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ON RELEVANCE IN SPOKEN INTERACTION

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1. Introduction

The problem of what it is that holds a text together has recently received considerable attention. Cf. Halliday and Hassan 1976, Enkvist 1978 and Hatakeyama, Petöfi and Sözer 1983. Under the headings of terms like cohesion, coherence and connexity such phenomena as anaphorical reference, tense sequences and topical maintenance have been investigated. In most of the studies the problem of what it is that connects the successive utterances of a multi-speaker interaction have not been dealt with. In fact, the use of the term text as a generic, independently of whether one is studying transcribed dialogues or written prose, has probably tended to obscure the fact that important differences, as well as similarities, exist between, on the one hand, monologue and interaction and, on the other hand, between spoken and written language. Cf. Hjelmquist 1983 and Linell 1982 respectively.

In this paper, I want to focus on the notion of relevance as an aid in trying to explain how successive utterances in a multi-speaker interaction are connected. I will thereby be investigating what Grice 1975 called the maxim of relevance "Be relevant", trying to discuss more in detail what is involved in giving an account of relevance in spoken interaction.

However, before embarking on this task one might want to question whether I am not presupposing something that should really first be demonstrated. Are the successive utterances of a multi-speaker interaction really relevantly connected?

Precisely this question was asked independently for English and Swedish dialogues by Clarke 1977 and Hirsch 1978 respectively. Both authors recorded dialogues which they subsequently transcribed in a such a way that separate utterances were written on separate cards. The cards from a certain dialogue were then randomized and given to subjects, who were told to put the dialogues together again in the order they originally occurred. The results in both cases were that subjects were able to perform the task with significantly greater than chance probability. In a few cases they were even able to reconstruct the exact original. These studies, thus, indicate that we seem to have considerable, more or less, tacit understanding of the factors that connect the utterances of a dialogue, an

understanding, I suggest, which to a considerable extent consists in an understanding of how utterances can be relevant in spoken interaction.

This approach will, accordingly, treat relevance as a factor which contributes to produce such phenomena as cohesion and coherence in a text. It would also be possible to view relevance as a static relation on a par with cohesion or coherence. See e.g. Wilson and Sperber 1984. Below I will argue that such a static view of relevance is dependent on and derivable from a more dynamic view.

2. The notion of relevance

Perhaps the first point to note about relevance is that it is a relational concept. It involves a relation between, at least, the following factors: *Something X* is relevant for *someone W* in *circumstances C* engaged in *activity A* with *purpose P*. Sometimes more than these factors and sometimes less can be involved.

This means that although it is also possible to give a general analysis of relevance as "meaningfully connected with", such an analysis is not sufficient. It has to be supplemented by an analysis where at least some of the factors which are linked by the relevance relation are specified.

In our case, the most general notion we could analyze is *relevance-in-linguistic-communication*, a notion which would apply to both spoken and written language. On a more specific level we can analyze *relevance-in-spoken-interaction*, which would focus on spoken language, and as a part of this, on an even more specific level we can analyze a notion of *utterance relevance*. It is this latter notion which will be the primary focus of interest in this paper. Besides utterance relevance, I will also discuss what I call *content relevance*.

The latter two concepts are related in the following way: *Utterance relevance* designates all relations that meaningfully connect a particular utterance with the interaction it is part of, while *content relevance* designates all relations that meaningfully connect the content of a linguistic expression with the content of another linguistic expression. Content relevance, thus, applies to both spoken and written language and to linguistic constituents other than utterances.

Utterance relevance is concerned with the activity of speaking while content relevance concerns relationships which are based on an abstraction from linguistic activity. When applied to utterances content relevance therefore becomes part of that which constitutes utterance relevance.

The main intuition behind the concept of utterance relevance is that an utterance becomes relevant to the participants of a spoken interaction if it can be connected with something that the participants have to take into account in order to

carry on the interaction. The things that the participants have to take into account I will call possible *foci of relevance*.

The analysis of utterance relevance will, therefore, be an analysis of what constitutes possible foci of relevance for speakers and listeners. I now want to suggest that, at least, a large subset of the possible relevance foci can be identified with the components of a model of spoken interaction developed in Allwood 1980 and 1982.

3. Spoken interaction as *activity language*

The major features of the model are the following:

I. Linguistic interaction is seen as immersed in different human activities. For some activities, such as debating or negotiating, linguistic interaction is essential? for others, like hunting or bricklaying, it is ancillary and the activity can also be pursued without linguistic interaction.

II. All activities can be analyzed into a number of determining and determined parameters. The determined parameters are properties of the linguistic and non-linguistic *behavior* involved in the activity. The determining parameters are the factors that control the activity. Usually the determining factors, in themselves, are non-linguistic even though they determine linguistic behavior

III. Both for determining and determined parameters we can distinguish between parameters that are of a *global* nature, applying to the interaction as a whole, and parameters that are of a *local* nature, applying only to a specific part of the interaction. Among both global and local parameters, we, further, distinguish parameters that depend on several simultaneously interacting individuals from parameters that can be determined by single individuals. I will call the first type *collective* parameters and the second type *individual* parameters.

The result of these distinctions is that there are four types of determining and four types of determined parameters in an *interaction*, two global and two local in each case.

In order to discuss how these parameters become foci of relevance I will now briefly discuss and exemplify each of the parameter types.

A. *Determining parameters*

1. *Global-collective*

Parameters of this kind are parameters that can determine the behavior of all participants during a complete interaction. Examples of such parameters are: *Main*

function or purpose of the activity. This is perhaps the most important of the determining parameters. It is this parameter that mainly contributes to the identity of an activity. For example, what is said and how what is said is interpreted, will vary considerably depending on whether the main purpose is hunting, marketing or teaching.

Role configurations. What standard jobs or roles does the activity require? Compare such jobs as sales clerk - customer, teacher - student. Each role can be analyzed into a set of standard rights and duties which have clear linguistic consequences for both speaker and interpreting listener.

Artefacts. What standard instruments or objects are used in the activity? Some instruments such as telephone, computer or pen have great consequences for linguistic communicative patterns.

General physical circumstances. What can be said, heard and done will also vary with such factors as temperature, noise, level, visibility and furniture, etc.

The determining parameters, thus, include all the three main explanatory concepts of linguistic theory, ie purposes, conventions and causes. Purposes occur in the first parameter, conventions in the first, second and third and causes in the third and fourth. The consequence of this is that both categories of understanding (purpose, convention) and categories of explanation (cause) are included. Cf. von Wright 1971. The reason for this is that in speaking people are determined by and attend to both types of categories. Even though we attribute intentions to other people, we simultaneously see them as governed by causality and convention.

Another feature to note about the determining parameters is that they are equally valid for both the speaker's and the listener's activity.

2. *Global-individual*

Besides global parameters which are collectively valid there are also global parameters which are more individual. These parameters are stable mental or physical traits of an individual which are not given by the collective determining factors. Individual parameters of this kind are, for example, physical handicaps, stable character traits, attitudes, values and beliefs. The last factors are especially important in determining the interpretation of a listener.

3. *Local-collective*

Determining local collective parameters are parameters that collectively determine the behavior of participants at a specific point in the interaction. There are several reasons for introducing such local parameters as distinct from global ones. Firstly, we must take into account that an activity can go through several phases, ie

consist of a sequence of subactivities, each with a subpurpose, partly different role configuration, artefacts and physical circumstances.

Secondly, the interaction determines itself to a certain extent. Participants can interactively work out new agreements, interests and habits, which even though they may not always agree with the global purpose of the activity, are shared and available as collective resources determining subsequent activity.

Thirdly, the most recent utterance has a primacy in memory and perception for both speaker and listener, thereby determining subsequent activity in a way which is more direct than is the case for many global parameters. Each utterance forms the immediate local determining context both for the listener's interpretation and the next utterance.

The subactivities which constitute the activity can be embedded in each other, follow each other or be pursued simultaneously. Minimal subactivities are what perhaps could be called *elementary interactions* such as: *assert - listen, question - answer* or *offer - reject/accent*.

The requirement for an elementary interaction is that it is a pairing of a sender activity with a receiver activity. Cf. Allwood 1976 and for a slightly different analysis Severinson-Eklund 1983.

4. *Local-individual*

The properties of the participants can often change during the course of an interaction. Often, their moods, attitudes and beliefs can be influenced by what occurs and then, in turn, determine the interaction in a new direction.

B. *Determined parameters*

1. *Global-collective*

The global collectively determined parameters of an activity are those aspects of behavior which require interaction and occur as a general pattern of the activity. Examples of such parameters are: The *sequence of subactivities* required by a certain type of activity. For example, the subactivities of a formal meeting - opening the meeting, electing a secretary or reading the minutes of the previous meeting.

Turn-taking regulations. Who has the right to speak to whom, about what, for how long?

Feed-back routines. How does one elicit or give feedback concerning understanding or attitudinal relations in different activities?

Both turntaking and feedback patterns vary considerably on a global level between different activities. For example, compare lecturing, arguing and dinner conversation.

2. *Global-individual*

Under this heading are included most aspects of language, traditionally studied in linguistics. To be more specific, four main aspects of linguistic communicative behavior are included: *Body communication*, e.g. facial or manual gestures, *phonology* - both segmental and suprasegmental, *vocabulary* and *grammar*. Further, I also include such general aspects of the listener's activities as perceiving, understanding and forming attitudinal reactions.

The aspects are classified as individual since it is possible for a single individual to successfully engage in all four without having to rely on the contribution of other individuals.

3. *Local-collective*

Collectively, the minimal local units are, by definition, given by what I earlier called elementary interactions, ie a pairing of sender and receiver activity. Such a pairing is sufficient for the occurrence of any of the collective aspects discussed earlier. A sequence of subactivities requires at least two events, turntaking requires at least two competitors and feedback routines require both a chance of eliciting and a chance of giving feedback to be complete. The requirements of all three types of collective behavior can potentially be met by a single pairing of a sender and a receiver activity.

Larger collective local units are constituted by the subactivities required by a certain type of activity.

4. *Local-individual*

The local-individual level consists of the individual aspects of linguistic communication as they are manifested in specific utterance acts, body communication and acts of perception and interpretation. In other words, it consists of the acts through which the participants incrementally make their contributions to the collectively created interaction.

4. **Relevance foci**

I now want to turn to the question of how the parameters of the model, described above, can be used to give an account of relevance-in-spoken interaction and more particularly of utterance relevance.

The basic idea is that both speakers and listeners try to be relevant to the activity they are engaged in. Each utterance act or act of interpretation is an attempt to be relevant in the sense that it is an attempt to be meaningfully connected with the parameters discussed above. Sometimes relevance is established by a connection to only one parameter but mostly it concerns several parameters. Below, in examples 1 - 9, I will try to exemplify some of the parameters as foci of relevance.

1. *Global purpose*

A: I think B is insulting me.

C: Dear friends, may I remind you of the purpose of this discussion.

C's utterance becomes relevant to A's utterance via its connection with the global purpose of the activity.

2. *Global role-configurations*

A and B are students and C is a teacher.

A: Show me that book!

B: Here!

C: Sit down!

C's utterance becomes relevant because of the duties connected with the teaching role.

3. *Global artefact*

A and B are speaking on tile telephone.

A: (inaudible)

B: Hello, Hello

B's utterance becomes relevant as a conventional elicitor of feedback on the telephone.

4. *Global physical circumstances*

A and B meet outside on frosty morning.

A: Hi, how are you?

B: Fine, pretty cold isn't it?

B's utterance is relevant both because it is an answer to A's utterance and because it concerns shared physical circumstances.

5. *Global individual*

A: Perhaps I could propose that the bike be mended.
B: Come on, don't always be so timid.

B's remark here becomes relevant by being connected with a supposed character trait of A's.

6. *Local preceding communicative act*

A: What time is it?
B: 6 o'clock.

B's remark is relevant to A's by being the second part of an elementary interaction with an appropriate content relation.

7. *Local individual*

A: I am sorry to have to say - that I can't do it.
B: Did I hurt you now?

B's remark is relevant to A's by bearing on an emotion supposedly expressed by A.

8. *Local turntaking*

A: When I got there I was
B:
A: Don't interrupt me!

{ shocked ...
Right, I...

A's remark is relevant as a point of order about turntaking.

9. *Local feedback*

A: I was overwhelmed.
B: Pardon.

B's remark becomes relevant as an indication that he has not heard A.

The exchanges in 1 - 9 are not meant to be an exhaustive list but only to provide examples of how the described model can be turned into relevance foci through which the speakers can try to meaningfully connect their utterances to the interaction. Examples 1 - 7 concern determining parameters and 8 - 9 determining and determined parameters. The uneven distribution between the two types reflects the fact, to be discussed below, that determining parameters, in general, are more relevant than determined parameters.

5. Some principles of relevance in spoken interaction

Next, we can ask whether all parameters serve equally well as relevance foci. In order to answer this question we will consider the three dimensions, determination, collectivity and locality, one by one, to see if, at least, a hypothetical preference order can be established between them.

A. *Determining-determined*; The first hypothesis is that relevance to determining parameters is more highly valued than relevance to determined parameters. Among the determining parameters, relevance to purpose is most highly valued. The purpose is the *raison d'être* of an activity. It is therefore to be expected that to the extent that participants can be seen as rationally cooperating agents, they should try to do things which are meaningfully connected with the purposes of the activities they are engaged in. Further, as we shall see below, there is probably a ranking order between different types of purposes so that some purposes are more important than others.

B. *Collective-individual*; Another dimension of importance in spoken interaction is whether a parameter is accessible to all participants, ie collective, or not. Since all interaction relies on intersubjectivity and in the case of communicative interaction also has intersubjectivity, in the form of mutual understanding, as a goal, it is to be expected that to the extent that participants are rationally interacting agents they will favor collectively relevant parameters over merely individually relevant parameters. A second hypothesis, connected with the question of a ranking order between purposes, is therefore that collectively given purposes will in general be seen as more relevant to the interaction than individually given (hidden) purposes.

C. *Local-global*; Regarding the third dimension we have discussed, ie that of the range of a parameter, a third hypothesis is that locally given parameters have a more consistent importance than globally given parameters.

There are two fairly straightforward reasons for this. Firstly, local parameters are what ongoingly at each instance of time determine the Speech Stream. Information about them is directly available through sense organs and short term memory. The individual can almost not help but to attend to them.

Secondly, all activities are not equally institutionalized and formalized. Sometimes there might not even be an activity to which it would be reasonable to attribute a given stretch of spoken interaction. This means that it would be very difficult to find any globally valid parameters. Local parameters are, however, still valid.

The consequence of what has just been said is that relevance to local purpose can always be brought into play, while the relevance of global purposes depends strongly on such things as degree of institutionalization, formalization and/or commitment to global purposes by participants.

In discussing relevance to local purpose it is important not to forget the differences between the sender and receiver role. The various properties of an utterance are determined parameters from a sender perspective. From a receiver perspective they are, however, determining parameters. The tasks the receiver has to perform, ie interpreting, understanding and responding are to a large extent determined precisely by what the speaker he is listening to is saying.

Perhaps the preference relations between the different types of parameters can be summarized in the following way:

1. Determining parameters are more relevant than determined parameters.
2. Collective parameters are more relevant than individual parameters.
3. Local parameters are more relevant than global parameters.

Perhaps the relative importance between the three dimensions is the following: Determining > local > collective. This would in turn mean that a relevance structure of the following type could be constructed. We assume that an utterance is most relevant when it is relevant to several relevance foci simultaneously.

1.	+ Det. + Coll. ± Local	2.	+ Det. - Coll. ± Local	3.	- Det. X Coll. y Local	4.	- Det. - Coll. - Local
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(In matrix 3, X and Y vary over (+) and (-) but cannot simultaneously take the value (-)).

The sequence of matrices is to be understood the following way:

Those utterances are most relevant which are oriented towards relevance foci which are determining and collectively available. Mostly these will be local but in some activities global parameters will be more important than local ones. Therefore, the feature local has been neutralized (by receiving both a (+) and a (-)).

Second most relevant are those utterances which are oriented towards determining features which are not collectively available. Again, however, it is hard to make a judgement about whether these parameters should be local or not, so the feature local has been neutralized.

Third most relevant will be those utterances that are oriented towards a relevance focus which is either local or collectively available but not determining and least relevant will be those utterances which have a meaningful connection with a relevance focus which is neither determining, collective nor local.

The status of this structure is, of course, entirely dependent on the status of the theoretical variables used and can, so far, only be regarded as a hypothetical construction of speakers' norms for utterance relevance.

Before. I continue. I would like briefly to discuss a putative counterexample to the preference structure. Do not "points of order" overrule any other relevance considerations? The answer to this question partly depends on what is meant by a "point of order". Let us assume that by "points of order" we mean remarks which pertain to such things as sequencing of subactivities, turntaking or audibility.

In the case of sequencing and, to some extent, with turntaking it is arguable that carrying out the activity according to the rules is seen as part of the purpose of the activity. In the second case, turntaking, we might also be dealing with a right that speakers, at least in some cultures, believe is superordinate to most activities they participate in. The right to speak (uninterrupted) is an important right in life. In the third case, inaudibility, we are faced with something that interferes with the primary purpose of the listener, to understand.

Thus, "points of order" do not to introduce new relevance foci. Rather, they are relevant because they point to discrepancies between current behavior and important global purposes.

6. Content relevance and utterance relevance

So far, I have primarily discussed the notion of utterance relevance. This notion can, as we have seen, be distinguished from a notion of content relevance. Utterance relevance is based on a view of speakers, as normal rational agents, jointly engaged in spoken interaction and the utterance relevance relation itself is seen as a relation which meaningfully connects the individual utterances of the speakers via aspects of their interaction.

Content relevance, on the other hand, is a notion which involves an act of abstraction over linguistic expressions in which one focusses solely on their (factual) content and then investigates the meaningful (semantic) relations that can hold between various types of content. The type of content which has mainly been discussed in relation to relevance is that of the proposition, ie the reified (factual) content of an assertion. There seems to be no reason, however, to limit such discussions to propositions. One could equally well imagine an investigation of relevance relations between the contents of words or phrases.

Among those who have investigated relevance relations between propositions, it has been suggested that either logical consequence, Wilson & Sperber 1984, or some weaker version thereof, Belnap 1969 and Dascal 1980, actually is what lies at the heart of relevance. I see no reason to restrict content relevance in this way. It seems quite reasonable to suggest that any semantic relation (such as part - whole,

metonymy, metaphor, or hyponymy) including logical consequence could be said to provide a relevant connection between two propositions, or more generally, between two types of content.

Whether one agrees with this or not will probably depend on the job one wants the notion of relevance to do. This, however, can probably not be decided without considering content relevance in the light of what speakers and listeners have to do, which, in turn, means establishing a link between utterance relevance and content relevance. On the content level this would mean taking a closer look at the relationship between, for example, the assertions in the following type of sequences:

10. A: Look, he is really angry.
B: Yes, he is like a tiger.

11. A: I can see him.
B: Yes, I can see his foot.

The most straightforward statement of the content relation between the assertions in 10 and 11 is that of metaphor and part - whole respectively. Whether these types of content relations are relevant will then in turn depend on the further notion of utterance relevance which via a certain type of interaction between A and B connects the two assertions in each pair with each other.

7. Concluding remarks

The main purpose of this paper has been to provide an analysis of relevance in spoken interaction. I have claimed that this notion can be helpful in understanding how speakers and listeners are successively able to connect individual utterances with each other. Relevance can thus be seen as one of the factors behind the connectedness, cohesiveness or coherence that can be observed in transcriptions of spoken interaction. I have also argued that although a notion of content relevance can be distinguished from what I have called utterance relevance, the former notion is essentially derivative and dependent on the latter. Finally, I have argued that within a concept of content relevance other semantic relations than logical entailment should be taken into account.

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