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A speaker-oriented multidimensional approach to risks and causes of miscommunication

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Combining ideas from different research directions and fields, the paper presents a multidimensional model of communication which enables to explain the risks of communication more comprehensively than before. The process of producing and interpreting speech is described through a message transfer circle. The model also includes the mental worlds of the speaker and the recipient, which substantially influence interaction. In addition, special attention is paid to recipient design, which plays a crucial role in interaction. One may even argue that such frequently mentioned factors as misreference or ambiguity are not causes of miscommunication but only risks for it; the real cause of miscommunication is incomplete recipient design. The common denominator is the egocentrism of the speaker: avoidance of cognitive effort, common ground fallacy, emotional overdrive, obstacles caused by physiological state or physical defects, and attaching greater importance to other things at the expense of recipient design.

Keywords: human interaction, miscommunication, communication failure, risk of communication, mental world, common ground fallacy, recipient design, egocentrism, speaker orientation, functional approach

Since Zaefferer (1977) causes of miscommunication have been analysed and classified by a number of scholars (e.g. Grimshaw 1980, Yus Ramos 1998, Bazzanella and Damiano 1999). Unconventional, rather formal models are provided by Anolli (2001) and Ardissono et al. (1998). Overviews of Western theories and classifications of miscommunication can be found, among others, in Dascal (1999), Tzanne (2000), Olsina (2002), House et al. (2003), and Verdonik (2010). There are interesting studies on the classification of miscommunication in languages other than English (see especially Ermakova and Zemskaia 1993, Falkner 1997, Bacevič 2004: 215–249). A new attempt to approach problems in communication

is presented by Janicki (2010), who uses the methodology of folk linguistics (cf. Niedzielki and Preston 2003).

This short overview shows that several attempts have been made to define and classify communication failures. The present paper will expand the angle of view on human interaction by paying attention to research carried out in fields other than linguistics. Such a multidisciplinary approach enables us to obtain a more complete picture of this complex phenomenon. It is in line with Weigand's claim that linguistics moves from searching for 'the simple' towards challenging 'the complex' (Weigand 2004: 3), or from 'reductionism' to 'holism' (Weigand 2011). The same idea is part of Kecskes's (2010) 'socio-cognitive approach'. My main claims are as follows:

- In most cases, the factors mentioned in the research literature as 'causes' of miscommunication are, in fact, not causes but risks which may lead to miscommunication only in certain circumstances.
- In describing the risks and causes of miscommunication, we need a multifaceted and multidimensional model of communication which takes into account various elements influencing the successfulness of interaction.
- Recent research on behaviour in interaction has revealed substantial weaknesses in people's ability to take into account the recipient they are interacting with. This feature of our communication behaviour cannot be ignored in attempts to understand the causes of miscommunication.

The purpose of this paper is to demonstrate a model of (mis)communication which makes it possible to understand and explain causes of miscommunication in a multidimensional manner. Preliminary versions of the model have been published in Mustajoki (2008, 2011b).

1. Grounding of a multidimensional approach to (mis)communication

I will first demonstrate, by using three simple phrases, the need for a multi-aspect approach to the risks and causes of miscommunication.

- (1) John studies Chinese language and literature.
- (2) John studies Chinese language and biology.
- (3) John studies Chinese language and philosophy.

All the phrases (1–3) are, from the purely linguistic point of view, ambiguous because their syntactic structure as such gives no hint as to whether or not the second noun is within the scope of the adjective. However, there are differences between the phrases when we put them into a real conversation. In (1) and (2), people usually arrive at similar interpretations of the meaning of each phrase (Chinese

literature but not Chinese biology). In doing so, we refer to our mental worlds, which provide us with the same outcome for most interlocutors. For a computer, the reading of phrases (1) and (2) is more problematic if it has not been 'taught' how to deal with such ambiguous phrases, i.e. provided with sufficient information for interpreting them.

The interpretation of the third phrase is problematic even in interaction between people. No problems occur if the interlocutors' mental worlds give the same interpretation of the scope of the adjective *Chinese*, but it is as likely that one of the interlocutors may think of Chinese philosophy, while the other will be thinking of common or general philosophy. These two levels or dimensions of approaching communication difficulties, purely linguistic and oriented to mental worlds, will be discussed in sections two and three.

However, the case of the three phrases is not yet closed. It is at this point that the role of recipient design comes in. The linguistic phenomenon of ambiguity and the differences in the mental worlds of interlocutors constitute risks to successful communication; failures in recipient design are real causes of miscommunication. Why is this the case? If the speaker realizes that phrase (3) may generate different interpretations, he or she can ensure correct understanding by disambiguating the phrase, i.e. by saying (3') or (3''), instead of (3):

- (3') John studies Chinese language and Chinese philosophy.
- (3'') John studies Chinese language and general philosophy.

The mechanism of recipient design and failures in it are the topic of the fifth section. This simple example shows that in order to obtain a fuller picture of miscommunication we are obliged to look at interaction from various points of view.

A further clarification is needed. The model presented in the paper concentrates on single speech acts where the speaker wants to say something. Many theories of human interaction (relevance theory, cognitive pragmatics, dialogue action game, etc.) emphasize the joint efforts of communicants in creating a dialogue and understanding (cf. e.g. Clark 1996, Pickering and Garrod 2004, Garrod and Pickering 2009). There is no reason to dispute this observation. In the sixth section, the speaker-oriented approach will be justified in more detail and applied to various risks of communication.

Miscommunication is used in this paper as an umbrella notion for different types of communication failures, such as: 'misunderstanding', 'non-understanding', 'communication breakdown', 'misconception', '(wrong) reference identification', 'mishearing', 'non-hearing', 'non-listening', 'misperception', 'communication disorder' ('disturbance', 'dysfunction'). Miscommunication may be briefly defined as the situation in which the recipient understands the message in a different way than it was intended by the speaker (cf. Ryan and Barnard 2009: 45).

The examples given in the text come from students who have taken part in courses held by the author during the last few years at Helsinki University. The original Finnish and Russian examples are given only in those cases where the cause of miscommunication has its origin in linguistic features of the dialogue; otherwise, only English translations are provided.

2. The process of interaction

We start with graphics showing the various elements of human interaction.

As shown in Figure 1, the mental worlds of interlocutors as well as monitoring and recipient design play a substantial role in interaction. We will return to these elements in the following sections and pay attention first to the inner part of the figure, the message transfer level, which begins with the speaker's aim of saying something ($\text{meaning}_{\text{Sp}}$) and ends with the interpretation of the utterance by the recipient ($\text{meaning}_{\text{Re}}$). As one can easily see, the message transfer circle has some similarities with Shannon (and Weaver's) famous information theory model. Some newer conceptions (e.g. Dobrick 1985: 97, Falkner 1997: 88) are even closer to our model. However, I believe that there are some features in the model which make it more suitable for describing risks to communication:

1. The form of a circle reflects the essence of communication better than previous linear presentations. It is true that communication takes place in time that flows forward linearly, but on the other hand, from the point of view of the

Figure 1. A multidimensional model of interaction (cf. Mustajoki 2008, 2011b).

needs and goals, communication is more like a circle where the speaker gives verbal expression to some thoughts which are then meant to be 'reborn' in the recipient's mind.

2. A relevant part of the model is the distinction between meaning (what the speaker wants to say and what the recipient comprehends) and form (the realization of the meaning in a linguistic form). Researchers modelling communication do pay attention to this issue (e.g. Dobrick 1985: 56), but nevertheless leave it out of the model they present. The asymmetry between meaning and form is so crucial both for producing an utterance and for understanding it correctly that it should be included in the model itself.
3. Further, the 'form' is not the same as the utterance, because some disturbances may occur in the process from the 'intended form' to the overt utterance. Thus, we have the chain 'meaning → form → utterance (overt interaction)'.

Producing and comprehending speech are in reality much more complicated processes than described in the model. As a matter of fact, the different phases of communication overlap and mix together. Here a reminder is needed: a scientific model is not meant to be a full copy of the real-world phenomenon, but an approximation to it. The purpose of a model is to help us understand the essence of the phenomenon.

We can now take a closer look at different elements of the communication process. We start with the referential strand of the message that the speaker is producing. With the exception of general (abstract) sentences with no localization, e.g. *Cats are lazy animals*, we always refer to a fragment of a 'world' when saying something. One may distinguish three main types of worlds: a/the real world; a virtual world (as in fiction and fairy tales, or in telling about future plans, expectations, beliefs, hypothetical events, etc.), and an inner world which comprises feelings and sensations that are significant and real-like for us, but not visible as such (cf. Mustajoki 2006, 2007). Even in the case of the real world, the interpretation of the speaker is always very personal. Fifty guests attending the same wedding celebration will each have a different story to tell about this fragment of the real world.

The *meaning* (what we are aiming to say) is in many cases a rather sketchy plan for expressing something. This is reflected in the cloud-like shape it has been given in the figure. The notion of meaning should be understood broadly. It includes all aspects of the message the speaker wants to express: (propositional) *content* P, (illocutionary) *function* F, and speaker's *attitudes* to P; for reasons of clarity, the whole complexity of the last issue will be covered by the symbol M (as *modality* and *mode*) (cf. Falkner 1997: 96 ff). M stands for very significant components of speech, such as scale of certainty (epistemic modality), scale of politeness, and source of information. Much research has been devoted to these issues, but usually not from the point of view of miscommunication.

Although it is not always possible to differentiate P, F, and M in an utterance, it is important to see them as separate parts of a message because misunderstandings often concern only one of these three elements. *It is raining* seems to be a very simple utterance, but interlocutors may have different interpretations of it with regard to all three elements of meaning. When it only drizzles, the P of the utterance is diffuse, not clear-cut. If he and she have agreed to go shopping on Saturday unless it rains, and on the Saturday morning he goes to the window and says *It is raining*, the phrase, while being formally a statement, has a special function ‘we won’t go shopping’. A substantial part of pronouncing the phrase is also the speaker’s attitude to it; a wrong tone may cause a serious conflict between the interlocutors.

A further example for clarification: if we say *It is hot in here*, having in mind a request to open the window, and the recipient understands the indirect speech act as a mere statement, a misunderstanding of F takes place. If one says to another *You have beautiful eyes* as a compliment, but the phrase is understood as ironic, we are dealing with a wrong interpretation of the mode (M) of the utterance. Mode therefore also includes the metafunction of the utterance, or, in Bakhtinian terms, the speech genre we are adopting.

Further, when we move on to the next stage of the process, we have to bear in mind that there are many more meanings than there are words and expressions in any language. Therefore, it is far from being the rule that a suitable form can be found for our meaning. “Every utterance is only an approximation to the very thought the speaker has in mind” (Jucker et al. 2003: 1742, Clark 2003: 17). As a matter of fact, even writers who are masters at describing the profound feelings of people complain that they are unable to fulfil their task. Fyodor Dostoyevsky (1989: 348) writes in this connection that only a small part of the ideas and emotions we have in our heads can be translated into human language.

On the other hand, there are usually several ways of saying ‘the same thing’. Consider the following situation: a supervisor wants to advise a student to shorten the introduction to an article. So, P is something like ‘You shorten the introduction’, while function is ADVICE. In expressing this meaning the supervisor has several options, including the following realizations of M:

- (4) a. I advise you to shorten the introduction.
- b. (I think) you should shorten the introduction.
- c. Maybe it would be wise to shorten the introduction.
- d. The paper would be better if you shortened the introduction.
- e. I would shorten the introduction if I were you.
- f. The introduction is rather long.
- g. Introductions are usually (a bit) shorter.

Moving forward from form to utterance, we have to bear in mind the non-discreteness of the process of speech production. Disturbances which may affect the clarity of speech may happen at the stage from the form to the utterance (slips of the tongue, mumbling, swallowing endings or entire words), or they may occur because the speaker starts pronouncing the utterance before deciding on the form (e.g. contamination of two sentences).

At the next stage, according to Clark (1996:21), the recipient attends to the speaker's vocalizations, identifies utterances, and understands meaning. Breaks in the flow of interaction may take place in all these phases. *Non-hearing*, *mishearing*, and *non-listening* mean that the recipient does not properly attend to the speaker's vocalization. It is a commonplace fact that listening and decoding the message are not mechanistic processes, but active work by the recipient, who compares the vocalization to the store of linguistic knowledge he or she possesses. Being a creative process also means that form_{Re} may include elements which are not in form_{Sp} as a result of mishearing and *overguessing*.

The next example shows how mishearing and overguessing occur in the same situation, the latter being a consequence of the former. A train arrives at the station. Passenger A gets off and meets B. C is approaching the scene from the background.

- (5) A: Onpas täällä savua ilmassa. Onko jossakin tulipalo?
 'There is smoke in here. Is it burning somewhere?'
 [B pays no attention to the question, but merely says *hello* to A. At this point C joins them.]
 B: Hello.
 C: Onko teillä satanut?
 'Has it been raining where you live?'
 A: Ei. Miten niin?
 'No. Why are you asking?'
 C: Kun sä kysyit että onko TÄÄLLÄ satanu.
 'Because you asked whether it had been raining HERE.'
 A: En mä sellaista kysyny.
 'I didn't ask anything like that.'

The only explanation for the miscommunication is that C heard only something like *O... t... sa...*, which fits both interpretations (cf. *Onpas täällä savua* and *Onko täällä satanut*). Recipient C then fabricated the rest of the phrase according to her own guessing. She probably paid no attention to the smoke in the air.

When processing the form to the meaning, the recipient (in the same way as the speaker) refers to her or his own understanding of words and expressions. This is indeed the only store of knowledge available for the recipient in a standard communication situation where dictionaries or wikipedias are not available. On this

basis, the recipient also interprets forms which have more than one possible meaning because of syntactic ambiguity, polysemy, or homonymy, or because of vague and nebulous concepts behind the words. In most cases this is a fully automatic process without any conscious action by the recipient.

As shown in Figure 1, both $\text{meaning}_{\text{Sp}}$ and $\text{meaning}_{\text{Re}}$ are related to a reference. This is a further risk that may hinder appropriate understanding of the message. The meaning of the phrase *John is playing tennis* may as such be correctly understood by the recipient, but he or she may think that this is a different John from the one meant by the speaker.

3. Mental worlds

Figure 1 shows that the mental worlds (MW) of the speaker and the recipient play a crucial role in all phases of producing and comprehending speech. MW is a wide concept covering various aspects of personal factors of interaction. They are linked to each other, but can also be considered separately. MW comprises a set of mental, intellectual, and emotional factors that the interlocutors bring into the communication situation. We start with those that are rather stable, namely: (a) the communicative (linguistic) ability; (b) the cultural background; and (c) the cognitive systems of the interlocutors (for more detail see Mustajoki 2008).

(a) *The communicative (linguistic) ability* of people has been discussed in terms of various competences: first grammatical competence, then different variations of communicative, pragmatic, and discourse competences. Weigand's (2003, 2010) term 'competence-in-performance' is an attempt to combine different concepts into a unified whole. We emphasize the very personal character of the communicative ability of the speaker (and the recipient). We each have our own repertoire of linguistic tools. It has kept developing through all the communicative situations in which we have been involved before the moment of the current interaction. We definitely also create something new in producing speech, but we are able to be creative only on the basis of the knowledge gathered in our mind through conscious or unconscious learning and observation (cf. Joseph 2003, Kecskes 2004, 2008). Communicative ability includes not only a repertoire of words and structures of the language concerned, but also the skills that are needed to use them in various contexts, the speed with which they are retrieved from the memory during interaction, and the personal feelings and associations they evoke in the speaker.

(b) *Cultural background* is, like communicative ability, based on the personal histories of people. This part of MW has been a popular topic in research literature, especially on intercultural communication, and not least from the point of view of miscommunication (e.g. Banks et al 1991, Bührig and Ten Thije 2006).

Cultural background covers the knowledge that people gather about the world they live in: typical natural phenomena, historical facts about their nation, community, and family, awareness of customs, traditions, and rules of behaviour. This information is manifested in presuppositions, stereotypes, scripts, mental sets, scenes, schemas, and mental models, or as a whole in 'cultural apparatus' (Rehbein 2006). Although the importance of cultural background for successful interaction has been mostly emphasized within the framework of intercultural (interethnic) communication, it is no less important in communication between people within the same language community. We belong to different 'cultures' on the basis of our age, gender, sexual orientation, religion, place of residence, occupation, and hobbies, and all of this is reflected in our MWs.

(c) *The cognitive systems* of the interlocutors are more or less permanent patterns of thinking. It is not easy to differentiate this factor from that of cultural background. Consider communication problems which occur in a conversation between a historian and a mathematician. Undoubtedly, they are partly caused by the cultural background, which refers in this case to things they have learnt during their studies. It is possible, however, that these people also think in different ways in a deeper sense. Psychological experiments have shown that there are differences in cognitive styles between people (see overview in Riding and Cheema 1991). These features cannot be ignored in seeking explanations for some of the problems in human interaction, although it is difficult to find exact evidence of their impact. Communication problems between people from different research fields have been examined by a number of scholars (e.g. Rapoport 1958, Berger 2007, Nichols and Ulatowski 2007: 363), but it is difficult to separate the influence of cultural background (adoption of the traditions of the research field) and the deeper cognitive patterns of the interlocutors. Berger (2007) provides evidence of the existence of 'rational and experiential communication modes'. On the basis of our everyday experience, this factor may be of great significance in all types of communication, but we still lack studies on the risks that differences in cognitive patterns and styles cause for fluent conversation.

The three elements of MWs mentioned above are more or less permanent in the sense that they accompany their bearer all the time. We now turn to three more factors which vary from one communication situation to another: (d) the relations between the interlocutors; (e) the emotional and physiological state we are in; (f) contextual elements.

(d) *The relations between the interlocutors* are as such rather stable. According to Clark (1996: 115), there is a certain basic gradation in closeness between people: strangers, acquaintances, friends, intimates. If we add to this list 'comrades' (for want of a more appropriate English word) with whom we work, play a sport, or have some other shared interest, we end up with a categorization which reflects

substantial differences or similarities in people's cultural background and communicative ability. What is meant here by relations between the interlocutors is more of an emotional factor that affects communication. A widely used casual word in this connection is *chemistry*. Positive chemistry between interlocutors fosters mutual understanding, while negative chemistry inhibits or hinders it. An example of the former case is a conversation between lovers who understand each other 'without words', as we usually put it; the latter case is seen in hostile contacts between enemies who refuse to understand each other. These are extreme examples. A less dramatic but still remarkable influence of this factor can be seen in most communication situations. In the intermediate categories, among acquaintances and colleagues, we meet the whole scale of attitudes, although people generally avoid showing them explicitly.

(e) *Contextual elements* have their origin in the environment in which the interlocutors find themselves. It is possible to differentiate at least three dimensions of this. First: what we see and hear at the moment of interaction. If the recipient sees something interesting happening behind the speaker, (s)he may concentrate on that instead of listening. If the speaker says that a certain Mary is about to join them, the recipient can make the mistake of assuming that the woman approaching at the moment is Mary. Second: what we have just experienced. In a noisy situation, where the linguistic context of words is difficult to hear, a person returning from a baseball match may associate the word *bat* with the game but not with the animal. As we will discuss below in detail, this is the situation where the common ground fallacy often occurs: people do not realize that their interlocutor is in a different associative space. The contextual factor also has a third dimension. As van Dijk (2006) observes, speakers modify their communicative behaviour not according to the real communication situation, but according to their intuitive comprehension of the discourse type (genre) they are involved in. This is why the communicants may interpret their environment in different ways. The contextual factor may lead to a certain freedom in choosing the means of communication. If the situation recurs frequently and the communicants know what it involves (e.g. a conversation between a sales clerk and a regular customer), both communicants may engage in small talk about the weather or keep silent instead of commenting somehow on the primary interaction they are performing (Raevaara 2010).

(f) *Emotional and physiological state*: personal feelings such as sorrow or delight and physiological states as illness or tiredness inevitably influence the way we communicate. To what extent and how they create situations where communication failures occur is not quite clear because there is little research on the topic. But our common-sense experience says that it is hard for a tired, depressed, frightened, or seriously ill person to concentrate on her or his own or another person's speech. Here we have a rather frequent situation: the recipient is offended by the

speaker and stops listening. In such a situation, the modal part of the message (M) takes up the whole scene while the other elements, P and F, are totally ignored.

4. Common ground and monitoring

This section first examines the relationship between the concepts of ‘mental word’ (MW) and ‘common ground’ and then the need of monitoring arising from a lack of common ground. These two notions obviously look at the mental and cognitive abilities of interlocutors from different perspectives. ‘Mental world’ is a neutral term, while the notion of ‘common ground’ has been launched in order to pay attention to the degree of similarity in people’s mental properties. Similar terms include ‘common knowledge’ and ‘mutual knowledge’ (cf. Stalnaker 1978, Clark and Brennan 1991, Clark 1996), and ‘shared beliefs’ (Airenti et al. 1993). The choice between these terms naturally reflects a difference in perspective. A more fundamental distinction concerns the scope of these concepts. MW covers a wider range of different factors influencing the process of producing speech and understanding it; common ground and other similar notions are mainly limited to the part of MW that is named ‘cultural background’.

One may question whether it is possible to speak of a (fully) common ground shared by two persons. In fact, from a purely quantitative point of view, people are very similar in this respect. The inhabitants of the world possess a huge number of items of common knowledge, such as ‘people are mortal’, ‘if you jump up, you will come down’, ‘we use our ears for hearing’, ‘all animals have to eat and sleep’, etc. We are not able to quantify the amount of such shared knowledge, but there are good reasons for estimating that it makes up a clear majority of all the knowledge we possess. Such a claim goes against our common impression of the great variety in people’s understanding of the world. This contradiction can be explained by looking at how people’s senses work: we do not notice things that are common and regular, but pay attention to dissimilarities and differences. In a way we face a similar effect in genes: although the number of genes that are different between human beings is extremely small (approximately 0.1%), we see in humans mainly those features whereby we differ from each other. Figure 3 therefore corresponds better to the typical relationship between the MWs of any two persons than Figure 2 (Mustajoki 2008).

On the other hand, a full correspondence between the MWs of two persons is practically unthinkable because even identical twins have differences in their life experiences. So we need *monitoring*. In order to ensure correct reception of the message, the speaker is constantly tracking the reactions of the recipient, i.e. performing ‘comprehension monitoring’ or ‘perceptual-loop monitoring’ (Ferreira et

Figure 2.

Figure 3.

al. 2005). Monitoring would be useless if we were able to know exactly how to speak without following the reactions of the recipient.

Monitoring is a complex process consisting of various, usually unconscious, acts, leading to minor or major readjustments in speech (Clark and Krych 2004). If we notice that the recipient has not understood what we said, we can repeat our utterance more loudly or slowly, or rephrase it (Berger 2007). In an intercultural encounter the first step in monitoring is choosing the means of communication (cf. Alpatov 2000: 15–20, Mustajoki 2010: 44–50). Monitoring can also lead to more radical behavioural consequences. After recognizing the recipient's reaction, the speaker can hit or kiss the recipient, start to cry, leave the situation, etc. Monitoring may also be seen as a sign of people's willingness and ability to take into account other participants of the communication situation.

5. Causes of failures in recipient design

Since Grice (1975), the 'cooperative principle' has been the leading idea in describing and interpreting human interaction. According to this theory, speakers try to make themselves as understandable as possible by taking into account who they are talking to. In a 'neo-Gricean' view, this is due to people's inherent mind-reading ability (Sperber and Wilson 2002). Tomasello (2008) even claims that the desire to share knowledge and to be cooperative is the main feature distinguishing humans from other primates. We can describe the speaker's behaviour in this connection by using the term *recipient design* (or 'audience design'; Sacks and Schegloff 1979, Bell 1984). Within the 'communication accommodation theory' (Giles 1973), the term 'convergence' has been proposed; it refers to the speaker's strategy of adapting her/his communicative behaviour to the recipient. Supporters of the concept claim that there is a general propensity for communicators to converge along salient dimensions of speech (Ylänné-McEwen and Coupland 2000). A further term in this connection is 'feeling of others' knowing' (Clark 1996: 111).

No one can deny the existence of monitoring and recipient design in human interaction. However, the idealistic Gricean view of the cooperative principle of interaction has been heavily criticized by scholars who study real communication situations (see e.g. Sarangi and Slembrouck 1992). During the last two decades or so we have gradually also accumulated concrete evidence against the dominant role of the cooperation principle through psycholinguistic experiments. They have shown that speakers are much more egocentric than was previously thought (Keysar and Henly 2002, Keysar 2007, Kecskes and Zhang 2009). People “often consult their own mental contents — what they themselves know, believe, and desire — to guide their inferences about the mental states of others” (Todd et al. 2011: 134). As will be shown below, we as speakers sometimes act even against our own communicative goals.

Recipient design as such derives from the egocentric goals of the speaker. It is beneficial for the speaker to take into account the recipient, because doing so makes it more likely that the message will be understood. However, despite the benefits of recipient design for the speaker, it often fails. Let us now turn to cases where egocentrism necessitates *lack of monitoring* and *poor recipient design*.

(a) *Avoidance of cognitive effort*. A fundamental feature of human behaviour is the avoidance of extra cognitive and/or physical effort. This is known as ‘the minimalist principle’: people try to achieve their goals by using as little energy as possible (Shintel and Keysar 2009). Always speaking in the same way is the most economic way of speaking. Monitoring and recipient design are therefore more energy-consuming than speaking in the egocentric mode. A typical sphere of communication where we are lazy about monitoring is leisure. When we are at home in the company of the people we live with, or when we drink beer with our friends in a relaxed atmosphere in a pub, we want to behave as freely as possible; there is little motivation for monitoring in such situations.

(b) *Common ground fallacy*. In the case of intercultural communication, the interlocutors recognize possible difficulties in interaction and switch automatically to careful recipient design. The smaller the deviations between the MWs of the interlocutors are, the more likely they are to fall into the *common ground fallacy* (or ‘false consensus effect’, as Clark (1996: 111) puts it). As a matter of fact, this is a very frequent phenomenon in everyday conversation between people of the same community. A well-known situation is that of a specialist–layman encounter (e.g. IT adviser–IT user and doctor–patient interaction). As a rule, the specialist needs training in order to acquire the necessary communicative skills. It is not easy to learn such things because speakers tend to overestimate the clarity of their speech. They are aware of risks of misunderstanding, but fail to recognize them in their speech (Keysar and Henly 2002).

The instances presented above are fairly clear; one may even see in them elements of intercultural communication in view of the different backgrounds of the interlocutors. Let us take a further example, recognizable to all people. Every time I ask students to collect instances of communication failures, I get variations on the following course of events: A has asked B to bring something (in this case bread) from a shop and B returns home. A sees what B has bought.

- (6) A: Why did you bring brown bread!? I asked for white.
 B: No, you asked me just to bring bread. And so I did.
 A: Yes, but you should have known that I meant white bread.

Psychological tests confirm the mechanism of thinking in these situations: people are systematically biased to think that they are understood when they are not (Keysar and Henly 2002). The mechanism we use in analysing the need for recipient design fails in situations where group boundaries are not so evident (Gallois and Giles 1988). When we have no clear indicators for differences in the knowledge and backgrounds of the recipient, we use ourselves as the anchor and reference point (Kruger et al. 2005, Epley 2008, cf. the thesis of 'reciprocity of perspectives' by Schütz 1944).

(c) *Emotional overdrive*. When the speaker has something very important to say, he or she will often concentrate intensely on the substance and may totally forget to think of how to say it. In other words, in such a situation we often do the opposite of what we should do from the point of view of attaining our communicative goals. We can see a good example of such behaviour in phone calls to an emergency centre. For the caller, it is extremely important to be able to explain the reason for the call as quickly as possible. In this respect, the caller should spare no effort to ensure that the message is understood. Nevertheless, he or she is, as a rule, overheated to the extent of speaking in a rather muddled way. The same is true in many other situations where we have something very important to say: the emotional overdrive may lead to a total catastrophe of communication and we end up not being understood.

(d) *Physiological state and physical obstacles*. It is quite obvious that our physiological state (being tired, drunk, etc.) reflects on the ability to speak clearly; or, to use the terminology of interaction, when we are in such a state we have limited resources to perform recipient design. Disfluencies in speech are manifested in various ways: swallowing (the ends of) words or phrases, mumbling, slips of the tongue, contamination of two syntactic structures, etc. These are normal features of any oral communication. "Spontaneous human speech is notoriously disfluent," as Brennan and Schober (2001: 274) put it. Disfluent speech may also be caused by permanent disorders (aphasia, Asperger's syndrome). It is hard to concentrate on recipient design if the whole process of speech production is problematic. The

risks that the speaker meets in producing speech, and the problems they cause for listeners, are well described in (Levelt 1989); among more recent studies, see e.g. (Podlesskaya 2010).

(e) *Other aims of communication are more important to the speaker than clarity.* We will note one more relevant factor which dictates the way we speak. An obvious reason that makes our speech less precise and increases the risk of misunderstanding is the need to be polite and to avoid direct messages, as in example (7):

- (7) A: I told you yesterday that the car was dirty.
 B: Yes. You did.
 A: It is still dirty.
 B: Yes. It is.
 A: Are you trying to be funny?
 B: Not at all.

[The dialogue continues in the same vein for a while].

If politeness and different forms and modes of indirect speech have been discussed in hundreds of studies, other needs of the speaker have gained less attention. One basic desire of people is the wish to be regarded as smart and intelligent. This leads us to use more complicated words and expressions than would be ideal from the point of view of pure communicative goals and recipient design. Metaphors, figurative expressions, and neologisms may be used as indicators of the speaker's knowledge and skilfulness, but at the same time they will make our speech less comprehensible (cf. Montminy 2010: 318–319). The following example gives a hint of what we are dealing with. To understand it, a piece of background information is needed. There is a rather common Finnish word *jatkot* referring to after-party gatherings. On the basis of this word formation model, a new word *etkot* (referring to an informal gathering for pre-party drinks) was created some ten years ago. It was first used only occasionally by some people, and most Finns did not recognize it. Nevertheless, in (8) A wanted to use it (the rest of the sentence is given in English):

- (8) A: Let's go first to *etkot*. We'll meet at five in the hall.
 B: Okay... At five in the hall.

By using the word *etkot*, A wants to display familiarity with this new word. Avoiding it would also be possible. B does not know the word, but is ashamed to admit it. The young people meet each other at five o'clock and have some drinks before going to the restaurant. The word *etkot* bothers B. Afterwards, B checks its meaning on the Internet and the word becomes part of B's active vocabulary.

As we have seen, (almost) every case of misunderstanding can be seen as the consequence of a failure in the speaker's recipient design. If we were able to take into account all factors deriving from the recipient's personality, background,

emotional state, and physiological state, we would be able to avoid miscommunication (cf. Günthner and Luckmann 2001: 58).

6. The roles of the communicants in various situations involving risks to communication

As said above, many researchers studying human interaction underline that it is a joint activity undertaken by both (or all) communicants. Sometimes this activity is described as a game (Carlson 1983, Weigand 2004, 2010). Some linguists see in this the main demarcation line between the two main camps within language studies: they speak of dialogical linguistics in contrast to Cartesian (Chomskyan, autonomous) linguistics (see e.g. Marková 1982, Linell 1998, 2009). In the model presented in this paper, we are dealing with dialogic situations where the speaker tries to say something to the recipient. However, the next step, the reactions of the recipient, remains beyond the scope of this study. Because the speaker-oriented approach may seem too narrow for researchers studying 'real dialogues', it is worth commenting on this issue in more detail by paying attention to several types of miscommunication and the roles of the communicants in them.

Let us start with the speaker's role in the process, i.e. by examining problems in producing the utterance. Their technical manifestations are *an inability to express the desired meaning* ($\text{form}_{\text{Sp}} \neq \text{meaning}_{\text{Sp}}$) and *disfluencies in speech production* ($\text{utterance}_{\text{Sp}} \neq \text{form}_{\text{Sp}}$). As was said in Section 2, we often feel, as speakers, that we do not have the appropriate linguistic tools for expressing our needs and thoughts. In addition to this, disfluencies in speech may occur as a reflection of permanent disorders in the speaker, or of occasional emotional or/and physiological states hindering proper concentration on speech (illness, tiredness, drunkenness, etc.). Similar problems in expressing one's thoughts are found in the speech of children or foreigners. In all these situations, the speaker has difficulty with recipient design because he or she has to concentrate on being able to express her/himself somehow or other. In this situation the recipient may perform *cooperative actions* to facilitate the interaction. Various repair actions, for example, are described in the literature on communication failures (see e.g. Bosco et al. 2006). The recipient may even play the role of a real assistant by helping the speaker to find the right words and expressions or by compensating for insufficient information through effective guessing (cf. Kurhila 2003). On the other hand, it is easy to see that the speaker with his or her insufficient performance is very much responsible for problems in understanding.

The formal description of the next three cases is $\text{utterance}_{\text{Re}} \neq \text{utterance}_{\text{Sp}}$. *Non-hearing* is mostly induced by the speaker's incapacity to recognize the circumstances where the interaction takes place, as in example (9).

- (9) S: Do you remember that we are going to my parents' on Saturday?
[R hears nothing because of a vacuum cleaner.]
On Saturday.
S: Let's go to my parents'.
R: I don't have time.
S: Why? We already agreed on that.
R: No. We didn't.
S: Don't try to claim that!

In (9) the speaker is aware of the noise, but for one reason or another fails to realize its significance; in other words, recipient design does not take place in a proper way. There are other contexts where non-hearing is simply due to the circumstances. At a reception, the common din may hinder a normal conversation, but it is not polite to shout, and thus the interlocutors often just pretend to hear and to understand. Non-hearing does not always lead to misunderstanding, because the recipient may fill in the gaps by guesswork, but there is of course a risk of doing this in an inappropriate way by false conjectures and overguessing as in (5).

Mishearing is a typical consequence of differences between the MWs of the speaker and the recipient. If one says *She'll officially...* and the other hears it as *Sheila Fishley* (cf. Cutler and Butterfield 1992: 222), this is due to dissonance in the associative fields of their MWs. Here the wrong interpretation differs to such an extent from the intended one that it will be corrected in the further course of communication. Thus, the failure is 'overt' in terms of the scale of 'visibility' of communication failures (cf. Linell 1995, Hinnenkamp 2001, 2003). If the erroneous guess fits the situation better, 'covert' and 'latent' failures are also possible.

Non-listening usually occurs in quite a different situation. It is a consequence of the recipient's reluctance to play an active role in interaction. It may happen when one dislikes the speaker or has something more interesting to think of; (10) is an example of the latter case. A has arrived home from work. B is sitting in an armchair and reading a newspaper.

- (10) S: I had a terrible day at work. The computer crashed.
R: Hm. [not listening]
S: I couldn't finish the report I promised to write. They repaired the computer ... You are not listening to me!!
R: Eh? What did you say?

In (10) one may think that the recipient alone is responsible for the miscommunication, but the speaker could in fact start by ensuring that the recipient is in the state of listening. Uncooperativeness on the recipient's side may also have more objective reasons, such as tiredness or difficult acoustic conditions. A further reason

may be the needs of the speaker, who may not be interested in recipient design but may simply want to discharge her or his feelings, say, after a hard working day.

The next group of communication risks is connected with differences in how the utterance is interpreted, i.e. $\text{form}_{\text{Re}} = \text{form}_{\text{Sp}}$, but $\text{meaning}_{\text{Re}} \neq \text{meaning}_{\text{Sp}}$. There are several variants of this situation. *Syntactic ambiguity* and *lexical homonymy* and *polysemy* are mentioned as causes of misunderstanding in almost all studies on this topic. Standard examples of syntactic ambiguity include phrases like *I saw the man on the hill with a telescope* or *small car factory*. In testing the influence of homonymy in English, the most popular pair of lexemes is perhaps *bat* and *bat*. The possibility of interpreting an utterance in more than one way is sometimes also used on purpose for producing a special effect; this happens especially in advertisements, headings, and linguistic jokes. Piantadosi et al. (2011:3) argue that “ambiguity can be understood by the trade-off between two communicative pressures which are *inherent to any* communicative system: *clarity* and *ease*” (cf. also Juba et al. 2011). According to Chomsky (2008), ambiguity shows that natural language is ‘poorly designed for communicative efficiency’. Technically, syntactic ambiguity and cases of homonymy and polysemy are extremely frequent in speech, so the risks of misunderstanding are obvious. However, they rather seldom materialize thanks to the hints that the recipient gets from her/his MW. The speech context is the main disambiguation device. This is why misunderstandings most commonly occur at the beginning of new speech acts where there is no contextual help. As a whole, the risk of miscommunication is in many cases real because the speaker is seldom aware of the ambiguity of the phrases he or she uses, and therefore often succumbs to the common ground fallacy.

As an illustration, we can take an example representing a rather surprising case of misinterpretation of an ambiguous phrase. To understand it, some explanations are needed. In Finnish, as a result of its rich morphology, homofoms (homonymous inflectional forms) often occur in words belonging to different word classes and having different base forms. The words *vaja* ‘a shed’ and *vajaa* ‘half-empty’, ‘not full’ merge in the form *vajaan*, which means both ‘into a shed’ and ‘genitive of *vajaa*’ (used also as object case). One could think that these meanings may never be mixed up. However, in example (11) R has the ‘shed’ interpretation, but S the other one. The misunderstanding was realized and corrected only after a while.

- (11) S: Veik sä jo sen vajaan?
 take+2sg you already it/the half-full/into the shed
 ‘Did you already take that half-full (wine package)? /
 Did you already take it into the shed?’
 R: Joo.
 ‘Yes.’

In (11) the shed is part of the MWs of both communicants spending their holidays at the same summer cottage. But it was only for R that the word (and the object) 'shed' was activated in the situation because he had recently been in that shed. So here the decisive aspect of the communicants' MWs was not their cultural background as a whole, but the contextualization of an element of the MW in that particular situation. As to the roles of the communicants, the speaker could have realized the ambiguity of the word form *vajaan*. Equally, the recipient could have noticed a double meaning and asked which of the two interpretations was intended.

In grasping the meaning_{sp}, the recipient may encounter problems in understanding the words of the phrase, because the vocabularies of two interlocutors are never totally identical. We are involved in several social settings, each of which has its own special vocabulary. In example (12), R assumes that Anna is a researcher as a result of not knowing that the Academy of Finland is a research funding agency. R realized the misunderstanding later after meeting Anna. This is a clear case where the MWs of communicants fail to match.

- (12) S: Anna is working in the Academy of Finland.
R: Interesting.

In using words unknown to the recipient, the speaker may be unaware of the unfamiliarity of the word to the recipient, but he or she may also be aware of the problem, yet uninterested in doing anything to aid comprehension. The significance of not knowing a particular word depends very much on the communication situation. If during a TV programme or public lecture a specialist says that *this mental operation happens in the cerebellum*, it is enough for the non-specialist listener to understand that the operation happens in some part of the human brain. However, when medical students hear the same phrase during a lecture, it needs to be understood precisely.

A more treacherous risk for communication is *fuzzy concepts*, although there are plenty of situations where a certain degree of uncertainty does no harm to understanding. When we say *Bring me a steak*, the recipient most probably interprets the phrase in the same way as we and brings a suitably prepared steak of suitable size within a reasonable time (cf. Montminy 2010: 325). But the recipient does not always understand a given word or concept and construes it differently from what the speaker meant, as in (6). Such a situation is typical in intercultural communication. There are concepts which are untranslatable, such as Russian *sud'ba* (≈ 'destiny, faith, fortune, lot') (Wierzbicka 2010) and *poshlost'* (≈ 'vulgarity, triviality, banality, platitude, small-mindedness') (Obatnin 2011); other concepts may seem familiar but have a different flavour, e.g. *krizis* ('crisis') (Mustajoki and Protassova 2011). However, we meet fuzzy concepts in intracultural communication as well,

and sometimes they are even very handy. Politicians and other advertisers use them on purpose. *Political will* is what is needed for positive decisions in politics, but no one knows where it comes from and who is responsible for it. Apparently, fuzzy concepts are an inevitable and even useful component of any human language. Modal expressions are especially prone to fuzziness in various languages: phrases such as *He should be here already* with more than one reading are frequent. The use of deliberate fuzziness and vagueness of speech is a curious case from the point of view of recipient design.

Indirect speech acts are a further case where meaning_{Re} may differ from meaning_{Sp}. In the majority of such speech acts, misunderstanding does not occur: if we say *You're standing on my foot*, the message cannot be misinterpreted. However, if we say *It is hot in here*, having in mind a request to open a window, misinterpretation of the illocutionary function of the phrase is more likely. The same concerns metaphors like *He has a big heart* (Vendler 1994: 19). Here we meet the paradox of (mis)communication: the more similar the mental worlds of the interlocutors are, the more often misunderstandings occur. This is due to the fact that the closeness of the interlocutors leads to risk-taking in communication and to common ground fallacy as in (7).

Misreference, or 'referential ambiguity' (Vendler 1994: 19), or 'nonlinguistic ambiguity' (Ferreira et al. 2005: 281) is a constant risk to communication (Brown 1995). Here meaning_{Re} = meaning_{Sp} but reference_{Re} ≠ reference_{Sp}. There are numerous examples of misreference in our material. Several students report the following history (13), taking place in Moscow where metro stations regularly have more than one entrance. To wait for another person at the wrong entrance is not a major problem in the era of mobile phones, but may still be an inconvenience.

- (13) S: Let's meet at the entrance to the metro station Pushkinskaia.
R: OK.

Personal pronouns (with the exception, perhaps, of *I*) and other deictic words are, in essence, ambiguous and thus create a risk of misunderstanding: the speaker may refer to another person, thing, time, or place than the one that the recipient has in mind. In fact, these misunderstandings also occur as a result of egocentric thinking. The speaker believes that the recipient's thinking is in line with her or his own, i.e. common ground fallacy takes place. This leads to inadequate recipient design. Misreference is usually soon recognized and repaired. If not, it may lead to persistent misknowledge and untrue rumours.

As we have seen, the roles of communicants are quite different with regard to various types of risks of communication. However, in all these cases the speaker could avoid miscommunication by conducting a more appropriate recipient design. It is true that in most cases the recipients could also assist in the process of

reaching mutual understanding, if they were willing and able to do so — except in those situations where the recipient is not aware of miscommunication. If the recipient is not sure what the Academy of Finland is (12), he or she could ask for clarification. The ‘entrance problem’ (13) could be solved in a similar way. The recipient can, of course, switch from a non-listening mode to a listening mode. In the non-hearing situation, the recipient may not hear that the speaker is saying anything. In that case the recipient is totally outside the situation, but if he or she does hear that something is being said, it is always possible to turn off the vacuum cleaner and ask *What did you say?*

Thus, the speaker and the recipient make the dialogue together, and both of them may take part in ensuring or at least trying to ensure the smooth course of interaction and mutual understanding. This is beyond any doubt. Nevertheless, they have alternating (sometimes overlapping) roles: one speaks, the other listens. It is therefore possible to examine the situation from the speaker’s point of view. In doing so, we are interested in finding out to what extent the speaker’s intentions are fulfilled during a single act of communication (cf. Wu and Keysar 2007, Ryan and Barnard 2009).

For some ‘real dialogue’ researchers such a restriction in the scope of modelling communication may water down the whole idea of dialogism, studying language in use. However, one should bear in mind that every researcher who tries to understand human interaction is obliged to concentrate only on some features of it and leave out much that is relevant. As a matter of fact, for a proper analysis of the course of dialogues, we should take into account all previous dialogues between these people, and perhaps indeed their whole lives prior to the moment of communication. Without such information, our interpretations and conclusions may lack deeper understanding of the interlocutors’ motivations and behaviour. Given that such a broad perspective is impossible to attain, we as researchers always take only snapshots and concentrate on them. In our case, the speaker’s problems in trying to say something to the recipient stand at the centre of the snapshot. But at the same time we try to expand our view of the situation by taking into account not only the process of interaction as such, but also the mental worlds of the communicants and the recipient design conducted by the speaker.

In a sense our approach resembles a ‘speaker’s grammar’, the idea of which was theoretically launched by von der Gabelentz (1891), Jespersen (1924: 33), and Shcherba (1974: 56, 333–338), and has been implemented in a concrete description of a particular language (Brunot 1922) and in models of functional grammars and syntaxes based on the principle ‘from meaning to form’ (see e.g. Dik 1978, 1997, Mustajoki 2006, 2007).

7. Conclusion

The purpose of the paper was to launch a new model of (mis)communication, which takes into account not only entirely linguistic factors, but also the mental worlds of the interlocutors and recipient design through which the speaker tries to accommodate her or his speech to the recipient. The following arguments and observations are important in this connection.

1. *Mental world*, which plays a crucial role in all phases of the interaction, is a wide concept including individual linguistic ability, cultural background, cognitive patterns, relations between interlocutors, emotional and physiological state, and situational factors.
2. *Recipient design* is an inevitable part of a successful interaction, but it often fails as a result of the egocentric behaviour of the speaker. Egocentrism is manifested in avoidance of cognitive energy, in common ground fallacy, in emotional overdrive, and in the speaker's attention to issues other than the ongoing interaction.
3. Factors that are traditionally regarded as *causes* of misunderstanding (e.g. linguistic and referential ambiguity, non-understanding of the purpose of the speech act) are, in fact, *risks* of misunderstanding. In most cases they are ruled out by the similarity of mental worlds or (where the differences are real) by proper recipient design.
4. It follows from point 3 that failures of communication are, in the end, caused by poor recipient design.

Despite the list of cases where the speaker fails to perform recipient design, one may try to ignore it by claiming that they are the exception in the normal course of communication. If we consider ideal communication between ideal native speakers, it is possible to disregard such features — but few of us will ever have witnessed a single instance of such communication. If we study real communication, we inevitably encounter these features all the time and it is our task to analyse them.

Finally, risks of miscommunication are very genre-specific. The genre (discourse type) determines not so much the frequency, but chiefly the type of communication failures. There are interesting observations on this. On the basis of a large authentic material, Ermakova and Zemskaja (1993) have reached a striking conclusion: communication failures are as usual between good friends and relatives as they are in intercultural encounters (cf. Sarangi 2009). However, the risks and causes of miscommunication in these genres are very different (cf. Mustajoki 2011a, 2011b). We need further studies of a variety of communication situations to reach a more complete understanding of the role of the genre factor in cases of miscommunication.

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Arto Mustajoki earned a Master's degree in German Philology in Helsinki University in 1970. Doctor's degree in Russian Language followed in 1981, HU. Since 1982 he has been Professor of Russian language in HU. Since 2010 he is Head of the Department of Modern Languages. He was also President of the Finnish Academy of Science and Letters, 2008–2010 and since 2010 Chair of the Board of the Academy of Finland. (Also: Research Student, Leningrad State University 1970–1972; Research Fellow, Cambridge University 1990–1991.)