. As Wilson says, Mary clearly commits herself to John's being English: she would be taken to have lied if it turned out that she knew that he wasn't. On the other hand, it is not clear what her attitude is to the proposition that he is a bad cook. She obviously intends to communicate it, but perhaps playfully, rather than seriously. To fully understand Mary's utterance, Peter has to work out her attitude to this implication as well as her attitude to the basic proposition expressed. In such cases, partial misunderstanding is far from unlikely.

2.2.4 Contextual assumptions

Several of the examples above indicate that bringing to bear the right assumptions is crucial to getting the right interpretation. For example, once the hearer works out what assumptions Thatcher intended in example (7), the intended implicature follows logically. Conversely, using the wrong assumptions is almost certain to cause misunderstanding. Assumptions of this sort are called 'contextual assumptions' in relevance theory, since they are not encoded by the linguistic material uttered, but must be worked out from the context.

Obviously, a key question is how the hearer knows which contextual assumptions the speaker intends him to use[xii]. These assumptions have several sources, including preceding text, knowledge about the speaker, and general knowledge (Wilson, 1994: 41).

The inherent riskiness and fallibility of communication certainly applies to the recovery of the intended contextual assumptions. There is no guarantee that the hearer will be right about these any more than about the other components of the intended interpretation.

Still we do manage to understand each other much of the time. Hearers and speakers have a great deal in common, as human beings and often as members of a shared culture, so they will typically have access to many shared assumptions. In addition, speakers are good at tailoring their utterances to the hearer's knowledge and abilities, and hearers can therefore work on the basis that the utterance will be a good clue to what the speaker wanted to convey, or at least that the speaker will have tried to make it a good clue.

In Grice's theory of conversation this tailoring of the utterance is described as the conformance of speakers with a Cooperative Principle and a set of conversational maxims. Other pragmatic theories postulate different constraints on speakers and hearers: relevance theory's Communicative Principle, for example, mentioned above.

2.3 Expectations and top-down effects

The hearer's expectations about what the speaker might want to convey play an important role in communication. For example, in trying to understand Thatcher's utterance of (7), you might have initially entertained the wrong interpretation, but rejected it because it is incompatible with your beliefs about the sort of thing that the prime minister would have wanted to convey.

We expect responses to questions to be answers (although this expectation is fallible), so, for example, Mary is likely to work on the assumption that Peter's utterance in (11) is intended to imply that John is not going to the wedding. Working backwards, she will be able to infer that 'he' refers to John, rather than Frank, Tim or another male individual, that John is too ill to go to the wedding, rather than, e.g. to play tennis, and that 'now' refers to a period of days at least.

11) Mary: Is John going to Frank and Tim's wedding?

Peter: He's too ill now.

Our expectations and background knowledge can outweigh what is linguistically encoded. It is possible to infer what the speaker intended to convey even if the speaker accidentally uses a wrong word, or parts of the utterance are lost in noise. For example, an utterance of (12) might be correctly understood as an attempt to say that the speaker was feeding *pigeons*,

because the hearer knows that there are – usually – no penguins in Trafalgar Square. Of course, such inferences are risky – the speaker might really have intended to say that she was feeding penguins – but they make communication less 'brittle' than it would be if it were purely a matter of encoding and decoding.

12) I was feeding penguins in Trafalgar Square.

There is evidence from psycholinguistics that top-down influences play a strong role and can override what is encoded. In experiments that present items like (13), participants mostly fail to notice the anomaly, presumably because they are engaged in producing an answer to the question that they think they have been asked.

13) How many animals of each kind did Moses take into the ark?

This is the 'Moses illusion' (Erickson & Mattson, 1981; van Oostendorp & De Mul, 1990), mentioned in the introduction.

3 Social aspects of communication and misunderstanding

There are two ways in which work on misunderstanding has focussed on groups larger than the individual. The first is a view of talk exchanges as something that the participants make together: a joint product of joint action. On this account, which has been the focus of inquiry by Herb Clark and colleagues (work listed under area III in the introduction), misunderstandings are joint problems that require joint solutions:

> when Bob does not understand Ann, the problem is not his alone, or hers alone. It is Ann-and-Bob's, and it takes the two of them working together to fix it. (Clark, 1994: 244; see also Clark & Schaefer, 1989: 263ff.)

This work is discussed in section 3.2 below.

3.1 Cross-cultural communication and misunderstanding

The second way in which a great deal of work on misunderstanding focusses on groups of people is the interest that has been shown in misunderstandings that are related to social or cultural differences (listed as tradition II in the introduction). As Schegloff writes,

> The misunderstanding which has been the focus [of work in sociolinguistics and discourse analysis] has not been that between individuals, although individual participants are, of course, always involved. (Schegloff, 1987: 201)

This research has focussed on

> … misunderstandings whose sources of trouble transcended the individual and were rooted in groups or allegiances which confer on the individual some specific social or cultural identity, and/or armed or saddled the individual with related resources for speaking, hearing, understanding, and interacting which contribute to misunderstanding… (Schegloff, 1987: 201)

The types of difference between groups of people that researchers have been interested in include national and regional identities, membership of a 'speech community', social class, ethnicity and 'race', sex, age and generation, and work and professional affiliation (Schegloff, 1987: 202). As Schegloff points out, these affiliations often overlap, "as when studies of classrooms focus on the troubles that can arise when young 'lower-class' black/chicano students have to cope with anglo-middle-class middle-aged teachers." (Schegloff, 1987: 202)

There has been a tendency in research on cross-cultural communication to conflate the roles played in misunderstanding by linguistic differences and non-linguistic cultural differences. Indeed some researchers have argued that it is wrong in principle to distinguish between cultural and linguistic differences in communication:

For example, Gumperz writes:

> … socio-cultural conventions affect all levels of speech production and interpretation […] we must abandon the existing views of communication which draw a basic distinction between cultural or social knowledge on the one hand and linguistic signalling processes on the other. (Gumperz, 1982a: 186, endorsed by Weigand, 1999: 764)

This is in contrast with theories (e.g. relevance theory, discussed above) which distinguish linguistic knowledge from non-linguistic assumptions. On such accounts, linguistic differences between speaker and hearer are most likely to cause problems with the encoding/decoding of the sentence uttered, while non-linguistic cultural differences are likely to lead to misunderstanding through discrepancy in which assumptions are available to speaker and hearer, or in the differential accessibility of assumptions.

Of course there are some differences that are both linguistic and cultural. For example, professional in-groups such as medical or legal professionals have both special knowledge of their area and specialised terminology in which this knowledge is couched, and it might be difficult to separate the two in discussions of misunderstandings between professionals and laypeople.

It may also be that impatience with distinctions of this sort has been partly driven by the urgency of the task of drawing attention to injustices that are fuelled by power imbalances. In the face of repression such distinctions may seem academic (in the pejorative sense):

> [Something that] adds a note of urgency and commitment to this line … of inquiry, […] is that these encounters across group boundaries are seen to work to […] the unfair and unjust disadvantage – of one of the participants […] . It is not, then, just that one person is misunderstood by another, but that the child is misunderstood by the teacher, the woman by the man, the black by the white, the Indian by the Briton, the welfare recipient or juvenile delinquent by the social worker – in each case one with lesser (or virtually no) power by one with more or much power (Schegloff, 1987: 202)

The results of work on cross-cultural communication are hard to summarise, because the research has mostly been concerned with bringing out the details of actual communication and misunderstanding. Many practitioners make audio – and, more recently, video – recordings of interaction, and work with transcriptions that aim to capture a high level of detail, including pauses, variant pronunciations, overlaps and other characteristic features of actual speech and verbal interaction. The examples from Schegloff given above (in section 2.2.1) are typical in this respect.

3.2 Maintenance and repair

One focus of the talk-in-interaction tradition that has a strong bearing on misunderstanding is the research on *repair*, that is "practices for dealing with problems or troubles in speaking, hearing, and understanding the talk in conversation (and in other forms of talk-in-interaction…)" (Schegloff, 2000: 207).[xiii]

Whether a misunderstanding is noticed and if so, by which party to a conversation, has implications for whether and how the problem is addressed as the conversation progresses. For example, in a conversation between two individuals, A and B, suppose that A makes an utterance (a 'turn' in the terminology of CA) and that B responds with an utterance (the second turn) which reveals to A that B has misunderstood A's original utterance. A has an opportunity in the next (i.e. third) turn to "perfor[m] some operation on the… trouble-source turn" e.g. by saying "'No, I don't mean X, I mean Y' " (Schegloff, 1987: 203). This is an example of what has been called 'third-turn' (Schegloff, Jefferson & Sacks, 1977: 366, 375) or 'third-position' repair (Schegloff, 1987: 203). Examples (2) and (4), above are of this type.

Alternatively, the speaker may notice as she is speaking that there is a problem and correct it immediately (Jefferson, 1974), as Naomi does in reformulating her question in example (14):

14) Naomi: But c'd we - c'd I stay u:p? (0.2) once we get // ho:me (Extracted from longer example at Schegloff et al., 1977: 366.)

This may be called 'same-turn' repair. Often such self-corrections are signalled by 'editing terms' (Levelt, 1983) such as 'uh you know' and 'I mean' in example (15):

15) Jane: this is the funny thing about academics, - . that if you're no- u:h you know, I I've. come to it, so late,. I mean I've had a lifetime of experience, rolling around, (Clark, 1994: 249)

Both this and third-turn repair are examples of 'self-initiated' repairs. These contrast with 'other-initiated' repairs, where the addressee of the troublesome utterance is the one who starts the repair process, typically by asking for clarification, as in (16a), or by offering a tentative interpretation, as Dar does in (16b):

16a) F: This is nice, did you make this?

K: No, Samu made that.

F: Who?

K: Samu (Schegloff et al., 1977: 367–368)

16b) Sam: well wo uh what shall we do about uh this boy then

Dar: Duveen

Sam: m

Dar: well I propose to write, uh saying . I'm very sorry [continues] (Clark, 1994: 249)

Initially, it was claimed that "that virtually all repair initiated by other than speaker of the trouble-source turn was initiated in the turn following the trouble-source turn" (Schegloff, 2000: 205), but this claim has been abandoned in favour of a more complex picture of other-initiated repair that can be delayed to later turns (Schegloff, 2000).

In an important paper, Herb Clark argues that the "common view of conversation [according to which] the participants manage the problems they encounter by monitoring for them and by repairing them when they arise[. …] is too narrow," (Clark, 1994: 243) and that:

> … speakers do more than make repairs. They have strategies for preventing certain problems from arising at all. For problems that are unavoidable, they have strategies for warning their partners to help them prepare for the problems. And for problems that arise anyway, they work with their partners in repairing them. In the management of problems, preventatives are preferred to warnings. Repairs are the last resort. (Clark, 1994: 243)

Devices that may prevent and at least warn include the pronunciation of 'the' as /ði:/ rather than /ðə/ when there is a problem in formulating an upcoming noun phrase (Fox Tree & Clark, 1997) and the use of 'uh' and 'um' to signal that an interruption will follow. Clark and colleagues have shown that 'uh' more often precedes short interruptions, 'um' longer ones (Smith & Clark, 1993; Clark & Fox Tree, 2002). Speakers also produce *hedges* such as 'sort of', 'kind of' and 'like' to signal that they are being imprecise (Wade & Clark, 1993). Clark argues that first-turn corrections, as in (17), are preventatives as well as repairs: "although they repair one problem, they prevent deeper and more costly misunderstandings down the line" (Clark, 1994: 247).

Sacks *et al* claimed that "[r]egularly… a turn's talk will display its speaker's understanding of a prior turn's talk, and whatever other talk it marks itself as directed to" (Sacks, Schegloff & Jefferson, 1974: 728). In particular, speakers often "show not only how they understood the last speaker's turn, but also that they understand that the last speaker understood the turn before that one" (Laurence, 1999: 279, summarising Sacks, 1992: 719). Clark and colleagues have shown that participants in a conversation actively check that understanding is being achieved (Clark & Wilkes-Gibbs, 1986; Clark & Schaefer, 1989; Wilkes-Gibbs & Clark, 1992; Brennan & Clark, 1996; Clark & Krych, 2004): "speakers … monitor addressees for understanding and, when necessary, alter their utterances in progress. Addressees cooperate by displaying and signaling their understanding in progress" (Clark & Krych, 2004: 62).

4 Concluding remarks

This paper has set out the 'state of the art' in the study of misunderstanding, discussing work across several different areas of research. There is no dominant theory of misunderstanding – perhaps because possible causes of breakdown in communication are too disparate. Moreover, sharp theoretical and methodological differences between research traditions can make it difficult to say what consensus exists. However, the work discussed in the previous section coheres well with the main findings of section 2 above. Given that communication is inherently risky, a) speakers maximise their chance of being understood by tailoring utterances to the hearer, anticipating and trying to head off problems; and b) participants in a conversation demonstrate that, and how, they have understood, and monitor each other's comprehension.

On the cognitive side, it seems reasonable to hope that advances in theories of the mental processes involved in communication will shed light on misunderstanding. In the study of misunderstanding as a social phenomenon, quite basic facts are still unknown. For example,

there are no statistics on how frequent misunderstanding is (Dascal, 1999: 754) nor on what it correlates with (e.g. degree of social difference)[xiv].

The importance of misunderstanding in communication and the fragmented state of current understanding are reflected in the fact that relevant – but less central – research has also been carried out in several areas not discussed in this paper:

i) work on misunderstanding in studies by computer scientists attempting to model dialogue (e.g. Hirst et al., 1994);

ii) the study of sentence parsing and how it can go wrong in, e.g. garden-pathing (Dowty, Karttunen & Zwicky, 1985);

iii) work on misunderstandings in second-language teaching and acquisition (e.g. Thomas, 1983; Blum-Kulka & Olshtain, 1986)

iv) work in psychology on framing effects, and, particularly, on whether poor performance in reasoning tasks is due to participants' misunderstanding of the task (e.g. Fiedler, 1988; Newstead, Pollard, Evans & Allen, 1992; Tentori, Bonini & Osherson, 2004);

v) two related literatures in medical and psychological journals on misunderstandings between doctors and patients and between medical researchers and participants (Blake, Weber & Fletcher, 2004; Dixon-Woods et al., 2007; Schober, Conrad & Fricker, 2004);

vi) the study of 'slips of the ear' i.e. misperceptions such as 'carcinoma' for 'Barcelona' (Fromkin, 1980).

There is also relevant work falling outside, or between, these areas, such as Elinor Ochs' survey, from the perspective of social psychology, of misunderstanding in childhood language development (Ochs, 1991). Finally, there are numerous popular articles and books on misunderstanding in communication (e.g. Tannen, 1991; Halvorson, 2011), demonstrating that the topic is of considerable interest to non-specialists.

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i See Laurence, 1999 for an overview of work on misunderstanding in communication science.

ii Weigand (1999: 764–765) calls these 'planned misunderstandings'.

iii There is an interesting parallel with the received view of knowledge in philosophy. It is generally accepted that it is not enough for a belief to be true for it to be knowledge; it must also have been reached in the right way and/or be held for good reason. See Steup 2005/2014 for an introduction.

iv A slightly different distinction is between misunderstanding of the utterance itself, and other misunderstandings that may attend conversation or other verbal communication.

v This example is from Peter Handke's *The Goalkeeper's Fear of the Penalty*: "She was about to sit down at a place where there was no chair and Block exclaimed: 'Look out!', but

she had only crouched and picked up a coin that had fallen under the table when she was counting the money," (Zaefferer, 1977: 30, fn. 3, trans. Zaefferer, modified by Allott).

vi For example, Schegloff uses the phrase "misunderstandings that occur between persons" (1987: 203) in a context that suggests that this (very broad) category is a focus of research in the CA tradition.

vii There is interesting work on misunderstanding in this broader sense, e.g. Perkins & Simmons, 1988.

viii Zaefferer's paper is an interesting attempt to treat linguistic misunderstanding in a decision-theoretic framework (1977). It does not belong to any of the bodies of work noted in the introduction or the conclusion, and seems to have been something of a theoretical dead end.

ix Conversely, Laurence (1999) argues that studying misunderstanding has occupied too central a place in much work on communication.

x Errors in encoding and decoding should also be on the list, *pace* Zaefferer.

xi Schegloff (1987: 209) gives an attested example of misunderstanding of illocutionary force, where a description is misunderstood as a criticism or complaint.

xii A question which has received too little attention is whether intended contextual assumptions are part of what the speaker intentionally and overtly conveys (Sperber and Wilson,1986: 194) or whether while essential to understanding what the speaker means, they are not themselves part of utterance content (Recanati, 2004: 48–49).

xiii Not all repair is correction of misunderstanding: other-repair often targets problems with hearing, and self-repair is often aimed at problems with speaking. See Schegloff, Jefferson & Sacks, 1977: 361, 379–80.

xiv One reason for the neglect of statistical analysis might be Schegloff's (1993) view that it is premature to attempt quantitative work in this area.