

# Discourse and pragmatics. A cognitive perspective<sup>1</sup>

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## 1. Introduction

This paper is concerned with the connections between semantics, pragmatics, and discourse. The underlying assumption for this enterprise is the belief that an explanatorily adequate account of discourse processes cannot be independent of semantics and pragmatics. The paper adopts a maximalist view of semantics in which the meaning of sentences is seen as a result of complex patterns of interaction between different cognitive models (Lakoff, 1987). These include propositional models, metaphor, metonymy, and image-schemas. The maximalist approach to semantics is combined with a broad view of inferential pragmatics according to which meaning derivation is regulated by the presumption of optimal relevance, i.e. the speaker's presumed desire to achieve the maximum number of meaning effects for the least processing effort (Sperber and Wilson 1995). Cognitive model theory attempts to capture all the richness of semantic characterisations. This endows the theory with a huge potential to account for inferential activity and the ability of people to create conceptually connected texts. Inferential pragmatics contains all the criteria necessary to explain how semantic descriptions are used strategically to create text. Text is the result of adequate balancing explicit and implicit information on the basis of relevance. This is done through what we may call cued inferencing, i.e. making inferences on the basis of prompts provided by linguistic expressions (usually underspecified semantic representations) in connection to a context.

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## 2. Aims and methodology

Within this framework, the present paper aims to explore the way in which discourse, which focuses on the construction of meaningful text, is grounded in pragmatics and semantics. In relation to this, it will be claimed that each of these levels of description, i.e. semantics, pragmatics, and discourse, carries with it a set of internal interacting principles and constraints that provide the input for the next level to become operative. Therefore, it is my purpose to give an account of (i) how semantics and pragmatics interrelate; (ii) how such interaction affects discourse. It is in attaining these goals that we will be able to find out to what extent discourse principles and strategies have to be explained in terms of semantic and pragmatic principles.

These goals have required three steps. The first one, which has already been mentioned above, has to do with the selection of compatible approaches to semantics and pragmatics. Thus, it was necessary to find an approach to semantics that allowed us to capture not only direct form-meaning relationships but also how such relationships are used to capture all forms of connectivity in texts. Furthermore, the theory should be broad enough to cover all forms of conceptual representation linked to linguistic expressions (e.g. not only propositional models, but also metaphor and metonymy), to the extent that such representations play a significant role in inferential activity. With respect to pragmatics, we have favoured an approach that sees meaning derivation as a matter of interpretation rather than decoding, one that handles inference in terms of interpreting lexicogrammatical cues (i.e. underdetermined meaning representations).

The second step has been to find the various levels of discourse activity where semantics and pragmatics play a significant role. Cognitive model theory, as originally expounded by Lakoff (1987), has provided us with the most relevant levels of cognitive modelling (including cluster models, metaphor, and metonymy) with an impact on inferential activity. For pragmatics, there are two theoretical constructs that have proved essential: the criteria of relevance, i.e. the balance between cognitive economy and contextual effects, and the balance between explicit and implicit information.

The third and final step has been the study of the principles and strategies that follow naturally from looking into the semantic and

pragmatic grounding of discourse phenomena, with a special focus on the distinction between cohesion and coherence, which is crucial to understand how meaningful texts are constructed.

### 3. Semantics and discourse

The maximalist view of semantics tries to capture the richness of conceptual organization in a principled manner. Cognitive semanticists, together with some discourse analysts (e.g. Beaugrande & Dressler, 1981) are among the leading exponents of this view. One classical example of the cognitive semantics perspective on concepts is Lakoff's (1987) analysis of the notion of 'mother' on the basis of a cluster of five converging cognitive models: the birth model ('mothers give birth to babies'), the nurturance model ('mothers take care of their children'), the marital model ('the mother is typically married to the father'), the biological model ('the mother supplies the egg that is fertilized by sperm'), and the genealogical model ('the mother is the closest female ancestor'). Lakoff (1987) argues that metaphorical extensions of the concept mother are based on the models in the cluster rather than on the whole concept. For example, *mother tongue* exploits the birth model, while *mother ship* exploits the nurturance model. Other models are not used metaphorically, but are the basis for semantic extensions, like the notion of surrogate mother, which is based upon the biological model of motherhood.

The maximalist approach has important consequences for discourse analysis. By way of illustration, contrast the use of the verb "to mother" in *She mothers her children well* and *My wife mothers me; in fact she spoils me*. The second utterance is a metaphorical extension of 'mother' based on the nurturance model. The first utterance is a literal use of 'mother' that also makes use of the nurturance. However, there is a degree of asymmetry between the literal and non-literal uses in that it is not possible to extend the first utterance to parallel the second: *\*She mothers her children well; in fact, she spoils them*. This is so because the literal use understands nurturing as taking care while administering discipline. The metaphorical extension only makes use of partial conceptual structure from the nurturance model in the cluster in order to construct the metaphoric source. We call this fact about the

semantic organization of linguistic expressions the *First Principle of Metaphoric Source Selection*. There is a complementary principle, the *Second Principle of Metaphoric Source Selection*, which accounts for the fact that only literal uses of concepts may make use of all the models in a cluster in order to create discourse coherence, while metaphorical extensions may only exploit one of the models in a cluster. This principle is evident from a consideration of transitivity in a literal use of "mother" in contrast with transitivity in a non-literal use. Thus, if Frieda is Mary's mother, and Mary is Jane's mother, then Frieda is Mary's grandmother. However, from the utterance *Necessity is the mother of invention, and poverty is the mother of necessity*, it does not follow that *\*Poverty is the grandmother of invention*. The reason that explains this apparent irregularity is that, even though both the birth and genealogical models apply in the literal use, the transitivity relationship is licensed only by the genealogical model. In contrast, the non-literal use only exploits the birth model (the idea of birth maps onto the idea of origin) whose logical structure is not sensitive to transitivity relationships.

Let us now consider the utterance *Spanish is my mother tongue, but for me English is like a mother tongue too*. Strictly speaking, a mother tongue is the language that a person has learned from his parents. A maximalist approach would add to this description some peripheral features: the mother tongue is usually mastered better than other languages; people usually feel more comfortable when they use their mother tongues. It is this knowledge, rather than the central characterization, that is used in the interpretation of "like a mother tongue" above. This selection of a non-central characterization is carried out in accordance with what we will call the *Peripherality Principle*: if the most central characterization of a concept fails to make sense in discourse, the speaker, in an effort to achieve coherence, will look for the first non-central feature that satisfies the conditions of relevance.

Metonymic activity also has a discourse potential that has so far been ignored in the literature. This may be due to the fact that metonymy is still regarded by many as a local cognitive phenomenon, of referential nature (cf. Lakoff and Turner 1989, for this view). However, there is growing evidence that metonymy is pervasive in much of our cognitive activity. It may even underlie the generation of conversational implicature and the interpretation of speech acts. In the follow-

ing example, the second speaker shapes his response on the basis of an underlying conventional scenario in which stopping a taxi is a precondition to take the taxi and ask the driver to take you to your destination:

(1) How did you get to the airport? -I stopped a taxi.

From the point of view of metonymy, the act of stopping a taxi provides us with a point of access to the whole scenario.

In a similar way, what speech act theorists call the "illocutionary force" of an utterance is ultimately calculated on the basis of a metonymic operation whereby part of an action scenario stands for the whole scenario. The utterance *It's getting colder here* may be interpreted as a request for someone to do something like close an open window in a context in which it is evident to the addressee that the current state of affairs affects the speaker negatively. By social convention (and this is a cultural model), we are required to change negative situations into positive situations for others if we are able to do so. Indicating that there is a negative condition provides access to the whole interpersonal scenario.

Gricean (cf. Grice 1975; Bach and Harnish 1979) and post-Gricean (e.g. Sperber and Wilson 1995; Levinson 2000) accounts of inference deal with implicature by positing the existence of maxims, principles, or heuristics that somehow allow the hearer to know that he has to engage in some sort of inferential activity. While these accounts are capable of giving an account of the outcome of such an activity, they have nothing to say about its nature. To fill this gap, we can postulate metonymic operations are part of the process of implicature derivation.

Understanding metonymy is also crucial in order to explain some phenomena of discourse cohesion, as evidenced by the following short exchange borrowed from Panther and Thornburg (2000):

(2)  
A: What's that noise?  
B: It's a burglar.

It is necessary to note that "it" in B's response is not anaphoric to 'that noise' but rather to the 'source of that noise' or 'the cause of that noise'. This is so in virtue of the application of the metonymy EFFECT FOR CAUSE. Thus, the answer *\*That noise is a burglar* would be ill-formed. To this account, we may add one more observation in terms of discourse connectivity: the fact that anaphora, one of the "grammatical" procedures traditionally associated with the creation of cohesion (Halliday and Hasan 1976), may depend on metonymic activation, seems to point to a different treatment of the issue, one in which cohesion is seen as conceptually (rather than grammatically) grounded. This may apply to other cases of anaphora: *I love my family. They do all they can for me*, where using the singular anaphoric pronoun would not be as appropriate (*I love my family. ?It does all it can for me*).

#### 4. Pragmatics and discourse

Achieving cohesion and coherence is also influenced by pragmatic principles. In fact, some discourse principles pertaining to what is known as cohesion and coherence phenomena are grounded in pragmatics. Nominal ellipsis, commonly accepted to be a (grammatical) cohesive device, is a case in point (Halliday and Hasan 1976: 150):

- (3) Here are my two white silk scarves.
- a) Where are yours?
  - b) I used to have three.
  - c) Can you see any black?
  - d) Or would you prefer cotton.

Halliday and Hasan observe that "yours" presupposes "two white silk scarves"; "three" presupposes "white silk scarves"; "any black" presupposes "silk scarves"; finally, "cotton" only presupposes "scarves". The conclusion is that the range of possible presuppositions is dependent on the structure of the nominal group: it extends only to cover that part of the presupposed group that would follow the Head of the elliptical group. However, the following examples are evidence that "yours", the Head of the elliptical group in extension (a) above, may cover different stretches of the preceding sentence:

- (4)
- a) Here are my two white silk scarves. They look very much like yours but are yours made of silk too? (yours = 'your scarves')
  - b) Here are my two white silk scarves. Yours are brown linen scarves, aren't they? (yours = 'your scarves')

It may be postulated that "yours" in these examples only codes a very generic meaning which stems from its pronominal nature, viz. the idea that it substitutes for a whole noun phrase, whatever its actual make-up. What conceptual material is to be supplied is a matter of co-textual and contextual requirements. This is clear from the following discourse developments of utterance (4.b) above:

- (4.b') Here are my two white silk scarves.
- a) Yours (= your scarves) are brown linen scarves, aren't they?
  - b) Yours (= your two white scarves) are not silk, are they?
  - c) When I saw yours (= your white silk scarves) I thought they were three.

We postulate that the scope of ellipsis is determined by the *Conceptual Structure Selection Principle*, which is grounded in the pragmatic Principle of Relevance. It is formulated as follows: ellipsis or substitution mechanisms select as much structure as is not cancelled out by the discourse unit containing the ellipsis or substitution. The grounding in relevance is evident: only relevant conceptual structure is brought to bear upon the referential operation on the antecedent (i.e. supplying conceptual structure that will not produce the intended quantity or quality of effects is contrary to the Principle of Relevance). Consider now:

- (5)
- a) Everyone seems to think he is guilty. If so, no doubt he'll offer to resign.
  - b) Everyone seems to think he is guilty. If so, we will have to change their minds.

In (5.a) "so" only substitutes for 'he is guilty', while in (5.b) "so" is broader in scope and refers to the whole first clause. The clue for the Conceptual Structure Selection Principle to select the correct amount of conceptual structure from the first clause is given by the main clause in the conditional sequence, since it provides the point of contrast with the relevant parts of the first clause. It is necessary to note that there is no grammatical indication either in (5.a) or (5.b) of the scope of the substitution device. It follows that substitution, like ellipsis, is not a grammatical phenomenon but a discourse phenomenon grounded in pragmatics. Contrast between the relevant parts of the clause supplying the antecedent and the clause containing the anaphoric device is based upon world knowledge, just like with coherence.

Since cohesion, like coherence, has a strong conceptual grounded and results from the application of discourse principles with a pragmatic basis, it may be legitimate to ask what the difference is, if any, between cohesion and coherence. The answer lies in the procedural nature of cohesion versus the conceptual nature of coherence. Thus, "so" in (5.a.) and (5.b) serves as an indicator that some conceptual material that was mentioned before has to be called up. However, finding what material is relevant is beyond the power of the substitution device itself. Here we need to make use of discourse principles, pragmatic principles, and world knowledge in the way indicated above. This distinction between procedural and conceptual connectivity may seem reminiscent of the relevance-theoretic treatment of discourse connectives as encoding procedures rather than concepts (Blakemore 1992). However, there are important differences. For example, Blakemore argues that connectors such as "so" and "after all" do not encode concepts; they simply constrain the inferential phase of comprehension by indicating the type of inference process that the addressee is expected to go through:

- (6)
  - a) Peter's not stupid.
  - b) He can find his own way home.

(7)

- a) Peter's not stupid; so he can find his own way home.
- b) Peter's not stupid; after all, he can find his own way home.

On Blakemore's interpretation, (6.a) either provides evidence for the conclusion in (6.b) or is confirmed by the evidence provided in (6.b). These implicit connections between (6.a) and (6.b) are made explicit in (7.a) and (7.b) by means of discourse connectors. For Blakemore, they have a procedural nature since they act as guides in working out the connections. However, it is possible to see discourse connectors like "so" and "after all" as different ways of activating a generic-level cognitive model that may be called the *evidential model*. The internal make-up of this model is derived from every day experience where we are led to believe that something is the case on the grounds of information that we consider reliable (either because we have had direct sensory access to it or because we trust the source of the information). In the case of (7.a), we understand that the speaker is caused to believe that Peter can find his way home because the speaker relies that Peter has enough intelligence to do so. The evidential model is activated by "so" in such a way that the grounds precedes the conclusion. In (7.b) we simply have a different perspective of the same model, since the conclusion statement precedes the grounds statement. With implicit connections, as in (6), the evidential model will be activated in one way or the other depending on contextual or other discourse clues.

Another evident example of a generic-level model with a potential impact on discourse comprehension is the *causal model*, which is also based upon experience with every day life and nature where every event is presumed to have an underlying cause. This model is called upon by means of subordinating conjunctions like *because* and *since* or by discourse connectors (conjuncts) such as *because of this*, *consequently*, *accordingly*, *so*, *therefore*, *as a consequence*, *as a result*. Other generic models like the *action model*, the *perception model*, or the *control model* do not seem to have comparable discourse structuring consequences.

The question of discourse relations leads to the question of iconicity. It is easy to find iconicity when we are dealing with temporal sequences. These may not be marked (e.g. *They hit the dog with a stick; the animal turned against its attackers*) or they may be marked

either lexically (e.g. *There was a flash of lightning; a thunderclap followed*) or grammatically (e.g. *They first did a thorough search for the missing file; then they called customer's service*). Iconic utterance configurations, as shown by psycholinguistic experiments (Noordman and de Blijzer 2000) are processed faster. If this is so, in terms of relevance, there must be a reason to use non-iconic configurations which offsets the extra processing effort. Let us compare the following examples:

- (8) Eight children were sent to hospital after they played with mercury dumped in an alley in Montreal's north end.
- (9) Eight children played with mercury dumped in an alley in Montreal's north end. They were sent to hospital.

The iconic arrangement of facts in (9) does little to draw the addressee's attention to the most relevant information, i.e. the dramatic consequences of someone's negligence. Thus, (8) has meaning implications that are absent from (9) in terms of the seriousness of someone's way of dealing with mercury, and subsequent measures to determine liability and to prevent something similar from happening again.

The Principle of Relevance predicts that there must be a number of extra meaning implications in the non-iconic arrangement, but it is insufficient to determine the interpretative path that the addressee is expected to follow. This gap is filled by an examination of discourse principles. We postulate that *Iconicity*, at this level of analysis, has discourse principle status. It is counteracted by the *Principle of Conceptual Prominence*. The former preserves the actual ordering of events in the world; the latter presents information in such a way that non-iconic prominent information enjoys privileged status.

Iconicity in discourse is not limited to temporal sequences. Noordman and de Blijzer (2000) have explored this principle in cause-effect sequences (i.e. in causal models, following our terminology):

- (10)
  - a) Norman skipped the red light. His car collided with my car.
  - b) Norman's car collided with my car, (because) he skipped the red light.

(10.a) is an iconic cause-effect construal; in (10.b) there is no iconicity. From a conceptual point of view, the iconic order of cause-effect is about relations in the world, while the non-iconic representation is about our judgement of the relations that hold in the world.

## 5. Discourse strategies

By a discourse strategy we will understand a non-conventional set of procedures that allow the speaker to create and interpret texts in a fully meaningful way. Discourse strategies are, in this view, subservient to more general communication strategies (Otal 2004). The relevance-theoretic perspective on communication has allowed Ruiz de Mendoza and Otal (1997) and Otal (2004) to distinguish between generic and local communication strategies. The former, which are prerequisites for the latter, derive from the general balance that we find in linguistic communication between explicit and implicit information. The latter strategies consist in specific sets of procedures used by the speaker to get the addressee to modify his cognitive environment (i.e. the set of assumptions he has in his mind) in such a way that the speaker attains his communicative goals. Imagine that a young, creative entrepreneur, Richard, has the goal of getting Geoffrey, a close friend of his, to join him in a potentially very profitable business venture. Geoffrey is hesitant and Richard, in an attempt to persuade him, remarks:

(11) Margie will really love it, and she'll be so proud of you. You know that.

Richard has the non-communicative goal of getting Geoffrey to disregard his fears about going into business. To achieve this goal, Richard sets up a related communicative goal that consists in building into Geoffrey's cognitive environment the assumption that Richard really wants Geoffrey to take part in the business venture and that he can please his wife if he does that. There is a communicative strategy associated to this goal, i.e. to make an indirect request to Geoffrey based upon the idea that Geoffrey's wife will be pleased and proud of him if he goes into business and to reiterate the idea in such a way that it

looks as if Richard is only making manifest what Geoffrey already had in mind. There are two realization procedures for this strategy: first, the indirect request is realized by means of a statement of fact that specifies that, predictably, Margie will be happy about the venture and proud of her husband joining in; second the speaker indicates that he is aware that the addressee can make the same prediction about his wife's attitude.

This is how strategic behaviour works at the local level of pragmatic activity. But the strategy also exploits discourse principles. In (11), the communication strategy consists of a fairly large amount of conceptual material, as is evident from the specifications given above. Part of the information is made explicit, while the rest is to be inferred. It is in this connection that a distinction can be made between three general communication strategies that derive directly from the relationship between explicit and implicit information in verbal messages: (i) information strategies; (ii) contextual strategies; (iii) negotiation strategies.

There are two information strategies. These are speaker's strategies which represent ends of a continuum along which the speaker will situate his linguistic output:

- [1] Use a signal that is poor in explicit assumptions and leaves a lot to inference.
- [2] Use a signal that is rich in explicit assumptions so that inferential activity is reduced to a minimum.

There are also two contextual strategies which are also ends of a continuum, but they work from the addressee's standpoint:

- [1] Make use of the minimum contextual information and rely maximally on textual features.
- [2] Make use of the maximum contextual information and rely minimally on textual features.

Negotiation strategies are made up of a number of repair procedures plus some (optional) cooperative attempt(s) by the interlocutor(s) either to make the repair or to make manifest where they believe the repair is needed.

High-level or general communication strategies constrain realization procedures. Once a local communication strategy has been set up, the speaker will have to decide on the degree of explicitness (and subsequent formal complexity of his message). This involves the selection of a general strategy and, from a discourse point of view, a careful management of information. Thus, an excessive lack of cohesive ties (procedural devices) will place a heavy processing load in terms of coherence (conceptual connectivity). Conversely, placing all the emphasis on procedural connectivity may not take sufficient advantage of the range of communicative interplay possibilities that may be triggered off by leaving it up to the addressee to work out what connections are to be made. Imagine utterance (11) without the use of the conjunction "and":

(12) Margie will really love it. She'll be proud of you. You know that.

The conjunction has the procedural function of constraining the addressee to consider the two clauses as a single pragmatic unit (Carston, 1993). This constraint does not hold for (12), however, where it is up to the addressee to think of the two clauses as combining or not into one complex conceptual unit. Note that the antecedent for "that" in (11) is the whole clause complex ("Margie will really love it and she'll be proud of you"), while in (12) "that" may either refer to the second clause ("She'll be proud of you") or to the conceptual combination of the two, as in (11).

Discourse strategies take two reverse options as far as connectivity is concerned:

- [1] Maximize the amount of conceptual connections and minimize the amount of procedural connections.
- [2] Maximize the amount of procedural connections and minimize the amount of conceptual connections.

The extent of application of these reverse strategies is constrained by discourse principles. We distinguish two: the *Principle of Internal Contrast* and the *Principle of External Contrast*. Consider the meaning impact of the following brief text:

- (13) The wise master makes his servants respect him. The unwise master makes his servants despise him.

It is based upon the contrast between the opposing behaviour of the wise and unwise master. This contrast can be made explicit:

- (14)
- a) The wise master makes his servants respect him. In contrast, the unwise master makes his servants despise him.
  - b) While the wise master makes his servants respect him, the unwise master makes his servants despise him.

Text (13) follows strategy [1] and the two texts in (14) follow strategy [2]. This has consequences with respect to what is communicated: in (13) the contrast between the wise and unwise masters is sharper than in (14.a) and (14.b). This is so because discourse connectors and conjunctions contrast whole propositions, but in (13) the contrast is not only between two propositions but very markedly between different components of each proposition ('wise' versus 'unwise'; 'respect' versus 'despise'). Example (13) is based upon internal contrast, while the examples in (14) exploit external contrast. Focus upon external contrast demands explicitly invoked procedural operations; the greater prominence of internal contrast, however, calls for conceptual connectivity.

We shall finally address two discourse principles that constrain anaphoric reference. In a previous section we have examined how anaphoric operations are influenced by semantic and pragmatic principles. Here we will look at the discourse end of this phenomenon. Consider this oft-quoted example taken from Sacks (1972):

- (15) The baby cried. The mommy picked it up.

Sacks uses this example to illustrate the claim that the interpretation of later utterances in discourse is highly influenced by earlier ones. For Sacks, it would be normal to interpret "it" as referring to the baby. However, as Brown and Yule (1983: 65) have observed, there may be contexts where "it" refers to an object, such as a toy that the baby has

dropped. In order to cope with this problem, Brown and Yule propose the "principle of analogy": unless we are given specific notice that something has changed, we assume that everything remains as before. This seems to mean that we interpret some utterances on the grounds of their analogy with what we know about the world.

Brown and Yule's principle of analogy is simply a principle that matches utterances with corresponding world knowledge. However, this principle is not capable of selecting the right referent for a potentially ambiguous pronoun when we have two conventional scenarios that may equally apply to it on the basis of analogy. Imagine the following extension:

(16) The baby dropped the toy and cried. The mommy picked it up.

Here we have the problem that picking up a toy that has been accidentally dropped (and giving it back to the baby) is just as conventional as picking up a crying baby. So, there is no way in which the principle of analogy can solve the ambiguity of "it" in this example. Nor can it be solved by resorting to another principle proposed by Brown and Yule (1983: 59) in connection to the question of how referents are selected. This principle instructs the hearer not to construct a context "any larger than he needs to arrive at an interpretation". If the hearer hears someone say "Shut the door", he will look towards the nearest door available for being shut. Since in (16) both the context in which the baby is picked up and the context in which the toy is picked up are not any larger than needed for interpretation, this principle cannot solve our problem either.

(17) If the baby won't drink the milk, it should be boiled.

Example (17) is discussed by Leech (1983) in the context of his proposal of textual maxims regulating the processability of texts. The maxims are not our concern here, but rather the question of the (probably unintended) ambiguity of "it" of (17) in comparison with the ambiguity of "it" in (16). There are two reasons why "it" in (17) is readily taken to refer to the milk and not the baby (in spite of the pun). One is because of the relatively short distance between "it" and "milk"

in the expression. The other is a matter of matching the information in the text with what we know about the world but in a different way from what is suggested by Brown and Yule's analogy principle. There is no conventional context in which people boil babies. So the issue here is one of conceivability: a situation in which people will boil the baby rather than the milk is not conceivable. The *Principle of Conceivability* provides a better explanation of (16) than analogy: it is equally conceivable to have a situation in which the mother will pick up the baby as a situation in which the mother will pick up the toy. This discourse principle licenses the two possible interpretations of (16). As for (15), where there may or may not be a toy, the analysis of the relationship between the utterance and its context of production will determine whether "it" refers to the baby, to the toy, or even to another object.

In (17) both the inconceivability of a situation and the *relative distance* between pronoun and antecedent help us to resolve a potential ambiguity. But these two reasons do not necessarily work in combination. Compare:

- (18) The engine came to a stop and a loose screw fell off.
- a) Bill tried to put it back in place
  - b) Bill tried to fix it.
  - c) Bill didn't say anything; he just pointed at it.

The Principle of Conceivability licenses anaphoric reference of "it" to the screw in (18.a) and to the engine in (18.b). Utterance (18.c) seems to favour reference to the screw on the basis of relative distance, although from the point of view of conceivability both the screw and the engine could be referred to. Like conceivability, *Relative Distance* has the status of a discourse principle since it constrains discourse activity.

## 6. Conclusion

Discourse is a tightly controlled strategic activity regulated by principles that are grounded in semantics and pragmatics. We have thus studied a number of semantic and pragmatic phenomena that have evident consequences for the development of discourse. These phenome-

na have been recognized with the help of some of the analytical tools provided by cognitive semantics (e.g. notions such as cluster models, centre-periphery, metaphor, metonymy) and by the varied implications of the pragmatic Principle of Relevance, especially those concerned with the balance between efforts and effect, on the one hand, and between explicit and implicit information, on the other.

Our study of the way we make use of cognitive models in discourse has allowed us to postulate the principle of *Metaphoric Source Selection*: the metaphorical extension of a concept can only select partial structure from this concept to construct the metaphoric source.

The recognition of degrees of centrality in semantic specifications underlies the *Peripherality Principle*. This is a discourse principle, grounded in the Principle of Relevance: when the most central characterization of a concept is not capable of creating discourse coherence, speakers turn to less central specifications and select the one that best satisfies the conditions of relevance.

The present study has also addressed the question of the discourse potential of metonymic operations. We agree with other scholars that metonymy underlies such pragmatic phenomena as implicature-derivation and (indirect) illocutionary activity. We additionally show that metonymy is also essential for a correct understanding of some cases of discourse cohesion. In connection to this, there is evidence that anaphora is a conceptual rather than a grammatical mechanism.

Relevance has revealed itself as crucial in constraining the selection of semantic features that will be used to determine the flow of discourse. But pragmatic activity has an even more important role in regulating discourse. In order to show what this role is, this paper has addressed the question of the pragmatic grounding of so-called cohesion and coherence in discourse. Within this framework, the present paper claims that ellipsis and substitution are discourse phenomena subject to pragmatic constraints and argues for the existence of the *Conceptual Structure Selection Principle*, which accounts for the semantic scope of ellipsis and substitution devices: these have within their scope as much structure as is not cancelled out by the discourse unit that contains the cohesion device.

We have redefined the cohesion-coherence distinction as one between procedural and conceptual connectivity and have formulated

two further principles of discourse connectivity: the *Principle of Iconicity* and the *Principle of Conceptual Prominence*. There is a large amount of evidence that iconic arrangements are an important aspect of discourse coherence. Still, there is little work done with respect to the principles that regulate non-iconic arrangements. The Principle of Conceptual Prominence, which accounts for the special discourse status of prominent non-iconic information, fills this vacuum.

The final part of this paper has focused upon the analysis of discourse-strategic behaviour. Discourse strategies are non-conventional sets of procedures that allow speakers to create and interpret procedurally and conceptually connected texts. They are grounded in low-level and high-level pragmatic principles explored by the author in previous work. Two reverse discourse strategies are formulated, both related to the balance between procedural and conceptual markers of discourse connectivity. To this we add two other discourse principles, the *Principle of Internal Contrast* and the *Principle of External Contrast*. The former is based upon explicit procedural operations, whereas the latter makes use of conceptual connectivity.

Lastly, we have distinguished two more discourse principles that constrain strategic discourse activity: the *Principle of Conceivability*, which regulates conceptual links with situations in terms of the possibility of creating plausible mental scenarios for them; and the *Principle of Relative Distance*, which helps sort out ambiguities in anaphoric operations on the basis of the relative distance between the anaphoric pronoun and its potential antecedent as licensed by the Principle of Conceivability.

## 7. References

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