WHAT IF MARY DIDN'T MEAN ANYTHING? NON-INTENTIONAL SOURCES OF DISCOURSE COHERENCE AND THEIR IMPLICATIONS FOR COMMUNICATION

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1. Intentions and communication

The search for intentions lies at the heart of pragmatic descriptions of discourse. The majority of theoretical frameworks in pragmatics rely on the mutual recognition of speakers' intentions, communicative plans and goals, following in the line of Grice's tradition. Grice's (1957) opening gesture of pragmatics, which distinguishes between natural and non-natural meaning, places intentionality at the heart of human communication. Gricean pragmatics, speech act theory (e.g. Searle 1969) and neo-Gricean inference-based models (e.g. Sperber and Wilson 1986) all assume a view of communication that is based on intentions and their recognition.

One of the consequences of this emphasis on intentionality is that, besides individual utterances, relations between successive utterances or units have also been interpreted as exclusively intentional. For instance, most pragmatic theories, including traditional speech act approaches would interpret the following question-answer exchange (adapted from Airenti et al. 1993, cf. Sperber and Wilson 1987: 699) as relying on the inferencing of the participants' implicit plans:

(1) Peter: Could you please lend me one hundred dollars for the weekend?

Mary: Sorry, I have the same problem myself; I have not been to my bank today.

As a result, discourse coherence appears to be a function of the interplay between participants' intentions.

Approaches that derive discourse coherence from an exclusively intentional source include both reductive approaches such as relevance theory (Sperber and Wilson 1986) and compositional ones, based on the interplay of "coherence relations" (e.g. Grosz and Sidner 1986, Mann and Thompson 1988). The meaning and role of intentions obviously differs in each kind of approach. In the former, discourse coherence is seen as an epiphenomenon of the pragmatic principle of relevance. For instance, according to Blass, "connectivity on discourse is ...a by-product of the search for optimal relevance"

(1993: 99, cf. Moeschler 1993). The recourse to relevance thus ties up the development of discourse to the communicative intentions of the speaker as computed by the hearer. Compositional approaches, on the other hand, relate intentions to the propositional or semantic content of the discourse as expressed in terms of logical relations (see Georgakopoulou and Goutsos 1997). This is one of the commonest views of intentions, since, as Schiffrin has remarked, "analyses of communication that focus on intentions tend to focus almost totally on how utterances produce understanding of the speaker's intention to convey a proposition, i.e. the referential content of the message" (1994: 394). There is wide diversity of the terms used in the literature for propositional relations, indicating the lack of agreement about their role, scope and classification. Models include Grimes (1975), Longacre (1976), Hobbs (1979), McKeown (1985), Rhetorical Structure Theory (Mann and Thompson 1984), Grosz and Sidner (1986) etc. (see Georgakopoulou and Goutsos 1997: 79 ff., for an overview). According to these approaches, discourse coherence is the outcome of the composition of individual, atomic intentions as expressed in the form of logical relations.

Despite their different approach to intentionality, what both reductive and compositional approaches share is the belief in the primacy of intentions and the assumption that all instances of relations between two segments or units in discourse can be (and thus ought to be) explained by an analysis of underlying intentions. This view is not only implied in the reduction of discourse coherence in relevance-theoretic approaches to a unique source, as noted above, but is also found in models of propositional relations. For instance, although Mann and Thompson (2000) recognize that their "rhetorical structure" is only part of creating the coherence of texts, they also explicitly relate individual relations with the author's intentions (to have a certain perlocutionary effect) and stipulate that RST analysis should assign a role to every part of a text. Similarly, in Grosz and Sidner's (1986) discourse theory the structure of communicative intentions is the one that determines linguistic structure. In this model, discourse phenomena such as interruptions, flashbacks and digressions are accounted for in terms of a tripartite structure of discourse, arising from relations between discourse intention (intentional structure), among focus spaces (attentional structure) and among discourse segments (linguistic structure). However, both the attentional and the linguistic structure are, according to the model, ultimately parasitic upon the intentional structure, in the same way that propositional structures lie at the heart of Rhetorical Structure Theory.

The predominance of intentions in communication has been challenged from a variety of theoretical angles. For instance, approaches to discourse analysis, including the ethnography of communication, conversation analysis etc., have emphasized the larger social and cultural construction of meaning in actual interaction as opposed to its individualistic construction on the basis of intentions. Within pragmatics, Levinson (1981) has been paramount in pointing out that the perfect matching of utterance pairs with speech acts or underlying intentions is an impossibility, since each successive utterance constructs a new context for what went on before (cf. also the discussion in May 1993: 252 ff.). More recently, Verschueren (1999) has severely criticized the dependence of meaning on intentions as found in the pragmatic literature for the emphasis it gives on individual cognition and the neglect of the dynamic and interactive aspects of meaning generation. Finally, psycholinguistic and computational approaches to discourse have also pointed out that, in Reichman's words, "in our society, to suggest

that communication is based mainly or solely on an understanding of underlying intentions, beliefs or desires of co-communicators is to be unrealistic" (1990: 47).

It is beyond the scope of this paper to fully discuss the arguments against the predominance of intentions in communication. My aim is to demonstrate that non-intentional considerations have, at least, an equally important role to play in the establishment of text relations, defined as relations that pertain between different segments or units of an organized text in discourse. This is illustrated here by referring to some of the non-intentional aspects of discourse in spoken and written texts. To identify non-intentional sources of discourse coherence implies recognizing their proper role in communication. It is thus suggested that the study of communication must take account of the contribution from different sources of coherence and, as a result, must draw on a comprehensive theory of text relations and their interaction in discourse. The paper outlines a preliminary view of such a theory.

2. Sequential relations in discourse

As suggested above, intentional relations do not account for much of what is going on in discourse and cannot be found to hold between all segments in a continuous text. (This is true for both intentional relations "proper" and propositional relations or ideational acts, as explained above). Non-intentional or non-propositional relations must be invoked in at least three cases of text relations: (a) relations between segments, (b) "weak" relations and (c) cases of textual deixis.

Firstly, utterances belonging to different segments or units of a text are obviously not related by a contiguous propositional or intentional relation with each other. For instance, no such relation can be found between the two last sentences in the following extract¹:

(2) After privatisation, investment would no longer be restricted by artificial Treasury-imposed limits. The change has had happy results in other privatised industries.

Will the government's chosen means of privatisation deliver these theoretical benefits?

It may be argued that in the absence of the surrounding co-text, it is difficult to decide whether the two sentences above are related intentionally to each other. However, this is precisely to beg the point of the analysis. Although the two sentences share a reference to a common concept ("privatisation"), in the context of the text as a whole they are presented in such a way that they are to be understood as belonging to two different segments. Indications such as the typographic paragraph boundary, the scope of the phrase "these benefits", the tense shift and the use of the question are part of this presentation, which suggests such an interpretation.

Similarly, in the following extract from a conversation between members of a family 029 is not related to 028 in any kind of propositional or intentional relation:

(3) [...]

027 D: ((to the dog)) WHAT is it my beauty? (2) WHAT is it?

my my! he's a beauty he needs water

028 M: c'mon (2) c'mon

029 ((ring))

S: ((looking around))

D: did you lose your mobile phone, aunt?

030 S: yes I did

In 027, D is admiring her dog, while M plays with it. The linguistic material surrounding this event indicates an interruption in 029 at the ring of a phone. The speech event is thus re-aligned towards a new "topic" with the result that contiguous utterances are propositionally (or intentionally) unrelated. This example would seem to indicate that the structuring of ordinary conversation events does not directly reflect the structuring of the participants' underlying intentions. A host of other phenomena including non-verbal behaviour may contribute to the definition of "what is going on" and the establishment of continuity or discontinuity. It is precisely in the context of the discourse event as a whole that we can understand whether two contiguous utterances belong to the same segment or not.

In light of this, we may want to review our assumed connection between Peter's question and Mary's answer in (1), since we have no information about whether they are to be understood as belonging to the same or different segments of the discourse event. Details about the immediate context as well as intonational and paralinguistic features would constitute necessary aspects of this information. It would then seem presumptuous to reconstruct the speakers' intentions without first establishing whether their utterances are oriented towards belonging the same or different segments.

Examples (2) and (3) above offer us a glimpse of a larger underlying network of non-intentional and/or non-propositional text relations. Verbal and non-verbal signals allow us to interpret discourse in both cases as consisting of two different sections connected to each other by a relation of discontinuity or shift. Different signals indicate a relation of continuity between contiguous utterances e.g. between the first and the second sentence in (2) or between the utterances in 027 in (3). Goutsos (1997) suggests that the function of these signals contribute to the text's sequential structure, which sums up the relations of shift and continuity between successive segments. He also argues for its independent (albeit interacting) role in the construction of discourse.

Invoking sequential relations is also necessary in cases of discourse-initial utterances or single-clause texts, which, as Blass (1993) has pointed out, cannot be accounted for in compositional approaches. At the same time, although recourse to relevance may be required for pragmatic interpretation, the marking of a new segment, unit or text is what is prominent in each case from a discourse coherence perspective. This is also true for extended opening sections such as the much-discussed openings of telephone conversations. Again, apart from the variety of speech acts performed by the opening utterances as unearthed by the detailed conversational-analytical studies (e.g. Schegloff 1986), the central concern of the speakers is to (conventionally) indicate the sequential structure of the talk i.e. mark the opening of the communication.² Finally,

¹ Written examples come from the corpus used in Goutsos (1997). Spoken examples are drawn from Goutsos (forthcoming a).

² It is interesting that Moeschler, who uses this example to refute speech act theory, speaks of many "functions or illocutions associated to single utterances" (1993: 153, note 3, my underlining). This

instances of new media discourse are characteristic cases of communication in which sequential, along with interpersonal, relations are much more foregrounded than the informational or propositional content of the message. This is true, for instance, of IRC messages, which involves change of topics between interlocutors situated in different computer terminals, as in the following example:

(4) <Skywalker18> hi

<led-zep> hi

<Skywalker18> nice nick

<Skywalker18> has it anything to do with led zeppelin?

<led-zep> of course

<Skywalker18> YES!!

<Skywalker18> finally someone who likes them

<Skywalker18> a/s/l?

<Skywalkerl8>:)

<led-zep> happy to see that yes in capital letters

Every utterance in (4) is related to its contiguous ones in terms of its position in the overall structure and the interpersonal relations between the participants, including sequential conventions such as asking about "a/s/l" i.e. the age, sex and location of the interlocutors or giving feedback by an "emoticon" (Goutsos forthcoming b). As Herring (2000) has suggested, conditions of "relaxed relevance" hold between segments of IRC communication.

Sequential relations of continuity are also the only ones that seem to occur in many sections of text related by "weak" propositional relations. This is the case with the utterances in 027 in example (3) above, for which we would have to stretch our interpretive abilities in order to find a connection between the speaker's intentions. By contrast, what seems to be happening here is an expressive elaboration of the speaker's feelings towards her dog in utterances that have a loose connection with each other. This weak connection is not restricted to spoken discourse: portions of written discourse may also be loosely connected from a propositional point of view. This happens, for example, with descriptive sections or the listing of points in a written text, as in the following sentences from the same text as in (2) above:

(5) A new body, Railtrack, will be set up to run track and signalling. Freight services will be sold outright. Passenger services will be split into franchises. A government-appointed director of franchising will decide broadly what services there should be.

According to one of the best studies of propositional relations, Hoey (1983), these sentences are connected by a relation that can be paraphrased as "Tell me something more about this". In the Rhetorical Structure Theory framework, relations like these involve many nuclei and are characterised as "joint". Other multinuclear relations include "list" and "sequence" (Mann and Thompson 1984, cf. "successive internals" in Martin's 1992 terminology). Even from these names, it is clear, however, that the status

formulation implies that functions necessarily relate to speakers' intentions and cannot be of another, non-intentional kind.

of these relations is not so much propositional or intentional as sequential. The occurrence of ideationally loosely or even arbitrarily related segments like the above would seem to fly in the face of models that insist on identifying a logical or intentional relation between every single text segment.

Finally, it is doubtful whether essentially presentational relationships such as the ones involving textual deixis can be couched in intentional terms at all. Textual deixis involves the use of metalinguistic expressions such as prediction phrases, enumeration items etc. to explicitly refer to the textual structure itself (Georgakopoulou and Goutsos 1997: 114). The propositional or intentional relation of such instances to the rest of the discourse is tenuous as we can see in the following extract:

(6) And, even in defeat, he will be a hero for some.

That's one political consideration. Here is another. Fighting with tanks and air supremacy in open country is one thing: fighting in towns is, bloodily, quite another.

The sentence opening the second paragraph ("That's one political consideration") is not propositionally related to the previous one ("And, even in defeat...") in any obvious way. Instead, it plays a crucial role in the presentation of the argument in the text by encapsulating and characterizing the preceding stretch of discourse by the use of the anaphoric phrase "one (political) consideration" (Francis 1986). As such, it has a predominantly sequential role, also indicated by the co-occurrence of other signals such as the paragraph break. The same happens with the relation of the sentence "Here is another" to the following stretch of discourse. These sentences do not relate to their surrounding co-text by e.g. an ideational relation of "general-specific" or "exemplification" but rather regulate the step-by-step progress of the discourse, acting as signposts of the text's organization. (Interestingly enough, the relation between them cannot also be propositional, but only a "weak" relation of "joint" or "listing").

The discussion of examples from spoken and written discourse above has suggested that not all relations between contiguous parts of a text can be accounted for in terms of intentional or propositional relations. In many cases, discourse coherence results in a sequential fashion from non-intentional aspects of the communication. Sequential relations of continuity and shift offer a much more revealing picture of what happens in the step-by-step unfolding of discourse than the analysis of participants' intentions or the examination of the referential content of their messages.

3. Non-intentional sources of discourse coherence

To argue about the occurrence of sequential relations crucially means to recognize one of the major non-intentional sources of discourse coherence. This is not, however, the only one. As identified in a variety of studies, non-intentional aspects of discourse coherence may refer to a host of other text relations found in the analysis of spoken and written texts. These include, among others:

- i) cohesive relations, including close and long-range cohesion (Halliday and Hasan 1976, Georgakopoulou and Goutsos 1997: 110 ff.),
- thematic progression (Daneš 1974, Goutsos 1997)

- iii) lexical patterns, including lexical sets related with statistical frequency (Philips 1989) and vocabulary flow (Youmans 1991), and
- iv) schematic relations, referring to patterns of topic or subject matter (Martin 1985, van Dijk 1987, Swales 1990).

On the other hand, further intentional aspects of coherence are also manifested, apart from the rhetorical, intentional or propositional relations identified in the models mentioned above, namely:

- i) macrostructures, organizing a text as a whole (van Dijk 1980), and
- ii) argumentative patterns, referring to a text's "rhetoric" (van Eemeren and Grootendorst 1982).

Some of these relations seem to be more prominent than others in relating parts of a text. However, all of them may be manifested in the absence of others, suggesting that none can be excluded as a source of discourse coherence. This happens e.g. in the following extract from the same conversation as above, in which the participants talk about the family dog called Lucky:

(7)[]				
006	_	(how) many times should I tell him ()		
000	?:	(you told him many times)		
007	D:	but he doesn't get it (.)		
	[]			
008	D:	doesn't get it		
	S:	'cause Lucky is a lucky boy,		
	T:	lucky boy		
009	S:	lucky boy (1) if he weren't lucky boy, would Constantinos=		
010	-	=find him when he was born in the garbage=		
011	S:	=bring him here, would we buy a feeding bottle=		
011	T:	(good dog)		
012	S:	=with pills=		
		=and then we'd feed him and throw away the pills =		
013		=and fill it in with milk		

In (7) above, although one of the dominant relations is the overall argumentative pattern ("if he weren't lucky...would we find him..."), much of the text seems to hang together by non-intentional relations. For instance, in 010-013 the successive actions are related by a "weak" relation of the type "what happened next". This schematic patterning, referring to the narrative succession of events, combined with cohesive patterning (e.g. "him...him..." etc.) accounts for the connectivity of the passage, more than any underlying intentional relation. At the same time, introjected utterances by the other participants (mainly T) also relate loosely to the rest from a propositional point of view, acting rather as feedback signals.

The analysis of such extracts, as also mentioned in the previous section, suggests that non-intentional sources of coherence are not reducible to and cannot be collapsed with their intentional counterparts. This position is not shared by all models or descriptions of discourse coherence, which, even if recognizing the multiplicity of coherence relations, insist on the primacy of intentional ones. For instance, in Leech (1983), interpersonal relations are superordinate or more important in the generation of

a text's meaning than textual (i.e. sequential) relations. Similarly, in Edmondson (1981), textual relations are a reflection of interpersonal relations or speech acts.

The primacy of intentions also characterizes computational models of discourse such as Hovy (1990). This has been criticized by Meteer (1993), among others, for assuming an isomorphism among types of relations (cf. Levinson's 1981 critique of speech act theory, mentioned above). Similarly, Moore and Pollack (1992) take issue with Grosz and Sidner's (1986) view mentioned above, by pointing out cases of conflicting trees between intentional and informational (i.e. propositional) structure. Characteristically enough, "centering theory" (Walker, Joshi and Prince 1998), which constitutes a development of Grosz and Sidner's theory, is specified only for utterances within discourse segments. The analysis of global discourse structure in this theory indicates the independence of the sequential structure from centering concerns (see e.g. Passonneau 1998).

On the other hand, many researchers advocate an independent treatment of discourse relations. For instance, Polanyi and Scha (1983) criticize theories that neglect to distinguish properly between discourse "syntax" and discourse "semantics". Their model is based instead on a clear separation of discourse content and expression, although these might be isomorphic in discourses constrained by the structure of some external object or event (e.g. iconic descriptions of a flat, a landscape etc.). Similarly, in Redeker's "parallel-components" model, each utterance is evaluated with respect to (a) the content it contributes to the discourse, (b) its contribution to a discourse segment purpose and (c) its sequential position in the evolving discourse. The three structures (locutionary/ideational/semantic; illocutionary/rhetorical/ and attentional/sequential) are parallel and not dependent on one another. Furthermore, multiple relations are "not only allowed to co-occur in one token example [...] but are even necessarily present, though often not overtly signalled" (Redeker 1992: 10).

In view of these contrasting analyses, it is clear that much more research is needed to clarify the contribution of intentional vs. non-intentional sources of discourse coherence. For methodological reasons, however, it would be preferable to keep the various types of relations separate and then identify any degree of interaction between them. On the basis of this assumption, we can then move on to outlining a theory of text relations and their interaction in discourse.

4. An outline of discourse relations

In the discussion above we mentioned in passing content and expression. Goutsos (1997) suggests that sources of discourse coherence can be classified according to whether they refer to the former or the latter, by employing Hjelmslev's (1954) model of stratification in language. In this seminal article, Hjelmslev claims that "[toute] méthode linguistique, explicite ou non, peut et doit se définir par rapport aux deux distinctions fondamentales" (163). These are the distinctions of content and expression, on the one hand, and between form and substance, on the other. The interlocking of these two pairs gives us four different strata or planes in language: the form of content, the substance of content, the form of expression and the substance of expression.

If we match the domain of application of the relations discussed above with the four planes of language, we get the picture summarized in Table 1:

	Content	Expression
For m	rhetorical relations argumentation intentional structure	cohesive patterns thematic progression lexical patterns
Substance	macro-structures schematic structure	linguistic medium

Table 1: Sources of coherence in language planes

This classification does not only allow us to capture the relation between sources of coherence, but also makes it possible to understand planes of language as patterned themselves. Thus the plane of substance of content, where subject matter is situated, is not occupied by "raw" material but is articulated in a way revealed by theories of schematic structure or macro-structures. This is the plane that provides the interface with the underlying knowledge bases or the social and cultural articulations of events and entities.

The plane of form of content, on the other hand, includes mainly intentional sources of coherence, which, as such, do not refer to expression properties of discourse. This is their basic difference from the two planes of expression, which are concerned with relations among linguistic elements. In particular, the plane of form of expression is where non-intentional aspects of coherence can be located and subsumes all the sources of coherence that deal with the management of the discourse agenda.

All these text relations can be further distinguished with regard to linguistic functions (or "meta-functions", in Halliday's 1985 terms) to which they refer, as well as according to criteria of structure and convention (see Goutsos 1997: 142 etc.). What is most important for our purposes here is to emphasize that it is possible to develop an approach that integrates different sources of coherence and accounts for their diversity and complexity in a systematic way (cf. Roulet 1997). By referring to stratified planes of language we are able to recognize the complex interweaving of mutiple and varied sources as they contribute to discourse coherence. More particularly, we can assess the contribution of intentional vs. non-intentional sources of coherence in specific terms: the former relate to the articulation of pragmatic content ("what is being talked about"), whereas the latter deal with the linguistic management or expression ("how does discourse move along"). As a consequence, their importance and contribution to discourse coherence, even if of a different kind, is equally significant.

5. Implications for a view of communication

In one of the most recent and original attempts to delineate pragmatics, Verschueren points out that:

"there is a need for a pragmatic return to meaning in its full complexity, allowing for interacting forces of language production and interpretation, and doing full justice to the central role of meaning in

human reality, whether cognitive, social or cultural" (1999: 48, emphasis in the original).

This paper has suggested a view of text relations that outlines these interacting forces, allowing us a glimpse into the complexity of meaning production and interpretation. A central argument has been that both intentional and non-intentional aspects of discourse coherence contribute to this complex meaning, as indicated by their function in instances of spoken and written texts. The study of non-intentional aspects of discourse coherence can thus contribute to an account of pragmatic complexity in discourse and communication. Consequently, the pragmatic study of communication must take account of this kind of relations.

In the approach to text relations outlined above, it was argued that discourse relations may either refer to the articulation of pragmatic content or its linguistic management or expression. These two facets impose different demands on speakers and listeners and draw upon different resources: the former is related to an overall, holistic planning, while the latter necessitates reference to a step-by-step, emergent connectivity. A closer look into the interaction of these properties would be indispensable in accounting for the complexity of discourse processes. In addition, this view of communication would have to allow for the development of relations in novel and unpredictable ways, contributing to the self-organization or 'emergent coherence' of discourse. As a result, cognitive models of communication should incorporate both static and dynamic (or online) processes and, by consequence, employ both deterministic and probabilistic approaches to discourse understanding in order to account for all different aspects of coherence.³

A significant consequence of an inclusive model of coherence would be that pragmatic research would come in line with developments in fields such as critical theory, in which the primacy of intentions in interpretation has been challenged for a long time. Post-structuralist and postmodern theories have raised doubts on the extent to which the intentions of an original subject (speaker or author) can be inferred from a text and whether this should be the main focus of interpretive work. In this way, they have moved away from what Deleuze and Guattari would call a "paranoid interpretation" (1987: 289), a stubborn insistence on a unique source of originary meaning. By exploring the different facets of discourse coherence, we may also be able to conceive the question of structure as a pragmatic problem (Lucy 1997: 249). As a central notion in linguistics, structure cannot be done away with by wishful thinking; it can, however, be reworked and redefined as a central pragmatic concern constituting a node for the multiple facets of discourse as a complex event. In this sense, as Goutsos (1997: 176) suggests, post-structuralism could then be understood as the "unfinished project of structuralism", the working through of its basic notions and assumptions towards a better realization of their importance for human communication.

³ In this respect, the PISA model of coherence (Sanders and van Wijk 1996) represent a significant advance in the analysis of both incremental, segment-by-segment and hierarchical, holistic aspects of discourse

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