Pragmatics and the Phantasm Called Text: a relevance-theoretic approach to Cohesion*

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Abstract

Since Halliday and Hasan's work *Cohesion in English* was published in the '70's, controversy over the actual nature and role of cohesion has bedevilled the text-linguistic and psycholinguistic literature. Adopting some of the communicative and cognitive considerations of the Relevance-theoretic agenda, this paper sketches a rough critique of Halliday and Hasan's approach and lays the foundations for a future, more psychologically adequate and pragmatically informed, investigation. Given that cohesion has traditionally been treated as a text-defining property, a novel approach to the issue could ultimately become the starting point for a reconsideration of the very notion of *textuality*.

1 Introduction

Textual theorizing, whether of the Text-linguistic, Discourse-analytic or Literary-theoretic variety, has traditionally been characterized by endeavours which either completely overlook the possibility of a symbiotic relation between Pragmatics and Text or see Pragmatics as playing only an occasional and incidental part in the overall framework of textual enquiry. As a result, core questions about the nature of text have so far been tackled almost independently of parallel advances in pragmatic research and, therefore, independently of an adequate theory of communication.

However, developments in Pragmatics in the last twenty years, and particularly the breakthroughs of the Relevance-theoretic programme, have made the need to incorporate pragmatic theory into the study of text more pressing than ever. Pragmatics - now an indispensable part of a wide range of linguistic domains - can shed new light on pervasive questions at the heart of text studies and open the way for a renewal of the domain and methods of textual enquiry.

This paper will argue for a thorough reconsideration of an issue widely debated in the text-linguistic and psycholinguistic literature: the nature and role of Cohesion.

Adopting some of the communicative and cognitive considerations of the Relevance-theoretic agenda, I shall sketch a rough critique of the approach to cohesion proposed by Halliday and Hasan in their survey *Cohesion in English* (1976), which was fundamental for functional linguistics. In passing, I will also refer to two other works by the same authors - *Language, Context and Text: aspects of language in a social-semiotic perspective* (Halliday and Hasan 1985) and *Coherence and Cohesive Harmony* (Hasan 1984) - in which some of their original proposals were further elaborated. While many other works have also tackled the issue (Greenbaum 1969, Quirk et al. 1972, Gutwinski 1976, Dressler 1978, De Beaugrande and Dressler 1981, Petöfi and Söze 1983, Quirk et al. 1985, Heydrich et al. 1989), Halliday and Hasan's surveys are without doubt the most systematic and thorough, epitomizing most of the major insights and pitfalls of this approach.

Since my aim is to argue for a reformulation of the cohesion question, I will place particular emphasis on descriptive and explanatory weaknesses of existing discussions[1]. Relevant points for investigation will include:
a) discussion of a classificatory problem created by the fact that some of the categories Halliday and Hasan term *cohesive* are apparently incompatible with their programmatic definition of cohesion;
b) assessment of Halliday and Hasan's view that cohesion is a text-constitutive property;
c) summary of deficiencies relating to the fact that Halliday and Hasan's approach lacks a developed pragmatic dimension, and finally;
d) outline of my alternative proposals designed to lay the foundations for a future, psychologically adequate and pragmatically informed, investigation of the issue.

There are two main reasons for reconsidering the notion of cohesion: first, there is evident intrinsic value in understanding the nature of the information retrieval processes of which cohesion is a subset. Second, and given that cohesion has invariably been treated in the literature as a *text-defining property*, a fresh investigation of the issue could become a starting point for a reconsideration of the very notion of *textuality*.

2 Tension between two aspects of Cohesion

A closer look at Halliday and Hasan's project reveals that *Cohesion in English* is tackling two distinct - though related - questions, which it often seems to equate.

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[1] I do not mean to downplay the importance of Halliday and Hasan's work. Their approach to cohesion has been fundamental for text-linguistic scholarship and has inspired research in other domains too: for instance, Givón's recent proposals on *conceptual referential accessibility* (2002) or Lascarides et al.'s suggestions on *ambiguity and coherence* (1996), in my view, owe a lot to the original work carried out by Halliday and Hasan in the framework of *lexical cohesion.*

The first question arises from the authors' definition of cohesion as '[the phenomenon which] occurs when the interpretation of some element in the discourse is dependent on that of another. The one presupposes the other, in the sense that it cannot be effectively decoded except by recourse to it. When this happens, a relation of cohesion is set up, and the two elements - the presupposing and the presupposed - are thereby at least potentially integrated into a text' (1976: 4).

As this excerpt shows, the authors realized that successful interpretation often involves a process of retrieving information processed at some previous stage in a given discourse, and termed this phenomenon *cohesion*. It follows that a cohesive relation (or 'cohesive tie' in 1976: 3) involves at least two areas of the text between which a relation of 'presupposition' obtains. Halliday and Hasan's analysis does not further elucidate how the term 'presupposition' is to be unpacked. Roughly speaking, however, we can conclude that the term 'presupposing' refers to the pole of the cohesive tie that includes the elements currently being interpreted and the term 'presupposed' refers to the pole of the cohesive tie where the 'required information' for the interpretation of the 'presupposing' pole is to be found.

It is relatively easy to see how all 'Componential Cohesive Relations' (Hasan 1984, Halliday and Hasan 1985: 81), that is, *reference*, *substitution*, *ellipsis* and, finally, *general* and *instantial lexical cohesion* in the form of *collocation* or *reiteration*, could in one way or another fit this definition of cohesion as a discourse-internal process of information retrieval[2]. However, Halliday and Hasan's survey is not always consistent with this programmatic definition.

The authors also consider a second question. In an attempt to account for discourse connectedness and its relation to textuality, they also classify as 'cohesive devices' (1976: 226-271) linguistic constructions such as *conjunctives*, *continuatives* and *contrastive intonation* (termed 'Organic Cohesive Relations' in Halliday and Hasan 1985: 81), which do 'connect' stretches of discourse, although it is hard to see in what sense they can be seen as retrieving information of any sort from anywhere in that discourse. If the claim is, ultimately, that the second conjunct must be processed using information from the first conjunct, then establishment of the cohesive tie still falls under the definition of Componential Cohesive Relations and is partly irrelevant to the function of the discourse connective.

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[2] Halliday and Hasan's work has very little explanatory value. As a result it is not clear in exactly what way each componential relation is cohesive, at which stage of the interpretive process it occurs and what contributions it actually makes. The points of potential convergence and divergence between each of the categories are not clear either. In later sections I shall briefly touch on this matter with the aim of raising the pertinent explanatory questions that a future discussion should tackle.

The eventual consequence of this ambivalence between two separate questions (i.e. about the role of cohesion in information retrieval and its contribution to discourse connectivity) is that some of the categories the authors term cohesive, and in particular all Organic Cohesive relations, undermine their own programmatic definition of cohesion[3].

The problem obviously goes beyond the creation of an internal methodological contradiction. Research in Relevance Theory using the *procedural-conceptual* distinction (Blakemore 1987, 2001) provides evidence that the function of Organic Cohesive Relations is fundamentally different from that of Componential Cohesive Relations[4]. Any attempt to merge these radically distinct aspects of language use under the same definitional umbrella is in any case bound to prove profoundly problematic.

3 Can cohesion define text? *Intertextual* aspects of language use

Around the time that Halliday and Hasan were pursuing their project on cohesion, a new theoretical agenda, aimed at defining textuality, accounting for the alleged ability of texts to function as a single unit, identifying the features that were taken to be characteristic of 'texts' as opposed to 'non-texts', etc, was becoming increasingly popular in Discourse Analysis, Text Linguistics and Theoretical Literary Studies, and was fundamentally shaping the way in which these questions are still perceived and investigated today.

Halliday and Hasan pursued their research on cohesion under the influence of these theoretical doctrines, clearly intending it as a contribution to the ongoing discussion on textuality. Ultimately, the authors treated cohesion as a text-defining property, a phenomenon found necessarily in texts[5].

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[3] This paper focuses on cohesion as information retrieval alone. Hence, from this point onwards when I speak of cohesion I shall only refer to it in the 'componential' sense.

[4] According to Blakemore, the function of discourse connectives is to indicate how the sentence or phrase in which they occur must be taken. As Sperber and Wilson (1993:11) note, '[in Blakemore's view] discourse connectives such as 'so' and 'after all' (…) constrain the inferential phase of comprehension by indicating the type of inference process that the hearer is expected to go through'.

[5] Accordingly, Halliday and Hasan suggest:
  'There are certain specifically text-forming relations which cannot be accounted for in terms of constituent structure; they are properties of the text as such (…). (…) Cohesion refers specifically to these non-structural text-forming relations' (1976: 7). 'Cohesion refers to (…) the semantic resources which are drawn on for the purpose of creating text' (1976: 10). '[It] is the set of meaning relations that is general to all classes of text, that distinguishes text from 'non-text' and interrelates the substantive meanings of the text with each other' (1976: 26). 'Cohesion, therefore, is part of the text-forming component in the linguistic system' (1976: 27).

On the assumption that when 'a relation of cohesion is set up, (…) the two [cohesively related] elements (…) are thereby at least potentially integrated into a text' (1976, 4), Halliday and Hasan felt justified in focusing only on discourse-internal forms of information retrieval and singling them out as a special kind of cohesion[6]. Along these lines, early in their book (1976: 18-19, 31-37, 71) the authors distinguish between two types of *referential relation*, *Endophora* and *Exophora*. Roughly speaking, endophora obtains when reference is assigned to an element/set of elements in the preceding (*anaphora*) or following (c*ataphora*) discourse, while exophora obtains when reference is assigned to an element in the context of situation.[7] According to Halliday and Hasan, only endophora is genuinely 'cohesive'.

However, the fact that in a later chapter the authors speak of 'exophoric' and 'endophoric *ellipsis*' (1976: 144) suggests that the terms 'exophora' and 'endophora' are not always used in their strictly *referential* sense but in a much broader one. I would be inclined to suggest that what Halliday and Hasan may have had in mind when introducing the terms is a more general distinction between retrieval of information originating within a given discourse (endophora) and retrieval of information originating from some other, discourse-external source (exophora). In this latter sense, not only reference assignment but all other types of componential cohesive relation must be seen as endophoric for Halliday and Hasan: they all involve a 'semantic relation between an element [/set of elements] in the text and some other element [/set of elements] that is crucial to the interpretation of it'. And as the authors note: 'This other element is also to be found in the text' (1976: 8).

However, Halliday and Hasan are in danger of contradicting themselves when they acknowledge that the limits of the text are sometimes fuzzy and that we cannot always pin down where one discourse finishes and another begins (1976: 291-303). That is, cohesion is strictly endophoric but we do not always know whether or not endophora obtains, because we do not always know whether the region where the presupposed information is to be found is part of the text or not.

If Halliday and Hasan were right to assume that when a relation of cohesion is set up, the two elements are thereby integrated into a text, this problem would not arise: as soon as any two stretches of discourse were associated by virtue of a cohesive relation, endophora should immediately obtain and the cohesively related

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[6] Note here that this view is still widely entertained in text-studies. As Toolan (2000: 23) recently put it, cohesion is 'what makes text'.

[7] In Gutwinski 1976 (66-68), non-endophoric reference is further distinguished into Exophora (reference to some element in the context of situation), Homophora (reference to some element in the encyclopaedia) and Paraphora (reference to some element originating in some other text).

elements should unequivocally be integrated into a text. But Halliday and Hasan's prediction is not always confirmed.

An utterance, like any representation with a propositional form, can be used in two fundamentally different ways, that is, *descriptively* or *interpretively*. More specifically, an utterance can be used either as a *description* of a state of affairs in the actual world or an *interpretation* (/metarepresentation) of some attributed thought or other utterance (Wilson and Sperber 1995: 231).

I want to argue that the subset of *interpretively* used utterances that (a) are used by the speaker to indirectly quote or allude to another utterance which they tacitly attribute to someone else or to the speaker themselves at some other time, and
(b) fall within the scope of lexical cohesive relations[8] - I shall term this particular subtype of interpretive use INTERTEXTUAL - raises serious questions as to the *text-constitutive* potential of cohesion.
In such *intertextual* uses of language, the two related utterances, the interpretation and the original, do form a cohesive tie but, contrary to Halliday and Hasan's predictions, endophora does not obtain and the utterances are not ultimately integrated into a single text:

Example A

(1) What if the USSR blockades the Gulf and all the oil?
(2) Oh come now, *Britain rules the seas*![9]

In order to fully understand the irony in (2), the hearer has to recognise it as an echo of the patriotic song which starts:

(3a) 'Rule Britannia (3b) *Britannia rules the waves*'.

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[8] It is important to emphasize here that interpretive uses of language do not always fall within the scope of cohesive relations. In the following example, for instance, Peter can infer that Mary is directly quoting the Prime Minister's words without having seen the interview and without having to access in memory the original utterance that is being echoed:
Peter: Did you see the interview with the Prime Minister?
Mary: His policies have been a great success!
Sperber and Wilson emphasize at various points that the hearer need not always access the original in order to understand the interpretation: the guarantee is that processing the interpretation will give him all the knowledge of the original that he needs. However, sometimes one is expected to have knowledge of the original, particularly in tacit interpretive use, where one has to recognize the allusion. I consequently take the above instance to be essentially different from the example presented in the main body of the paper, in which the hearer's ability to identify the interpretive use and the resulting irony rests upon establishing a 'cohesive tie' between interpretation and original.
[9] The example is taken from Levinson's *Pragmatics* (1983: 109) and is one of the many instances thoroughly discussed by RT under the heading of 'verbal irony'.

Hence, the interpretation of (2) involves recourse to (3b) and the relation between them falls within the scope of what Halliday and Hasan call *lexical cohesion by partial reiteration or paraphrasis* (1976: 277-282). In line with Halliday and Hasan's proposals, (2) and (3b) undoubtedly form a *cohesive tie*. However, to suggest that the ironic utterance and the song it echoes form part of one and the same text would go against the clear intuition that these utterances belong to two separate texts.

Example B

Monday morning. My mother ostensively looks at my father's shirts hanging from the back of a chair and says:

(4) *The pope* did not bother to iron his shirts today.

Monday evening. My mother says to me:

(5) Tell *the pope* to carry this table out into the garden.

In order to construct the explicature of (5) and find the intended referent of the definite expression 'the pope', I have to recall (4) and infer that the referent must again be my father. The point here is that (5) could not be independently understood by the same form of creative inferencing as was used to interpret (4), since the situation in which (4) was uttered contains enough clues (the shirts hanging on the chair) to identify the intended referent, while the situation in which (5) was uttered does not. It can be quite safely argued that reference in (5) can only be assigned by recourse to the referent of the definite expression 'the pope' in (4). The relation between (4) and (5) falls within the scope of what Halliday and Hasan call *lexical cohesion by verbatim reiteration or repetition* (1976: 277-282); but is it empirically justified to say that the two utterances amalgamate into and form a single text?

Cohesion is by no means endogenous to or defining of text. Consideration of *intertextual* instances of language use shows that cohesive relations may well obtain between utterances without resulting in their amalgamation into a single unit. Halliday and Hasan felt justified in focusing only on discourse-internal forms of information retrieval, on the assumption that this type of information retrieval is ultimately constitutive of text. This assumption now breaks down. Discourse-internal types of information retrieval are no more constitutive of text than information retrieved from other, discourse-external sources. This in turn justifies a

broader treatment of the cohesion question and argues in favour of a more holistic approach[10].

3. Developing a theoretical framework
3.1 Conceptual information retrieval and cognitive environments

It is now widely held in pragmatics that linguistic meaning *underdetermines* speaker meaning (Carston 2000: 15-83). Relevance Theory endorses perhaps one of the most radical approaches in the field by treating underdeterminacy as an essential property of the relation between linguistic expressions and the propositions they are used to express: no sentence ever fully encodes the thought or proposition it is used to articulate. Carston (2000: 30) explains: 'I think that public language systems are intrinsically underdetermining of complete (semantically evaluable) thoughts because they evolved on the back, as it were, of an already well-developed cognitive capacity for forming hypotheses about thoughts and intentions of others on the basis of their behaviour'.

Such a radical underdeterminacy thesis entails that verbal communication is heavily *inferential*; encoded linguistic meaning provides merely a schematic starting point on the basis of which speaker meaning must be *pragmatically* supplied.

In this light, Halliday and Hasan's attempt to ascribe special intrinsic worth to endophoric componential cohesion and treat it as 'the [set of those] semantic resources [of language] which are drawn on for the purpose of creating text' (1976: 10) emerges as both inadequate and unjustified. These text-internal cohesion relations, along with other types of information retrieval that the authors exclude from their theoretical framework, are merely consequences of the fact that speaker meaning is heavily underdetermined by public language. Taking a broader perspective on the matter, let us now consider how we might use the Relevance-theoretic framework to analyse information retrieval in a more holistic manner as a process occurring within human (*mutual) cognitive environments*.

The notions of *mutual cognitive environment* and *mutual manifestness* were introduced in *Relevance: Communication and cognition* (Sperber and Wilson 1995: 38-46) as a response to the hypothesis, prevalent at the time, that communication is

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[10] A considerable body of psycholinguistic and text linguistic research (van de Velde 1981, 1989, Charolles 1989, Heydrich 1989, Danes 1989, Hölker 1989, Lita Lundquist 1989, Coates 1995, Givón 1995) has already pointed out the need for some expansion/reformulation of the notion of cohesion. Psycholinguists and Text-linguists, however, are not always consistent as to the direction which this expansion should take. It comes as no surprise that attempts to replace cohesion with the much broader concept of *coherence* have ended up by complicating things even further.

a *symmetrically co-ordinated* process based on *mutual knowledge*: that is, knowledge which is not only shared by both participants, but known to be shared, and known to be known to be shared, and so on ad infinitum. The notion of mutual knowledge is psychologically implausible and is not in any case (according to Sperber and Wilson) required for successful communication.
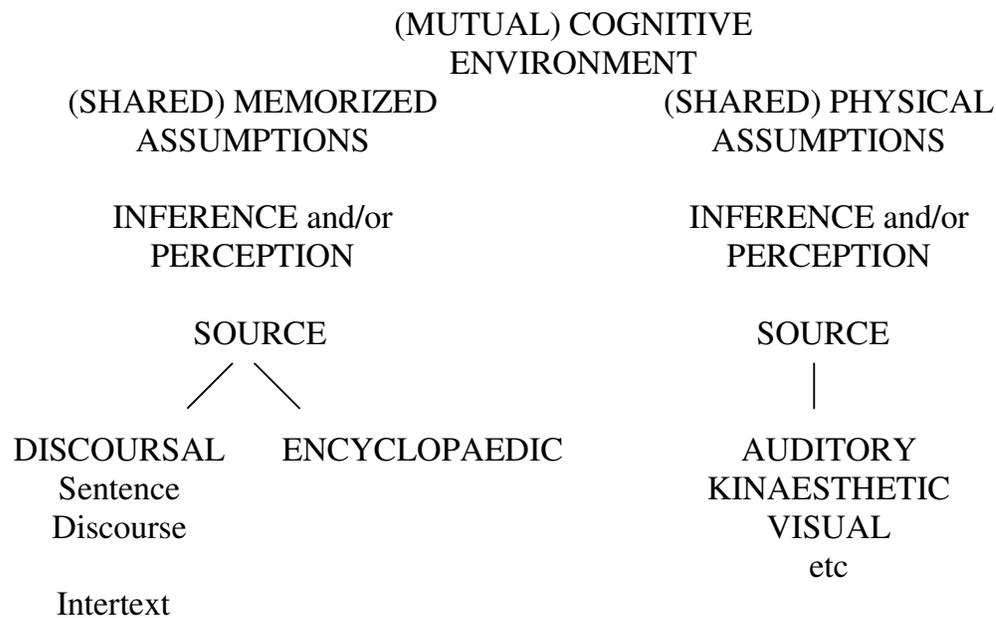
In defining the term 'cognitive environment' Sperber and Wilson make the following suggestions:

> 'A fact [or, more generally, assumption] is *manifest* to an individual at a given time if and only if he is capable at that time of representing it mentally and accepting its representation as true or probably true. A *cognitive environment* of an individual is a set of facts [or, more generally, assumptions] that are manifest to him. To be manifest, then, is to be perceptible or inferable. (…) [Hence] an individual's total cognitive environment is a function of his physical environment and his cognitive abilities. It consists of not only all the facts [or assumptions] that he is aware of, but also, all the facts [or assumptions] that he is capable of becoming aware of, in his physical environment. (…) Memorized information is a component of cognitive abilities' (1995: 39).

On this basis a *mutual cognitive environment* is further defined as 'any shared cognitive environment in which it is manifest which people share it. In a mutual cognitive environment, (…) every manifest assumption is *mutually manifest*.' (Wilson and Sperber 1995: 41- 42).

For Relevance theory, communication is a fundamentally *asymmetrical* process, in which the responsibility for avoiding misunderstandings is not equally shared between communicator and addressee but lies exclusively with the communicator: in a mutual cognitive environment a communicator can entertain strong intuitions about the assumptions that the receiver will have accessible and will be likely to use in the interpretive process. He is then expected to formulate his utterance accordingly, as far as is compatible with his abilities and preferences, manifestly intending the receiver to supply appropriate contextual information accessible to him. In a mutual cognitive environment a speaker can manifestly intend contextual information to be retrieved from the following sources[11]:

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[11] The following diagram is a rough approximation and does not illustrate the complex relations and constant interaction between the abilities mentioned in it. My aim at this point is to give a rather schematic idea of the potential sources from which information can be supplied in a mutual cognitive environment and map out the location of discourse-internal information within this broader picture.

Table 1

<div align="center">

(MUTUAL) COGNITIVE
ENVIRONMENT

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(SHARED) MEMORIZED ASSUMPTIONS	(SHARED) PHYSICAL ASSUMPTIONS
INFERENCE and/or PERCEPTION	INFERENCE and/or PERCEPTION
SOURCE	SOURCE

DISCOURSAL	ENCYCLOPAEDIC	AUDITORY
Sentence		KINAESTHETIC
Discourse		VISUAL
		etc

Intertext

In all cases the information retrieved is *conceptual* in nature. Hence, let us refer to the process of pragmatically supplying it as *conceptual information retrieval*. For reasons of brevity, let us also refer to contextual information manifestly intended by the speaker as part of the interpretive process as *presupposed information*. Presupposed information may be either a single concept or a larger conceptual representation.

Any utterance occurring in a (shared) physical environment may well presuppose information retrievable from this environment:

(6) *It*'s so cute!

The above example involves referential indeterminacy; what has to be supplied is a conceptual identification of the physical referent.

Any utterance may also presuppose information retrievable (or derivable) from (shared) memorized assumptions. Let us momentarily focus on types of conceptual information retrieval that could occur in this framework. When a single complex sentence is uttered in a shared cognitive environment, the possible sources from which memorized information might be presupposed are:

A. *Sentential*, involving all the components of the sentence that have already been processed/represented at the time of the retrieval:

(7) *John$_x$* took off *his$_x$* hat.

B. *Intertextual*, involving information from discourses that have been processed and represented in the past:

(8) [Memorized patriotic song] 'Rule Britannia, *Britannia rules the waves*'.
(9) [Utterance presupposing conceptual information retrieval from (8)] *Britain rules the seas*!

C. *Encyclopaedic*, involving all conceptual entries and assumptions linked to a certain conceptual address:

(10) Are we going to play tennis?

(11) It's raining.

Encyclopaedic assumption presupposed by the utterer of (11) as an implicated premise for the interpretation of her reply:

When it is raining in a certain location X one cannot play tennis in X.

When communication extends from the level of the sentence to that of supra-sentential utterances, all the above sources of conceptual information retrieval remain constant, while one more is added: all sentences that have preceded the sentence under interpretation have already provided mutually manifest assumptions and subsequently, presupposed information can be retrieved from them as well. Hence, the source of conceptual information retrieval may also be:

D. *Discoursal across adjacent sentences*

(12) a. *John$_x$* entered the room. *He$_x$* looked exhausted.
  b. We didn't *go to the party$_x$* but Mary did *φ$_x$* [i.e. 'go to the party'$_x$]
  c. Her mother brought her *a kitten$_x$*. *The kitten$_x$* …

E. *Discoursal across non-adjacent sentences*

(13) It was *Christmas$_x$*. Mary was in a mood for shopping. [Then the text shifts to Mary's encounters and thoughts while shopping without any further mention of Christmas. A few paragraphs later…] It was late. She was now walking back home carrying a little *tree$_x$*. [i.e. 'Christmas tree'$_x$]

[At an early point in the text the reader is presented with the following utterance:]

(14) …Kevlar sails are advantageous in bad weather.
[At a later point in the text the reader encounters the following exchange:]

(15) Captain, what sails shall we use?
(16) The weather is going to get worse.

The implicated assumption presupposed by the utterer of (16) is the one explicitly given at an earlier point in the text, namely, in utterance (14) 'Kevlar sails are advantageous in bad weather'.

   Thus, in my view the core question ought to be *how receivers move from an area X of their cognitive environment* - where X is the utterance under interpretation which, roughly speaking, functions as the *stimulus* that instigates the process of conceptual information retrieval - *to some other area Y* of their cognitive environment *in search of the presupposed conceptual information.*

   It seems that whether the information retrieved comes from *memory* and is identified:
a) in information within the sentence or
b) in the representation of the 8 - 9 utterances that have preceded/succeeded the sentence or
c) in the representation of more remote preceding areas of the given discourse or
d) in the representations of previously represented discourses or
e) in our encyclopaedic assumptions
or comes from *perception* and is identified:
f) in the physical environment

is rather a matter of cognitive *geography*, partially independent[12] of the structure and identity of the mechanism which instigates and carries out the retrieval of relevant conceptual information. And such a mechanism can only be *pragmatic*.

   In the Relevance-theoretic agenda, there is a substantial difference between the frame of mind in which the individual may approach an utterance or other ostensive stimulus directed at him and the frame of mind in which he approaches other phenomena: 'When attending to other phenomena, he may have hopes of relevance. (…) With an ostensive stimulus, however, the addressee can have not only hopes, but also fairly precise expectations of relevance' (Sperber and Wilson 1995: 154-158).

   It follows that when an utterance calls for information retrieval - and given the extent to which public language underdetermines speaker meaning, it is always the

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[12] Except, perhaps, for genuinely linguistic binding processes, which typically apply in local linguistic environments, and occasionally across sentences.

case that an utterance calls for some sort information retrieval - hearers rely on these 'fairly precise expectations' theoretically articulated in the so called *Communicative Principle of Relevance* (1995: 158)[13] to enable them 'navigate' amongst a plethora of disparate memorized or perceptual facts and identify the bit of conceptual information that is being called for[14].

The particular procedure used by the comprehension system for the retrieval of relevant conceptual information and the resolution of all underdeterminacies is described by Carston (2002: 45) as follows: 'Check interpretative hypotheses in order of their accessibility, that is, follow a path of least effort, until an interpretation which satisfies the expectation of relevance is found; then stop'.

The obvious advantage of the Relevance-based approach is that it makes possible a holistic investigation of the information retrieval mechanisms of which endophoric cohesion is merely a subset. It locates the study of cohesive relations within the broader domain of underdeterminate linguistic meaning and unifies the theoretically disparate proposals of existing text-linguistic and psycholinguistic research within the scope of a single pragmatic mechanism.

3.2 Relevant questions for further research

It follows from the above discussion that all types of conceptual information retrieval can be accounted for within the same explanatory framework linked to the *presumption of optimal relevance*. For reasons of methodological convenience we can, of course, single out and look closely at only the discourse-internal ones. If so, we need to bear in mind that this is an artificial distinction, which does not ascribe any special qualities to discourse-internal conceptual information retrieval.

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[13] Communicative Principle of Relevance: 'Every act of ostensive communication communicates a *presumption of its own optimal relevance*', while in the postface of the revised edition of Relevance Theory (1995: 270) Wilson and Sperber propose the following definition of the *presumption of optimal relevance*:
(a) 'The ostensive stimulus is relevant enough for it to be worth the addressee's effort to process it'.
(b) 'The ostensive stimulus is the most relevant one compatible with the communicator's abilities and preferences'.

[14] The fact that some types of conceptual information retrieval consistently contribute to the development of the *explicature* while others typically supply *implicated premises* does not conflict with such a holistic approach. As Wilson and Sperber (2004: 9) note: 'Relevance Theory treats the identification of explicit content as equally inferential, and equally guided by the Communicative Principle of Relevance as the recovery of implicatures. The relevance-theoretic comprehension procedure […] applies in the same way to the resolution of linguistic underdeterminacies at both explicit and implicit levels'.

In line with work already carried out in Relevance Theory - and particularly in Wilson and Matsui 1998 - an adequate explanatory investigation of the subject should, amongst other things, look at:

3.2.1 Accessibility of relevant conceptual information. How does the processor access the presupposed conceptual information from a range of potentially competing candidates with which this information shares extensive referential and conceptual similarities?

3.2.2 Explicatures, implicatures and conceptual information retrieval. In considering accessibility, particular emphasis should also be placed on the role played by implicatures and higher order explicatures - including free pragmatic enrichments - (Carston 1988, Sperber and Wilson 1993) in the identification of presupposed conceptual information[15]. For instance consider:

(17) On his way to work John came across the *mayor's$_x$* wife with her granddaughter
(18) It was a lovely morning and he grasped the chance to linger a little and chat with them.
(19) Soon after the *grandfather$_x$* showed up too.
(20) So my *friend$_x$*, said John, what are you going to do about the civil servants' strike?

In order to infer who the addressee of (20) is being referred to as 'my friend' the hearer must resort to utterances (17) and (19) and use as part of his inferential process the weakly implicated assumption 'the girl's grandfather is the mayor'.

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[15] A brief parenthesis here to mention that Halliday and Hasan realized and emphasized the significance of *surface text analysis* in understanding the establishment of cohesive ties. The lack of a refined pragmatic framework, however, limited their view of 'explicit' content to the notion of 'encoded linguistic meaning'. In due course this code-based view of cohesion led them into contradiction: they maintained that cohesive elements are always linguistically indicated (i.e. encoded) in the text (1976: 13, 14, 19) but nevertheless, included in their analysis categories such as *ellipsis* in which no encoded cohesive indicator occurs.

As a result, when the conceptual tie is established on the basis of *higher order explicatures*, *free pragmatic enrichments* and of course *implicated premises* and *conclusions*, the Hallidayan framework yields the wrong predictions or no predictions at all. Although psycholinguistics has taken into account the role of inferences in various aspects of text comprehension (see for instance Roth and Thorndyke 1979, Masson 1979, Noordman and Vonk 1992), in text-linguistics inference has received little attention (e.g. Shiro: 1994) or no attention at all.

3.2.3 Acceptability of relevant conceptual information. The information accessed by the receiver is either accepted or rejected in line with expectations of optimal relevance. Rejection of accessed conceptual information might lead either to the accessing of another piece of conceptual evidence which accordingly will be tested for relevance and will be accepted or rejected and so on, or to the abandonment of the expectation of relevance.

   Memory constraints and the structure of the message itself (e.g. *garden path utterances*) must be considered as factors that influence the rejection or acceptance of accessed conceptual information independently of whether this information was the one ultimately intended by the communicator.

3.2.4 Contributions made by the retrieved conceptual information to the subtasks (Wilson and Sperber 2004) involved in the relevance-theoretic comprehension procedure. In this respect all types of conceptual information can be roughly divided into two categories:

a) conceptual information retrieved and added to the explicit content of the utterance
b) conceptual information retrieved and used as an implicated assumption in the process of
b1) developing the explicature (e.g. bridging assumptions)
b2) deriving implicated conclusions (i.e. implicated premises)

It seems that certain types of conceptual information retrieval consistently contribute to (a) while others contribute to (b).

3.2.5 Monitoring of the specific source/location of the retrieved information. Monitoring the exact location in the discourse from which the presupposed conceptual information is retrieved might help understand which bits of the message actually contribute to establishing conceptual ties. In the Hallidayan theoretical framework and the analyses based on it, the conceptual tie is seen as invariably established with any of the occurrences of the presupposed element in the preceding discourse. This treatment, however, is both inadequate and incorrect. For instance, consider the way reference is assigned in the following example:

(21) a. John took a bottle of *medicine$_x$* out of his pocket
        b. and drank φ_x [i.e. the medicine$_x$].
(22) *It$_x$* felt cold on his tongue.

In this case, reference assignment does not depend on identifying a conceptual tie between the anaphoric item 'it' in (22) and one of the occurrences of the target 'the

medicine' in (21a) or (21b). To illustrate this, let us consider first the interpretation of the sequence (21a)-(22), omitting (21b):

(21a) John took a bottle of medicine$_x$ out of his pocket.
(22) *It$_x$* felt cold on his tongue.

Here, unless otherwise indicated by conceptual information to follow, a natural interpretation is that the bottle felt cold on John's tongue. It follows that the repetition of the target item in the free pragmatic enrichment in (21b) makes a decisive contribution to establishing the conceptual tie and yielding the correct interpretation:

(21b) John drank φ_x [i.e. 'the medicine$_x$'].
(22) *It$_x$* felt cold on his tongue.
[The medicine he had just drunk felt cold on his tongue]

Direct association of the anaphoric pronoun in (22) with the referent 'the medicine' in (21a), as all existing approaches would suggest, could result in the interpretation that the bottle and not the medicine felt cold on John's tongue. This indicates that the conceptual tie is not in effect established directly between (21a) and (22) but mediated by (21b). Direct association of the anaphoric pronoun 'it' in (22) with the recurrence of the referent 'the medicine' as a *free pragmatic enrichment* in (21b) results in an interpretation which makes the right prediction with the medicine he has just drunk feeling cold on John's tongue.

4 Epilogue: Conceptual Information Retrieval and Textuality

Can the examination of processes of conceptual information retrieval shed light on the nature of *textuality*? I take this to be a genuine question and I do not pretend to know the answer. The study of text could do with genuine questions. Much of the existing literature in the domain has set out to confirm preconceptions of questionable value; it may even be that the notion of textuality itself is a preconception. As Umberto Eco pointed out, the notion '*text*' is a post-medieval and hence modern *fixation*, and it could be that as a theoretical concept it is completely redundant. If we want to investigate textuality, we must at least treat text squarely as an object amongst other objects occurring within human cognitive environments; looking at conceptual ties internal to the text is bound to prove inadequate, particularly when - as acknowledged by those most theoretically aware - the very *limits* of a text are elusive. If textuality is somehow related to conceptual information retrieval, it must be the amalgam of all the conceptual ties potentially

integrating text into and partly instantiating it within our cognitive context. Or it might be that such a relation between textuality and conceptual information retrieval does not even obtain at all.

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