

## Chapter 2

# The Procedural Approach to Texts

*There is no such thing as the “philosophy” of language. There is only linguistics; and grammar is an essential part thereof.*

Louis Hjelmslev, *Principes de grammaire générale*

In Chap. 1 we have shown that there is no simple scientific definition of the concept ‘text’ because although texts are linguistic artefacts, for a long time they were not considered the highest and most important level of linguistic analysis. Instead, general linguistics, which developed in Europe and the United States, has always considered the sentence as the highest level of analysis.

During the twentieth century, in Europe and in the United States, the domain of linguistics gradually expanded to stably encompass links with some neighbouring disciplines, such as semantics. As a result, linguistics took on the task of recognizing the text as a valid subject of analysis, considering it as a sort of maximum extension. In the second half of the twentieth century, many linguists worked from this perspective and ended up creating a new autonomous discipline, text linguistics, which was able to integrate the research results achieved by semantics. In this way, and in order to deal with the most controversial issues of semantics, scholars also admitted pragmatics into the domain of text linguistics.

This circumstance created scientific debate between various scholars’ points of view, specifically the positions taken by each with regard to specific problems and the methods used to deal with them. Some of them employed the formalism of analytical logic that had developed in the tradition of Frege-Lewis (see Chap. 1, 19–21); other scholars leaned toward the tradition of linguistic phenomenology, cultivated by the “later Wittgenstein”-Grice current (see Chap. 1, 29, 30). For this reason, the most outstanding scholars of text linguistics work in different perspectives according to the current they belong to.

Now, I shall attempt to illustrate the orientation of the following specific authors, seeking to highlight the similarities and the differences between their points of view and the other textualists’ ones. In order to do this, I wish to present a leading book, the *Introduction to Text Linguistics* by Robert-Alain de Beaugrande and Wolfgang Ulrich Dressler.

This book has two versions: the English and the German one. Both of them were simultaneously published in 1981 by the two authors, who had prepared a common work, that originated two manuscripts, each of them in his author's mother tongue. In Italy the translation appeared for the first time in 1984 and a second renovated edition was published in 1994. My work refers to the English version of 1981 and to the second Italian edition of 1994.

This choice is a tribute to Robert-Alain de Beaugrande, a passionate scholar, who loved the truth and the unfettered, no-holds-barred scholarly debate. Defying the academic conventions, he put all of his research works on his web-pages for free. I thought that the best way to remind him and his unconventional ideas was using the page numbers of his free printable online English version of the *Introduction* (1981) in my citations. It was available until 10 August 2012, date of its archiving, due to copyright issues. His defiance to scholar conservative enterprise lives again in this work through this device.<sup>1</sup>

## The Point of View of Dressler and de Beaugrande

On the back cover of the second Italian version of the volume (1994), you can read as follows:

The science of the text does not pretend to reach the formal rigour typical of mathematics and logic, and, to some extent, even of linguistics, since its unit of measurement – the text – does not lend itself to absolute categorizations and regulatory paradigms. In the light of the results achieved so far, the science of linguistic structures above the sentence level is characterized by qualitative rather than quantitative predictions, and its main task is to design models to represent the complex processes of production and reception of texts, processes that are not observable in the laboratory, but reconstructed in the conceptual framework of cognitive science and communication theory.

R.-A. de Beaugrande and W. U. Dressler, leading experts in the field together with Schmidt, van Dijk and Petőfi, in this systematic and updated introduction intend to make known to the general reader not only the methods and models of the discipline, but also the close relationship it has with psychology, anthropology, literary criticism and semiotics (my translation of de Beaugrande and Dressler 1994, p. IV).

Reading this page prompts two interesting questions that can help us identify the different perspectives of the various textualists:

1. Why should text linguistics aspire to the formal rigour typical of mathematics and logic, and, within certain limits, of linguistics [*viz.* sentence linguistics]?
2. Who sought to impose intricate mechanisms and a rigorous formalized approach on the text, which is the unit of measurement of text linguistics?

To answer the first question, we must refer to the history of linguistics outlined in Chap. 1. As stated before, in Europe and in the United States sentence linguistics

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<sup>1</sup>See Lemke and van Helden (2009).

had come a long way: initially, formal methods were rejected. Later, linguistics recuperated them, first in the prevailing algebraic approach (Harris and Chomsky), and then in a logical approach (generative semantics and Montague). First through studies of syntax and then through studies of semantics, formalization took hold of linguistics, and though it had initially been isolated from neighbouring disciplines, it had gradually extended its domain to include semantics. Therefore, the answer to the first question is that text linguistics, born from the gradual formalization of sentence linguistics during the twentieth century, was configured as a separate discipline based on the formal rigour typical of disciplines such as mathematics and logic.

To answer the second question, we must necessarily elaborate a broader analysis. The text that prompts the question derives from the point of view of Dressler and de Beaugrande; therefore, we must first understand the perspective adopted by the authors. To do this, let us look again at a part of the page just quoted:

the [...] processes of production and reception of texts [...] are not observable in the laboratory, but reconstructed in the conceptual framework of general cognitive science and communication theory.

This statement brings the status of text linguistics closer to the cognitive science. Opposing the use of logical and mathematical formalism, the two scholars carry out an expansion of the domain of linguistics. Considering semiotics as having been divided into the three branches (syntax, semantics, pragmatics) identified by Morris (see Chap. 1, p. 26) in their vision pragmatics assumes a specific weight. In fact, they define pragmatics as «the domain of plans and goals, and questions of use are freely treated in syntax and semantics as well» (de Beaugrande and Dressler 1981a, b, p. 22). With regard to the actual use of language, they argue that «if human language users are in fact demonstrably unable to make such a distinction [*viz.* between sentences and non-sentences] consistently [...] grammaticality of sentences is only a default in a theory of language as human activity, that is, something assumed in absence of contrary specification» (de Beaugrande and Dressler 1981a, b, p. 24). This position—in contrast with generative grammar, which has its centre in the distinction sentence/non-sentence—places the focus on pragmatics.

Going even further, both argue that «as the distinctions of sentence/non-sentence and text/non-text lose importance, the gradations of efficiency, effectiveness, and appropriateness gain [...]. Those factors control what people say at least as much as do the abstract rules of grammar and logic» (de Beaugrande and Dressler 1981a, b, p. 24). This last position, however, critical of the use of logical and mathematical formalism, which regiment texts rigidly, gave pragmatics a priority role because it is able to process flexible principles.

In light of the above considerations, let us re-read the second question:

2. Who sought to impose intricate mechanisms and a rigorous formalized approach on the text, which is the unit of measurement of text linguistics?

The “intricate mechanisms” and the “rigorous formalized approach” to which the authors refer were employed by textualists belonging to a different tradition than that of de Beaugrande and Dressler and who operated according to the logical and mathematical formalism developed by the Frege-Lewis current. They are Teun Adrianus van Dijk and János Sándor Petőfi, presented in Chap. 1, p. 28.

On the same page quoted above, they are mentioned as the leading experts in the field of text linguistics, without specifying, however, that they belong to a tradition different than that of the authors of the *Introduction*. Both theoretical proposals, that of van Dijk and that of Petőfi, by integrating the perspectives of analytic philosophy without ignoring the issues raised by the phenomenological approach, delve deeply into the various problems; but it is clear that in the attempt to mediate between the demands of the two fronts, they are vulnerable to criticism from both areas of research. Indeed, they end up being too casual for the analytical philosophers and too strict for the phenomenologists, and thus leave themselves open to criticism.<sup>2</sup>

The position taken by Dressler and de Beaugrande in the *Introduction* is a veiled criticism: they accuse the two scholars, especially the Hungarian one, of excessive rigour. This is evident by reading the passage in which the two scholars mention the theories of Petőfi. They argue that:

Setting aside the technical details of Petőfi’s evolving model, we can view it as illustrative of the issues which logic-based text theories will have to face. Either established logics are employed, so that much of the texts’ nature is lost from view; or the logics are modified to capture texts more adequately [...]. Petőfi foresees intricate mechanisms to mediate between real texts and logically adequate versions of texts. Whether this undertaking will succeed, and whether it will then clarify the interesting properties of texts, remains to be seen. Perhaps a less rigorous, formalized approach would do more justice to the approximative way humans use texts in everyday communication (de Beaugrande and Dressler 1981a, b, p. 19).

The approach to text studies suggested by Dressler and de Beaugrande avoids the use of logical bases, and the point of view they propose is close to that of the cognitive science. So, it is time to take into consideration the cognitive science.

## The Scope of Cognitive Science

There is no single definition of “cognitive science”.<sup>3</sup> First of all, scholars do not even agree if we should speak of cognitive sciences or of cognitive science. In the first case it would be clear that an attempt is being made to establish a field that brings together different disciplines, which share the same object of study but have different methods and knowledge. In the second case, however, the idea of a unifying model is suggested, or at least of a synergy between disciplines that

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<sup>2</sup>On this point, see Chap. 1, p. 15.

<sup>3</sup>For Italian audience useful introductions to the cognitive science are Tabossi (1998) or Legrenzi (2002).

operate in the light of shared results. The cognitive science is relatively recent, if we consider the year of their birth as 1978, when a *Cognitive Science* conference was organized at the University of California in La Jolla, outside San Diego, California.

Despite the problem of knowledge that has always run through philosophical thought, the conference attempted to photograph the state of the art of the cultural, scientific and technological changes which since the Seventies had attracted great attention to issues related to the human mind. Scholars, each according to his view, include a number of different disciplines in the great family of the cognitive science. This, however, does not prevent us from defining a broad group of disciplines that constitute the backbone of this field. Since the subject that the cognitive science examine is basically “knowledge”, they are faced with the task of answering questions like: how does the cognitive system of a person work? How does it reason, store information, perceive and “know” the world? In general, what do intelligent systems consist of and how do they work? Can intelligent machines be built, and how? To answer these questions, a group of different disciplines are called upon to interact in search of an integrated perspective constituting the framework of cognitive science.

The list of disciplines can be compiled in various ways; according to the needs of this discussion, we shall take into account a small group of disciplines. For this reason, in addition to cognitive psychology, which is one of the undisputed and unanimously recognized pillars of the cognitive science, we shall also consider the contributions of neuroscience, artificial intelligence research, as well as the linguistic and philosophical research (considered simplistically as a single block).

## ***Cognitive Psychology***

In the first half of the twentieth century, *behaviourism* dominated the field of psychology. The intent of this line of research was to make the discipline scientific by adopting the experimental method and forgoing assertions not based on direct observation. The behaviourists had to base their studies only on observable behaviour, excluding any mental process from theories that had been or were being formulated. In other words, the mind had to be considered a sort of “black box”, something unobservable and whose functioning, therefore, could only be the subject of unprovable hypotheses. For this reason, experimental psychology for decades was based on the stimulus-response mechanism: the subject (human or animal), subjected to certain stimuli, produced responses that the researcher observed and attempted to classify. This gave rise to a great mass of experimental data, which highlighted the existence of certain mechanisms; these mechanisms, however, were anchored to situations that were simplified, limited and unrepeatable.

In the Fifties, interest in the mental mechanisms on which human behaviour depended became more widespread. Internal processes, as such not directly observable, regulate these behaviours; nevertheless, a number of more or less general hypotheses were progressively elaborated about the way these processes

worked. Although still unaware of itself, this was the birth of cognitive and behavioural psychology.

In addition to its interdisciplinary configuration, cognitive psychology had other significant characteristics. First, it was interested in the cognitive processes (perception, attention, memory, language, thinking, creativity), and these were recognized as possessing both structural autonomy and reciprocal interrelationships and interdependence. In the second place, the mind was conceived as an information processor, with a predetermined organization of a sequential type and a limited processing capacity along its transmission channels.

### *Neuroscience and Artificial Intelligence Research*

Cognitive psychology relied on an analogy between mind and computer that was based on notions of information, channels, sequences of transmission and processing of information, the input and output of data to and from the processor and memory structures. To explain this structural and functional organization, flow-charts were used, formed by units (boxes) having specific tasks (perception, attention, etc.) and by communication paths. In early models, information processing was conceived as a horizontal multi-stage process; when the operations of one stage had been completed, the next stage began, and so on.

In the Seventies, new models were presented that evidenced both the possibility of sending feedback from one stage of the process to previous ones and the possibility for operations from a later stage to be activated even if the former stages had not already processed the information.

The contribution of neuroscience refers to the study of the functioning of the human nervous system, especially the fields of neuropsychology and neurophysiology, through analogy with computers.<sup>4</sup> With the passage of time, more and more knowledge was acquired and today the influence of neuroscience on cognitive science is significant. The hypothesis of so-called neural networks derives directly from neuroscientific research.<sup>5</sup>

Artificial intelligence research comprehends all studies aimed at building intelligent machines (or, in other terms, machines that are able to simulate intelligent behaviour). Today, disappointed by the results of artificial intelligence, one prefers to speak about expert systems, i.e. systems that can solve specific problems. A prime example could be that of medical diagnosis; a second example, however, could be represented by HCI.<sup>6</sup> It was pointed out that a user who is not familiar with a given system still manages to interact with it, recalling experiences and models

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<sup>4</sup>Of particular interest is Tabossi (1998).

<sup>5</sup>See in particular Changeux (1983).

<sup>6</sup>On HCI (= Human-Computer Interaction), see Chap. 1, footnote 23.

acquired in similar situations.<sup>7</sup> In general, the process through which many technological innovations are metabolised seems largely metaphorical. Often, to be accepted by potential users, a new technology must present a familiar look. In other words, it needs to present itself in such a way that it expresses continuity with the past and parallelism with other existing technologies (same appearance, same functions, etc.). This way the user will tend to use models of behaviour and user experience that he or she had developed in other circumstances. The same thing happens with the spread of a new medium,<sup>8</sup> and with human language, which takes advantage of the global models that we discussed earlier.

### *Linguistic and Philosophical Research*

A large contribution to the cognitive science had been made by scholars studying semantic issues in the linguistic and philosophical research area. The father of the idea of the 'modular mind', one of the most popular in this field, is Jerry Fodor, whose semantic model, developed together with Katz, we outlined previously. Another important linguistic contribution is the theory of the metaphorical nature of the conceptual system by George Lakoff and Mark Johnson.

The two scholars assume that there is no difference between a semantic system and a conceptual system. A conceptual system is the basis of knowledge of the world that individuals have, and therefore of the way they interact with it. The concepts are instruments of categorization of reality, which allow us to pigeonhole individual everyday communicative interaction in larger (and known) groups. However, there are also abstract concepts, with which we build our reasoning. These concepts, and the reasoning in which they are used, are the way individuals represent reality; we rely on them to build assumptions and create behaviours that we believe contribute to our survival. It thus follows that the conceptual system is fundamental both for thought and action. This conceptual system is manifested mainly through verbal language. Simplistically, we could say that nouns express the categories in which individuals classify worldly objects (concrete and abstract), and some conjunctions represent the types of logical connections used in reasoning. Other elements (visual, audio, etc.), however, also belong to the conceptual system.

Lakoff and Johnson stress the high frequency of metaphors in speech, not for their aesthetic function, but as evidence of the structure of the conceptual system. The idea of Lakoff and Johnson is to study this conceptual system (the way the

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<sup>7</sup>See Mantovani (1995), pp. 132–138.

<sup>8</sup>Bolter and Grusin (1999), inspired by McLuhan (1962), use the concept of 'remediation', i.e. the process by which every new medium of communication conserves certain characteristics of its predecessors.

concepts are structured in and among themselves) through its manifestation in verbal language. They note that: «But our conceptual system is not something we are normally aware of. In most of the little things we do every day, we simply think and act more or less automatically along certain lines. Just what these lines are is by no means obvious. One way to find out is by looking at language. Since communication is based on the same conceptual system that we use in thinking and acting, language is an important source of evidence for what that system is like» (Lakoff and Johnson 2003, p. 4).

According to the two researchers, the concepts themselves have a metaphorical organization and to prove this they take as an example the concept ‘argument’ and the metaphor of “war”. This principal metaphor (that is, the idea that in some respects an argument is like a war) has different realizations in language:

#### ARGUMENT IS WAR

Your claims are *indefensible*.

He *attacked every weak point* in my argument.

His criticisms were *right on target*.

I *demolished* his argument.

I never *won* an argument with him.

You disagree? Okay, *shoot!*

If *you* use this *strategy*, he’ll *wipe you out*.

He *shot down* all *of my* arguments.

[...]

It is important to see that we don’t just *talk* about arguments in terms of war. We can actually win or lose arguments. We see the person we are arguing with as an opponent. We attack his positions and we defend our own. We gain and lose ground. We plan and use strategies. If we find a position indefensible, we can abandon it and take a new line of attack. Many of the things we *do* in arguing are partially structured by the concept of war. Though there is no physical battle, there is a verbal battle, and the structure of an argument – attack, defense, counterattack, etc. – reflects this. It is in this sense that the ARGUMENT IS WAR metaphor is one that we live by in this culture; it structures the actions we perform in arguing.

Try to imagine a culture where arguments are not viewed in terms of war, where no one wins or loses, where there is no sense of attacking or defending, gaining or losing ground. Imagine a culture where an argument is viewed as a dance, the participants are seen as performers, and the goal is to perform in a balanced and aesthetically pleasing way. In such a culture, people would view arguments differently, experience them differently, carry them out differently, and talk about them differently. But *we* would probably not view them as arguing at all: they would simply be doing something different. It would seem strange even to call what they were doing “arguing.” Perhaps the most neutral way of describing this difference between their culture and ours would be to say that we have a discourse form structured in terms of battle and they have one structured in terms of dance. This is an example of what it means for a metaphorical concept, namely, ARGUMENT IS WAR, to



structure (at least in part) what we do and how we understand what we are doing when we argue. *The essence of metaphor is understanding and experiencing one kind of thing in terms of another.* It is not that arguments are a subspecies of war. Arguments and wars are different kinds of things – verbal discourse and armed conflict – and the actions performed are different kinds of actions. But ARGUMENT is partially structured, understood, performed, and talked about in terms of WAR. The concept is metaphorically structured, the activity is metaphorically structured, and, consequently, the language is metaphorically structured.

Moreover, this is the *ordinary* way of having an argument and talking about one. The normal way for us to talk about attacking a position is to use the words “attack a position.” Our conventional ways of talking about arguments pre-suppose a metaphor we are hardly ever conscious of. The metaphor is not merely in the words we use – it is in our very concept of an argument. The language of argument is not poetic, fanciful, or rhetorical; it is literal. We talk about arguments that way because we conceive of them that way – and we act according to the way we conceive of things (Lakoff and Johnson 2003, pp. 4–6).

According to their hypothesis, the conceptual system is organized mainly in a metaphorical way. For example, this occurs when some of the concepts—the ones that are particularly abstract or distant from the world of experience—would otherwise be unclear. Metaphorization lets us see certain elements in terms of another better known and more understandable concept; it, in turn, may have been metaphorized previously.

A typical example would be abstract concepts. Probably, the first units of meaning with which individuals confront each other are those related to the perception of the world, which is, then, the basis of knowledge and of the entire conceptual system. On this basis individuals build the remaining part of their conceptual system, often thanks to subsequent metaphorical extensions.

In this regard, the two scholars observed the following human behaviour: «we typically conceptualize the nonphysical *in terms of* the physical—that is, we conceptualize the less clearly delineated in terms of the more clearly delineated» (Lakoff and Johnson 2003, p. 59).<sup>9</sup> As we saw in the case of “argument”, which can be metaphorized through war or dance,<sup>10</sup> different metaphors will produce different concepts or different aspects of the concepts.

Metaphors do not only structure individual concepts, but also sets of concepts. Some initial concepts can thus be used to arrange the relations between other concepts amongst themselves. Of great importance are the so-called metaphors of

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<sup>9</sup>In general, Lakoff and Johnson define as structural metaphors those that structure a concept in terms of another concept. They insist on the idea of structuring because, as we have already seen, conceptual metaphors never exist as an isolated case. In other words, if, for example, I am considering the metaphor “discussion is a war”, I will not stop at this initial consideration, but I shall articulate the metaphor by perceiving a number of similarities between the situation “discussion” and the situation “war”. The two concepts, however, never overlap completely (otherwise they would represent the same concept). This means that the metaphor necessarily highlights certain aspects of the metaphorized concept (those that exhibit a similarity with the other concept), while it neglects or hides the others.

<sup>10</sup>For a proposal of interpreting ‘argument’ as a metaphor of ‘dance’, on the basis of Hegel’s thought, see Giuffrè (2013).

orientation, so defined because many of them relate to spatial orientation: up-down, in-out, front-back, etc.<sup>11</sup>

This broader conception of metaphor, understood as a cognitive mechanism, is the basis of the global models in the procedural approach of Dressler and de Beaugrande, which addresses the problem of identifying the way in which these models are used by people during verbal interaction.

## Procedural Semantics

The *Introduction* ascribes a central role to semantics in the procedural approach. The authors argue that in order to ascertain what expressions mean, one must build a system of operational semantics that operates on the basis of human thought processes, unlike the logical semantics of the structuralists, the semantic interpretation of Katz and Fodor and the model-theoretic semantics adopted by the van Dijk and Petőfi. According to Dressler and de Beaugrande, procedural semantics is the heart of the approach to texts.

Since procedural semantics was born as part of the cognitive science, it has not been universally defined, as it is not part of a single perspective. Indeed, three qualifying aspects can be identified: first, the relationship between semantics and understanding; second, semantics lacks autonomy in the proper sense; finally, the relationship between meaning and concepts.<sup>12</sup>

The procedural approach makes semantics a kind of theory of understanding, which undertakes the task of describing the ways individuals understand linguistic expressions. On this level, classification schemes are developed, to which we have referred above in relation to global models. Because understanding is a mental activity, meanings become “cognitive content” and for this reason, the mental processes that construct meanings and make them part of the overall conceptual framework are of capital importance.

Procedural semantics is non-independent, at least from two points of view: if it is isolated from all cognitive abilities, the study of meaning cannot be addressed; in the procedural perspective, linguistic knowledge cannot be separated from extra-linguistic knowledge, which is related to factual reality. This is due to the interaction and reciprocal influence of cognitive models and linguistic models.

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<sup>11</sup>These spatial orientations derive from the human body itself and how it functions in the physical environment. The metaphors of orientation give the concept a spatial orientation. For example, in expressions such as “Today I am in high spirits”, the expression for “happy” has a high position. The fact that the concept it contains is oriented upwards determines a spatial location for that mood. These metaphorical orientations are not arbitrary, as they have a basis in physical and sensory experience. But, although the opposition up-down, in-out, etc. are physical in nature, the metaphors of orientation based on them can vary from culture to culture (Lakoff and Johnson 2003, p. 33).

<sup>12</sup>See Violi (1997).

The third key point is the relationship between meanings and concepts. Compared to Saussure's view, which decreed the priority of the linguistic system over forms of thought and therefore discriminated clearly between linguistic meaning and conceptual meaning, the procedural perspective affirms there is a direct connection between the two elements. According to the theoretical positions of the various authors, this connection has different configurations: for some,<sup>13</sup> language retains a clearer specificity and has greater variations with respect to a more defined conceptual framework; for others,<sup>14</sup> semantic and conceptual categories are more overlapping; the latter is the case of Dressler and de Beaugrande.

In this second perspective, some have even hypothesized a single level of mental representation, which is considered as a conceptual framework containing information related to language, perception, motor skills, etc. with probable correspondences and possible compatibilities. On this level procedural semantics investigates the relationship between language and perception, in an attempt to find parallels between the linguistic system and the spatial-perceptual system. Procedural semantics, given its mentalist assumptions, does not accept the idea that meanings are linked to states of reality (while the perspective of logical semantics does), but assumes that language and the perceptual system interact.<sup>15</sup>

Dressler and de Beaugrande explicitly restate their positions towards the problem of semantics as a whole. The two authors believe that framing the texts and knowledge about the situation in which communication takes place within a logical system is probably absurd.<sup>16</sup> Rather, it appears more convenient for them to act in the opposite direction: models must be built that are acceptable from the cognitive, perceptual and sociological point of view, and only later should we search for types of logic to use as a formal basis. In other words, they refute the perspective of logical-philosophical semantics Chap. 1, p. 30.

In the aforementioned line that includes Frege, Russell, the "later" Wittgenstein, Austin, Grice and Searle, the philosophy of language developed by focusing on the philosophical understanding of the essence of language and how it works, thanks to Willard van Orman Quine, Donald Davidson, Nelson Goodman, Saul Kripke and Hilary Putnam. Their studies made it possible to go beyond two paradigms of linguistic philosophy: the first is the one that identifies philosophical problems with

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<sup>13</sup>This is the position of Fillmore (1968).

<sup>14</sup>Jackendoff also holds the same position and has spoken out against the "syntax-centric" nature of Generative Grammar. In the various versions of Generative Grammar listed in Chap. 1 footnote 20, Chomsky argues that syntax is the only generative component within a language. Jackendoff instead believes that phonology, syntax and semantics are generative, and that they are connected to each other reciprocally by means of special components having their own rules. Rejecting the mainstream of syntax-centric Generative Grammar, the contribution of cognitive semantics—which Jackendoff helped develop—principally concerns meaning. He disputes that it is syntax that determines semantics, and not, however, the contrary. Syntax requires a relationship with semantics to be able to produce eutactic outputs; see Jackendoff (1996, 2002).

<sup>15</sup>On the whole issue see Traini (2006).

<sup>16</sup>See de Beaugrande and Dressler (1981a, b), pp. 55–56.

linguistic problems, whereby language itself would be the cause (this first model, which we mentioned earlier, may be an indication of a sort of “dissolution tendency”); the second paradigm, however, is the one that identifies philosophical problems as problems concerning the meaning of words. From this perspective, philosophy should help solve the problems by precisely verifying the meaning of words (“resolution tendency”).<sup>17</sup> Both trends share a lack of interest in the psychological component of meaning (anti-psychologism) and a strong interest in the relationship between natural languages and the real world (referentialism).

In concrete terms, this relationship was theorized in two ways: without any mediation between linguistic sign and extra-linguistic referent, or with mediation, that is, through categories that connect signs and referents. On the one hand, the relationship without mediation is supported by Quine and Kripke, for example, who consider nouns and other word classes connected to the referents on the basis of an act of designation that is valid for all the possible worlds in which the element exists. On the other hand, the relationship with mediation is typical of the procedural semantics of de Beaugrande and Dressler. According to them, logic is in no way able to explain a large number of complex sequences of reasoning that humans, however, are clearly capable of performing.

In expressing this idea, they are much closer to the orthodox tradition of structural linguistics, represented by the position of Hjelmslev (from whom we took the epigraph of this chapter, provocatively), than to van Dijk and Petőfi. This gives an idea of the distance between their perspective and that adopted by the other textualists.

In the perspective of the procedural approach, knowledge and meaning are sensitive to the situations in which they are used. In principle, the connection between a concept and the relationships that it activates in the mind of an individual can be considered a case of problem-solving. It thus follows that it is possible to deal with this situation in the manner described previously. When individuals who use a text come upon vague portions of content, they build more or less plausible hypotheses on what the text means.

Processes such as making inferences are also performed by the participants in a conversation in complete harmony with the conditions under which they receive the text, that is to say, with the communicative situation. So the focus of research becomes how to classify and systematize the ways in which these events occur, and not to prove that all individuals repeat the same process. Even in this respect, therefore, the authors of the *Introduction* distance themselves from logic-philosophical semantics.

Dressler and de Beaugrande’s procedural approach to semantics is also a significant change compared to Montague’s model-theoretic semantics. While the philosopher tried to change the instruments of formal logic in order to regiment natural languages, the procedural approach overcomes the problem at the foundation.

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<sup>17</sup>See Marconi (1999).

Since natural languages obey global cognitive models that are flexible according to the situations in which they are used, it is impossible to find formal means able to represent all possible elements: in fact, a part of these elements is oriented by context; however, the other elements are conditioned by aspects that could even be precognitive and justified only on the basis of processes of perception or cognition. In the procedural approach, language is no longer an infallible mechanism, as the logic-oriented tradition of linguistics of the twentieth century had considered it.

The procedural approach does not require increasingly precise semantic markers to be set in order to constitute the logical apparatus of a textual theory; it indicates the need to engage in the search for types of global cognitive models on the basis of which textual production and reception functions. The point of arrival is not knowing how language works in general (the scope of general linguistics), but finding out how the human mind operates to achieve its goals (the scope of cognitive science), especially when it plans to produce texts as outcomes of the human faculty of language (the scope of text linguistics).

For Dressler and de Beaugrande, the centre of the epistemological framework of linguistics is not logic, but the realm of cognitive science. Linguistics is the study of the human faculty of language, one of the faculties the human mind employs to achieve its goals; but language is expressed concretely only through texts. Therefore, the only linguistics possible is text linguistics.

It is useless to ask how a language works; instead, it is much more important to set out clear principles on which the cognitive ability of men and women operates and see how, in each case, that faculty has to bend itself to conform to useful models within communicative interaction in order to fulfil various purposes. And these models are not the same for everyone (and thus are not general and universal, as competence is), but the result of the interweaving of a common physiological basis and individual experiences of perception and cognition.

A comprehensive semantic theory should integrate the three dimensions examined above. The first is the intralinguistic dimension, i.e. the relationship between the elements of a linguistic system. This dimension, although we have repeatedly noted that it is unable by itself to give an explanation of meaning, is nevertheless important, because it puts the focus on the social and cultural aspects of meaning and gives an account of the differences between languages (linguistic relativism). The second dimension is the cognitive dimension, which refers to the relationship between the lexical structure and the conceptual structure. We must consider whether it is appropriate to maintain a fixed distinction between lexical units and deep conceptual schemas. The third dimension is the extra-linguistic dimension, that is, the relationship between language and the world. The key issue here is the role of experience, to which language refers. The problem of reference is formulated in the perspective of semiotics, whereby an objective reference to an external reality is no longer of primary importance, but rather a reference to experiential content. Certain lexical aspects seem to strongly confirm the importance of perceptual experience in the constitution of meaning; and since a portion of perceptual

experience is irrepressibly individual, there will be an irreducibly subjective area in language, too. Therefore, it will be necessary to give up the tradition of logical-philosophical semantics and also the path followed by van Dijk and Petőfi, based on Montague's model-theoretic semantics.

The irreducibly subjective element had already been glimpsed by Hjelmslev, who had argued that in language there is an irreducible pre-logical element. This consideration had prompted him to say that «there is no such thing as the “philosophy” of language. There is only linguistics; and grammar is an essential part thereof» (Hjelmslev 1928, p. 27), as I indicated in the epigraph.

Part of the literature<sup>18</sup> argues that in human communication there are at least two kinds of knowledge: the first, called “declarative knowledge”, concerns beliefs about facts in the sense of the organization of events and real world situations; the second, called “procedural knowledge”, refers to facts or beliefs adapted to certain types of uses and/or operations.<sup>19</sup> Meaning, as a property of language inserted in a text, is configured as a special case of acquisition, memorization and use of knowledge in the context of all the activities carried out by individuals. Since usages of language are highly differentiated, they are normalized according to social agreements.

Linguistic expressions used during a communicative interaction activate relations with corresponding concepts that are deposited in a mental workspace of memory.<sup>20</sup> This workspace, from a functional standpoint, is larger when the relationship between the text reception and production (for example, in the case of participation in a dialogue) activates integrated and memorized simple models. These models may have different aspects according to the processing demands of the moment.

In procedural semantics, the memorization and use of knowledge are regulated by two different principles.<sup>21</sup> The first principle, defined as episodic, depends on the personal experiences of the individual; the second principle, inherent, reflects the models governing the organization of knowledge, i.e. the structures of events and situations. Episodic knowledge must be reconnected to the situation of the specific circumstances in which the individual experiences occur; and so it is burdened with many accidental traits. Intrinsic knowledge, however, is related to common traits.

The importance of global patterns is evident in the production and reception of a text: a topic, in fact, may be articulated through the repeated usages of modules. According to the principle of economy, global patterns reduce the complexity of processing. Therefore, language should not be separated from people's experience; rather, it should be placed within models whose use can be explained on the same

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<sup>18</sup>Miller and Johnson-Laird (1976), Winograd (1976), Levesque (1977), Schneider (1978), Levesque and Mylopoulos (1979).

<sup>19</sup>Goldstein and Papert (1977) and Winston (1977).

<sup>20</sup>This issue was dealt with in detail by Miller and Johnson-Laird (1976).

<sup>21</sup>The point is dealt with in further detail by Tulving and Donaldson (1972).

level as other perceptual and cognitive processes.<sup>22</sup> If text linguistics must perform this task, it must necessarily move away from logic and the philosophy of language and draw closer to the cognitive science.

## The Procedural Approach

According to the procedural approach, the object being analysed—a text—is considered to be the outcome of a process. And if a text is a material object resulting from the completion of a process, linguists have the task of describing the various levels of language according to how they are used. The *Introduction*, as we have seen, recognizes that even different traditions of linguistics agree that language has a “systematic nature”, by virtue of which each of the elements belonging to the different levels of analysis has a function that contributes to the overall operation. Despite this, research has produced different outcomes because after identifying the levels of analysis, linguistics has been primarily concerned with the systems of the minimal units.<sup>23</sup>

The systematization of an object being analysed depends on the scientific purpose to be achieved. To describe an object, it is sufficient to identify the set of properties that make it classifiable in a reliable manner; to explain an object, however, one must identify the principles by which the object has certain properties, and verify the cases observed in empirical reality. Descriptions of a language are without doubt possible and often exclude the considerations necessary to explain it. Otherwise, to explain language, the concept of interaction should be employed rather than that of modularity.<sup>24</sup>

In modularity, the factors of a process are viewed as independent of each other; in interaction, however, the components are seen to interlock and control each other. Modular systems are more easily realized; this is why the linguistic models considered until now are modular, that is, the theoretical paradigms within which structuralists and generativists carried out their work. Ultimately, they do not offer effective operating systems for the comprehensive analysis of how language is used. Actual communicative behaviour can be explained only by the use of interactive systems.<sup>25</sup> In the real time of human communication, a linguistic model that maintains an autonomous syntax (such as Generative Grammar) finds itself facing a sort of combinatorial explosion: a calculation of the structures and the alternative

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<sup>22</sup>In this direction Minsky (1975), Miller and Johnson-Laird (1976), Rumelhart (1977).

<sup>23</sup>See de Saussure (1916), Hartmann (1963), Chomsky (1965), and Coşeriu (1975).

<sup>24</sup>See de Beaugrande and Dressler (1981a, b), pp. 23–24.

<sup>25</sup>Walker (1978) reports a series of tests that support the idea that abstract distinctions are not recognizable in the verbal processes but can only be derived from the communicative situation.

readings of a given communication, even a simple one, would require astronomically vast amounts of time to analyze.<sup>26</sup>

Basing their work on this idea, Dressler and de Beaugrande affirm the need to study texts in human communication using the procedural approach. It, ultimately, does not bother to identify structural units; rather, it focuses on the operations that regulate the units when language systems are implemented. From a procedural perspective, the text is defined as a result of the operations regulating the units in the use of a system. Both argue that by employing the procedural approach, one can empirically evaluate under realistic conditions the accuracy with which a person produces a text, placing the morphological and syntactic material in sequential order and then using it in actual practice.<sup>27</sup>

According to them, the validity of the models used in the procedural approach is to be verified in relation to natural human activities; therefore, scales of different priorities must be established on the basis of the object being studied. Furthermore, it is essential to develop a new observational model for some of the “traditional issues” of traditional linguistics.

The concept of ‘distinctive trait’, for example, should include the features detected by experimental phonetics and psycholinguistics, which should complement the information derived from descriptive linguistics. In addition, the structural analysis of utterances to which different meanings can be assigned—a recurring issue in generative linguistics—could be oriented in the direction of the processing strategies of psycholinguistics, which deal with the ways in which individuals exclude or eliminate a posteriori the ambiguities in everyday language. Even the concept of ‘assumption’ should be modified in its application to the single utterance, developing a macro-theory that deals with the general application of “world knowledge” in human communication, which would fall partially in the domain of behavioural psychology. Finally, the interest of logic in the ‘existence of objects’ and the ‘truth conditions’ of sentences should be replaced with a search for the minimum cognitive thresholds that act as a dividing line, in order to understand the extent to which participants in a communication are able to recognize objects and believe what is said.

While Dressler and de Beaugrande do not propose to set aside the distinction between sentence and non-sentence, they believe that we must assume that speakers are normally able to recognize the grammaticality of sentences without doubt and in a consistent manner. That said, it must be admitted that in the absence of expressly contrary indications, the standard case of human communication is valid utterance. Only those realizations that absolutely cannot be tolerated in human communication are non-texts because they clearly contravene the criteria of textuality: this occurs when participants in a conversation are totally unable to recognize cohesion and coherence in the language produced.

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<sup>26</sup>In the early models of computerized language processing, this factor was particularly evident, as pointed out by Woods (1970).

<sup>27</sup>See de Beaugrande and Dressler (1981a, b), p. 25.



## ***Text Production and Reception***

Communication functions as a constant upheaval and reestablishment of stability through the interruption and restoration of the continuity of a text. By attributing value to the continuity of relationships and connections, the processing of a text presents itself as a formal problem-solving process that takes place in successive stages dominated by various principles. The problem is considered solved when there is a connection without interruptions between the original state and the end state.<sup>28</sup>

The two states can be connected by employing three different research strategies to solve the problem: in the first case, the problem-solver tries to find a text's purpose, proceeding by paying little attention to alternatives; when he encounters an obstacle, he retreats just far enough to resume progress towards the finish line (depth-first search). As a second alternative, the problem-solver considers only a partial and more attainable goal and evaluates alternative paths to reaching it; he then repeats this process until he reaches the primary purpose (breadth-first search). The last research strategy is the means-end analysis, through which the solver identifies the key differences between initial and goal state and then gradually reduces them one by one. Each state encountered on his path becomes a control centre from which he can move in any and all directions.

The *Introduction* defines the model of text production and reception as a non-rigorously sequential arrangement of phases of processing dominance. Dominance is invoked because it presents two advantages: to begin with, it is not necessary to assume that the processes of a given phase suspend those of other phases, and moreover, it lets us go beyond the opposition between modularity and interaction discussed earlier.<sup>29</sup>

In text processing, the first phase is the planning phase. A person who produces a text has a purpose.<sup>30</sup> From this point of view, text production is only an intermediate step in achieving this purpose. The producer, through a means-end analysis, attempts to evaluate which text among the many that could be produced will help him the most in reaching his goal in a given situation.

Once the text type has been selected, the second phase begins: ideation. The authors propose an explicit correspondence between the concept of 'ideation' and the *inventio* of classical rhetoric, the search for ideas. The *inventio* is perhaps the most important part of rhetoric for Aristotle. It is, as Barthes (1970) says, more than invention, it is discovery. It is the *inventio* that must guide our search for the proof, that is, the building blocks of our discourse. Aristotle's main concern, contrary to that of Cicero and Quintilian a few centuries later, is to construct solid and convincing reasoning. The proof Aristotle speaks of can essentially be of two types: *technical* and *non-technical*. Non-technical proof is not derived from our reasoning

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<sup>28</sup>See de Beaugrande and Dressler (1981a, b), p. 26.

<sup>29</sup>See de Beaugrande and Dressler (1981a, b), p. 26.

<sup>30</sup>Petőfi (2004) and van Dijk (1972) define this the 'dominant intention'.

and our speech, but comes in some manner from the extralinguistic universe. It is what in a modern courtroom trial we would call the evidence. For Aristotle, technical proof is much more important because unlike non-technical proof, it is not ready-to-use and must be processed first. It is, in fact, the fruit of reasoning, which can occur through induction or through deduction (as in dialectics). Falling within the category of *inventio* are also the so-called *topica*, i.e. the set of arguments (or, to be more precise, more or less abstract argumentative models) that are available for use in any discourse and which a good speaker must always be ready to retrieve at the appropriate time. A prime example is political oratory, in which the producer must often conceal the true purpose of his text. An idea is a conglomerate of conceptual contents that offers several control centres for the creative and sensible text production. The transfer of a design structure onto a idea is complicated to say the least; the degree of difficulty increases when it is not useful to talk openly about one's purpose.

The third phase is the development, whose function is to expand, develop and connect the ideas that have been selected. The development is a sort of search for the various arrangements of content stored in memory. The development oscillates between two extremes: recalling combinations without altering their contents and connecting contents in a new way to create original combinations.

Through expression, the fourth phase, the contents that have been gathered thus far are arranged and links between the various levels are organized so as to create an organized overall structure. If the contents have already been expressed in the past, we can speak of preferences in the choice of expression.

The search for proper expression can be seen as partially corresponding to the concept of *dispositio* of classical rhetoric. The so-called *dispositio* is the second part of rhetoric. Its function is to arrange material from the *inventio* in an effective manner within a discourse. There are various opinions regarding the *dispositio*. For example, according to Aristotle, only two parts of speech are important: the statement (which introduces the main idea) and the proof or *confirmatio* (where the idea is confirmed by the evidence). The statement is often called the narration (*narratio*). Barthes (1970), for example, associates the two; Aristotle, however, observes that it is only the forensic speech which requires a regular narrative (*διήγησις*), a full and detailed statement of what has happened before. So, he prefers to speak of statement, since the statement of the case is necessary (otherwise, what is to be demonstrated?) while a discourse does not always include a narration of facts.<sup>31</sup> According to other authors, however, the statement is only a part (albeit the central part) of the narration. The *dispositio* was concerned with not only the parts of a speech, but also the order in which facts and arguments had to be arranged.<sup>32</sup>

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<sup>31</sup>«For narrative only belongs in a manner to forensic speech, but in epideictic or deliberative speech how is it possible that there should be narrative as it is defined, or a refutation?» (Aristotle, *Rhetoric* 1414, 3a–b), in the English translation by John Henry Freese, fellow of St. John's College, in the Loeb Classical Library (1947), book III, XIII.3, p. 425.

<sup>32</sup>The classical tradition required facts to follow the natural order, that is their true chronological order. Later, especially in the Middle Ages, however, this rule was often violated in order to create

The last phase is parsing. Expressions are arranged in the surface text and inserted into grammatical dependencies. It should be remembered that there is a certain asymmetry between the repertoire of conceptual relations and that of grammatical dependencies.<sup>33</sup> The process that produces the surface text expresses certain preferences (for example, the sequential arrangement of grammatically interdependent elements).

The *Introduction* warns scholars not to conceive of these phases as a linear sequence because it is conceivable that they affect each other simultaneously in an alternation of dominances. It is not to be excluded that there is a principle according to which, during production, the materials demonstrate specific organizational trends and impose them on the producer. In practice, the continuous production of texts generates interpenetration between the individual phases of text production.

According to the two authors, in principle there is no limit that induces us to consider the production of a text completed; instead, there is a threshold-term at which point the producer considers the product satisfactory in relation to its purpose. Similarly, the qualitative assessment of the recipient determines the amount of processing potential that the recipient is willing to employ. But we cannot speak of an absolute conclusion in the reception of a text either, and we must speak again of a threshold-term at which point the recipient considers his understanding of the processed material satisfactory.

Two other possibilities should not be excluded: first, another individual can change the surface text, possibly even improving it; second, another individual can parse a text even more deeply than the recipient to whom the text was addressed.<sup>34</sup> The Tartu school of semiotics and the semiology of Roland Barthes argue that a literary text is inherently polysemic. From the perspective of the procedural approach, these prescriptions should be applicable to any type of text without ruling out a priori their belonging to one literary genre or another.

If the final product becomes the documentation of the decisions made within processes of selection and combination, the surface text becomes significant due to

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(Footnote 32 continued)

specific narrative effects (analepsis, prolepsis, etc.). In these cases, we are dealing with an artificial order. As for the arguments, however, classical tradition mentions three different methods: (1) ascending order: from weak to strong arguments; the advantage is that the last arguments used are more easily remembered; (2) descending order: from strong to weak arguments; the advantage is the strength of the first argument's impact; (3) Nestorian or Homeric order: the strongest arguments are placed at the beginning and at the end (so named because in the *Iliad* Δ, Nestor places less reliable troops at the centre of his formation).

<sup>33</sup>It has been observed by Indo-Europeanists that modern European languages such as German, English and Spanish have a far less extensive repertoire of grammatical dependencies than Finnish, Hungarian or Caucasian languages, which are equipped with many grammatical cases capable of indicating conceptual relations. Hjelmslev (1935) has already reflected on the correspondence between semantic relations and grammatical cases, assigning a kind of supremacy to the Finno-Ugric languages.

<sup>34</sup>See de Beaugrande and Dressler (1981a, b), pp. 29–30.

the existence of other versions that exist virtually and might have appeared if they had been chosen. The different ways in which different subjects can receive the same text must also be examined.

## *Communicative Functions*

The procedural approach considers a text as a system made up of a vast set of functions. Whereas a language is the virtual system of available choices that can be made but which have not yet been selected, the text is a specific organization that has already been realized: an actualized relationship between elements in which certain possible selections have been made and implemented. «This utilization is carried out via procedures of actualization» (de Beaugrande and Dressler 1981a, b, p. 25).<sup>35</sup> Consequently, the text is defined as a «cybernetic system which continually regulates the functions of its constituent occurrences» (de Beaugrande and Dressler 1981a, b, p. 25).

During a communicative interaction, the participants possess knowledge systems concerning the language and the content of their messages and intentions; when these knowledge systems diverge, the stability of the textual system is disturbed. It must therefore be re-composed thanks to an integration that regulates the divergent case. If insoluble discrepancies persist, use of the text is blocked; but under standard conditions participants in communication tend to safeguard the stability of the system, maintaining a continuity between meaningful occurrences and relevant context. The participants in a conversation are more likely to infer that there is unspoken content than to abandon the idea that the speech is coherent and contains information.

Although they have several options to identify relations between the elements of the text, some are more satisfactory or more likely than others. To the extent that knowledge is distributed by a community in a preferential order, the outcome of text processing will be similar for almost all the community's members. The individuals in question will be induced to pay more and more attention to their common preferences.

According to the *Introduction*, the awareness that preferential knowledge exists certainly does not require the members of a community to comply with it; indeed, the opposite occurs: a text that conforms fully to established knowledge will provide zero information. All that is known fully—or in cybernetic terms, is totally stable—is devoid of interest for the human mind.

A language that transmits contents that are already known is easy to produce and receive because the sender and the recipient are moving along a routine path. For

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<sup>35</sup>In this passage, the concept of 'execution' expressed by de Beaugrande would be an actualization of competence during execution; there is thus a huge difference between this idea and the analogous concept of 'performance' utilized by Chomsky.

this reason, however, the contents of this language are not incisive and end up being boring. On the contrary, a creative language whose content is unusual and which is expressed from unique perspectives has a significant influence and a bewitching charm; it also proves enormously difficult to process. It offers the recipient a challenge and the pleasure of interpretation.

A good speaker or a proficient writer gives the impression that he produces texts in a totally relaxed manner; the suspicion does arise though that the limited time required for the expression of these texts, written or verbal, may be counterbalanced by a proportionately much longer period of preparation. In all likelihood, these individuals invest a great deal of consciousness in order to obtain such results. This may explain why an individual with experience in textual production can correct other people's texts without having participated in their thought processes. The producer of a text may often find it more difficult to correct himself since he is already familiar with the concepts in question and is thus unable to detect inefficient expressions or, even worse, errors.

### ***Regulative Principles***

In the procedural approach, a text can be recognized due to the fact that it is realized on the basis of three regulative principles—efficiency, effectiveness and appropriateness—that determine certain pragmatic characteristics. If a text is to be regarded as a tool, it is obvious that it can be used with greater or lesser skill. A cleverly constructed text will prove to be functional, that is, it will allow the person who produced it to reach his goals; these goals, however, can be reached with greater or lesser degrees of efficiency, effectiveness, and appropriateness.<sup>36</sup>

A text is efficient if it is able to achieve in an economical manner the goals for which it was realized, that is to say in a manner that requires the recipient to make the least interpretative effort possible. An efficient text will consist of a well-known code, will have features of linguistic explicitness, will be full of elements that contribute to its linguistic and thematic unity, and will not introduce too much new information.

An effective text is one that completes its task forcefully and energetically. For example, an informative text may ensure its effectiveness through graphical devices and structural or expressive elements and content (e.g. the use of special characters or the use of a transgressive style) that make it especially easy to remember the information it conveys. Normally, very effective texts tend to be inefficient; vice versa, efficient texts are not very effective. This is not surprising because the effectiveness and efficiency of a text are functions of its predictability. It is easy to understand that documents that do not require inferences to be made or a large amount of information to be accessed are relatively predictable for the recipient and

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<sup>36</sup>See de Beaugrande and Dressler (1981a, b), p. 11.

for this reason they are efficient; on the contrary, those which have the opposite characteristics are effective. Appropriateness, finally, is the characteristic of texts whose general approach is appropriate to the content that they aim to convey.

In the *Introduction*, the two researchers warn scholars that these elements have not yet been thoroughly investigated in the scientific literature because the complexity of the operations surpasses the descriptive ability of the models developed heretofore. Despite the great quantity of operations possible, the number of types of operation that deserve to be investigated is, according to them, relatively limited. These operations direct the content of the communications in a way that can be compared to the rules of grammar and logic; moreover, by reflecting on the average level of abstract knowledge of grammar possessed by native speakers of their mother tongue, it could be argued that in everyday texts, criteria of textuality count more than grammatical rules.

Before directly analysing a specific case in the next chapter, we must illustrate the criteria by which textuality is identified in the model of Dressler and de Beaugrande. In fact, most of their *Introduction* is devoted to the discussion of the criteria that fully determine the properties that, in a scientifically fixed definition, the ‘text’ object must possess.

## The Concept of Textuality in the Procedural Approach: Seven Criteria

### *Cohesion*

The first criterion is cohesion.<sup>37</sup> The authors use this term (from the Latin verb *cohaerere* = to be joined, attached) to indicate the function of syntax, which is to impose an organizational model on the surface text in the context of the communication. In their view, syntax manifests a lesser number of classes and structures than that of conceptual relationships; this is seen by the observation that individuals retain the surface structures of a text in “working memory”, but store the conceptual content in long-term memory.<sup>38</sup>

The two authors find full correspondence between syntactic functions and cognitive factors. The principal units of syntax are highly distinct models of dependencies: the phrase, the clause, the sentence. These tools contribute to stability. Recurrence is defined as the repetition of these elements and patterns. Cohesion is more evident within a phrase, a clause, or a sentence than in two or more such units. However, they believe that it is not easy to explain how these units become structured when used in language.

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<sup>37</sup>See de Beaugrande and Dressler 1981a, b, pp. 32–53.

<sup>38</sup>For support they indicate Wright (1968).

Cohesion is achieved through various means: in units such as phrases, clauses, and statements, cohesion is ensured by the inclusion of various elements in the grammatical dependencies; in longer texts, however, the main operation is the enumeration of elements and models already in use, which can be reused, modified, or combined together.

The first mechanism is that of repetition.<sup>39</sup> The direct repetition of elements is called recurrence, because the original item appears again—it reoccurs. Recurrence takes place at different levels, but of particular interest is lexical recurrence, that is, the repetition of words or expressions. Recurrence is mainly used to reinforce one's opinion, but it can also be used to deny. Partial recurrence entails using the same basic word components but shifting them to a different word class. Recurrence has the disadvantage of reducing the level of information transmitted. For this reason certain techniques such as parallelism are used, which involve the repetition of structures. This also occurs in the case of paraphrase or synonymy. Repetition also concerns the use of pro-forms, which do not always co-refer to elements of the same grammatical class (e.g. a pronoun with a noun). These correspondences are preferences that re-use grammatical frameworks that have already been parsed. The primary motivation for using pro-forms, in general, is efficiency. There is a point where a trade-off is established between compactness and clarity. Pro-forms save processing effort because they are shorter than the expressions they replace. However, if those expressions are difficult to find, the savings are lost again on search operations.

Another cohesive device is ellipsis.<sup>40</sup> It is defined as a perceptible discontinuity in the surface text that is detected when the text is processed. In general, ellipses are based on the partial commonality of certain structural components. The typical case is that of the anaphoric ellipsis. The ellipsis of the subject or other unnecessary elements indicates how complex the interaction between cognition and syntactic conventions is. The procedural approach attempts to clarify why ellipses are more present in certain conditions. If the function of syntax is to produce a surface structure that determines which hypotheses can be formulated in regard to the organization of the underlying concepts and relationships of a text, then an underdeveloped syntax would constitute a substantial processing strain. Both the use of pro-forms and ellipses are based on a trade-off between compactness and clarity. The use of texts without ellipses is more time-consuming, but it can be noted that very large ellipses require very intense research.

Another expedient of cohesion is junction, which makes it easier to identify relationships among events and situations. The authors believe that there are at least four basic types of junction: conjunction, disjunction, contrajunction, and subordination.<sup>41</sup> Junction is very intricate. The use of junction is required infrequently given that speakers can recognize certain relationships by referring to their general

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<sup>39</sup>Repetition had already been studied by Weinrich (1972) and van Dijk (1972).

<sup>40</sup>It had been analysed by Dressler (1970) and Halliday and Hasan (1976).

<sup>41</sup>In particular, Lakoff (1971), Halliday and Hasan (1976), van Dijk (1977).

knowledge. Through the use of junctions, the producer of a text influences the way the recipient rebuilds the relations. In this perspective, junctions underline the fact that the participants in a communication are involved in an interactive communication. The various types of junction may appear simple, but they are only apparently simple; in fact, it is significant that in *impromptu* speech they are omitted.

Thanks to the computer and via the so-called transition network it is possible to construct a representation using the concept of nodes linked by connecting branches. In a transition network, structures of phrases and clauses are used as means to construct (and then verify) hypotheses regarding the reliability of various elements. These networks contain the users' expectations and strategies, and express grammatical rules in the form of procedures for the use of the rules.

These operations can also be examined in another perspective. The processor of the text could put each occurrence on a waiting list of partial results until the macro-status was completed, and then could sort the various results into a grammatical dependency network. In this way a network within each single phrase would be constructed.

Repeating this procedure for all the phrases, the sentence is not parsed as a linear sequence, but rather as a labelled transition network: the nodes represent the grammatical states and the branches represent grammatical dependencies. The role of such a network would be to organize the surface structure according to the most direct access, so that the linear text could be read off it during production, or traced back to it during reception.

## Coherence

The authors' second criterion is coherence.<sup>42</sup> They mean the ability that a linguistic expression has to transmit knowledge (any possible meaning, thus a virtual ability). The two linguists define actual meaning or sense as the knowledge actually transmitted in a text. A text makes sense because there is a certain continuity in the knowledge activated by the expressions used. This sense of continuity is the foundation of coherence and it represents mutual accessibility within a combination of concepts and relationships.

The two scholars are surprised by the fact that in traditional debates the meaning of individual expressions or the content of isolated concepts is the centre of so much controversy. They explain that in the procedural approach, virtual meaning (= meaning) and the actual meaning (= sense) are procedures used to apply one's knowledge to a wide range of tasks and activities deriving from texts. They also insist on the consideration that in the textual world, both expressions and contents appear fairly stable and delimited.

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<sup>42</sup>See de Beaugrande and Dressler 1981a, b, pp. 53–72.



The authors thus propose that instead of deconstructing meanings and concepts, we should examine the attribution of conceptual meaning to linguistic expressions. Indeed, the construction of textual worlds is well-documented in human communication. The two authors empirically attempt to progressively decrease the instability of concepts, providing as much precise information about communicative situations as possible. In this framework, they define the content of a concept as an ordered set of hypotheses regarding the access of cognitive elements within a current pattern.

According to the procedural approach, meaning—as a property of language—is only a special case of acquisition of knowledge. During the processing of texts, surface expressions are taken as cues to activate the combination of concepts and relations. The knowledge on which the use of texts is based should be formalized in global models that are to be re-utilized according to each specific representation. These global models may appear in different forms depending on the processing needs of the moment.<sup>43</sup> The recipients then verify their hypotheses about the main subject and the organization of the textual world.

They believe that some types of global patterns are probably stored as integral “chunks” because they are used so frequently. “Frames” are global patterns that contain common-sense knowledge about certain basic concepts. These frames indicate, in general terms, what the connections are but not the order in which the related concepts must be expressed. In addition to frames, “schemas” need to be identified, that is, global patterns of events and states in ordered sequences. “Plans” are global patterns of events and states that refer to an intended goal. Finally, “scripts” are stabilized plans called up to define the roles of participants and their expected actions.

According to Dressler and de Beaugrande, during text production and reception all the global models regarding the development of the arguments, the sequence of events, and the characters in the various situations ineluctably become important. Coherence is the result of the concepts and relationships that are unified in a network, whose core is made up of main topics and knowledge spaces. The concepts function as steps for building a continuity of sense and the extent of processing will vary according to the task. The points that are strategically important for processing are called control centres, which correspond to the primary concepts and sub-concepts.

According to their model, the textual world is organized through a comparison of beliefs about the real world and a person’s own knowledge. In this way, linguistic expressions activate knowledge and text users define a textual world that does not appear correspondent to standard knowledge as “fictional”.

In addition to the connections, the authors define the state of the links that are made by different operators, which include:

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<sup>43</sup>Global models are treated in a plethora of studies; among others, see Petőfi (1976), Schank and Abelson (1977), van Dijk and Kintsch (1978) and Allen (1979).

determinateness operator ( $\delta$ )

typicalness operator ( $\tau$ )

proximity operator ( $\pi$ )

projection operator ( $\rho$ ).

The processes of activation and realization of inferences are mechanisms that expand, develop, and integrate the content of a text. Inferences are established to deal with discontinuities. Activation is expanded when certain points of a stored model are stimulated.

Text linguistics (see chap. 1, p. 24) was concerned with cohesion and coherence even before the advent of the procedural approach. In fact, the cohesion of a surface text and the coherence of textual worlds, even though they are the most obvious criteria of textuality because they contribute to the production of the meaning of the text, are not in themselves sufficient to discriminate between a text and a non-text. This stems from the observation that in human communication, even structures that are not entirely cohesive and coherent can function as texts. Therefore, the *Introduction* indicates five other criteria of textuality.

### ***Intentionality and Acceptability***

Intentionality and acceptability, rather than two separate policies, seem more like a separated pair of the same property, part of which is oriented to the issuer of a text and another to the recipient. As a criterion of textuality, intentionality is the counterpart of acceptability. The first regards the issuer and demonstrates that his product is intended to be cohesive and coherent; the second, however, regards the receiver in that he must accept the text produced by the issuer as a cohesive and coherent construct.<sup>44</sup>

In order to participate in a communicative interaction, a linguistic structure must be validated, that is recognized and accepted by issuer and receiver. Therefore, the attitude of text users must also be taken into account by the criteria of textuality. Attitudes relate to the tolerance towards any disturbances in cohesion or coherence that do not undermine the purpose of the communication. The attitudes of those who produce a text are indicated by the authors as intention, while the attitudes of those who receive the text are indicated, correspondingly, as acceptability.

Intentionality may be considered in both a narrow and in a wider sense. Strictly speaking, the issuer always considers his text product as cohesive and coherent; however, limitations of time and processing resources do not always allow the text to fully realize this intention in the presentation phase. The mutual dependence between cohesion and coherence and communicative intention sometimes produces

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<sup>44</sup>On intentionality and acceptability see de Beaugrande and Dressler (1981a, b), pp. 72–86.

somewhat complex situations. For example, the issuer may lapse into faults in coherence because he wishes to conceal some of his knowledge or actions (we could think of a police interrogation in which inconsistencies are used to evaluate the strength of an alibi).

Beyond this strict sense, intentionality also has a broader sense. It refers to the means the issuer uses to pursue and achieve his goals. From this point of view, the authors point out that studies relating to intentions have been conducted in several disciplines (sociology, psychology, philosophy and artificial intelligence research) and that linguistics has been particularly influenced by philosophy.<sup>45</sup>

The speech acts theory of Searle, developed following Austin's footsteps within the phenomenological current that we mentioned in Chap. 1, p. 30 made significant contributions to linguistic pragmatics. Among the most successful results of phenomenological studies are the so-called conversational maxims of Grice.<sup>46</sup> In the tradition of behaviourism, human language has been investigated as a reactive response to an external stimulus in the environment.

Both phenomenology and behaviourism have overlooked the human ability to envision alternative future states and to work toward a particularly desired one. This faculty, typically human, is to make plans. Of course men and women are not all-knowing or all-powerful and are influenced by the environment, but people also have a threshold of plan activation. This is the degree of awareness of the steps required to start developing a plan. When one of the steps looks uncertain, the planner has a problem. Hence, planning is an elaborated, comprehensive type of problem-solving applied to advancing the planner's own state toward a goal in an evolving situation. The action of producing texts is driven by a specific plan whenever the issuer intends to steer the situation to his own end.

In the procedural approach, communication is a case of active planning and participants submit texts as acts of speech.<sup>47</sup> For example, a plan might require inducing beliefs in participants if they are useful to achieving the goal. Such a project can be problematic if the belief collides with empirical evidence.

The correspondences between intentionality and acceptability are extremely complex. Under stress or time pressure, people often produce utterances which they might feel disinclined to accept under normal circumstances; conversely, they accept utterances from other people which they would be reluctant to produce. Some studies try to show that people may not be aware of their own speaking styles, or those of their social group.<sup>48</sup> And people may shift between styles of text production in order to obtain desired social roles in different social contexts, taking

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<sup>45</sup>See also Schank and Abelson (1977), Cohen (1978), Allen (1979).

<sup>46</sup>The maxims listed by Grice (1975) concern cooperation, quantity, quality, relevance and manner, and make it possible to monitor the logical implicatures in conversations.

<sup>47</sup>See Bruce and Newman (1978).

<sup>48</sup>See Blom and Gumperz (1972).

advantage of the different qualities of certain options. In view of all these considerations, the conclusion that language can scarcely be described or explained except in terms of texts in real settings again seems inescapable.

Like intentionality, acceptability also has a meaning in a narrow and in a broad sense. In a strict sense, acceptability presupposes a certain degree of tolerance for discontinuities or discrepancies, provided that the overall context can be perceived. Thanks to the progress made in research aimed at demonstrating that the set of all allowed utterances is a grammar, more and more scholars subscribe to the opinion that acceptability must be considered what is actually accepted in a human communication, while grammaticality is what is determined by abstract criterion.<sup>49</sup>

The two scholars, however, are uncertain about the correlation between the two concepts and assume that the crucial difference lies between the virtual system and the process of actualization. In fact, when there is adequate justification, actualization is necessary, even if it means bypassing the organization of the virtual system: this principle is the fundamental distinction between the subject of study in the Exact Sciences and in the Humanities.

According to scholars, the rigid application to a text of concepts derived from the exact sciences seems to remove the subject of investigation from its proper domain—that of an imperfect human artefact; a formal configuration ends up becoming a diagram, in the semiotic sense, but not an explanation. From this point of view, they find that logical and mathematical formalisms are inadequate tools and we can therefore understand the criticism that the authors make of the framework of Teun Adrianus van Dijk and of János Sándor Petőfi.

A certain prospect of validly linking the abstract and the concrete level might be offered by probabilistic considerations.<sup>50</sup> Grammar would thus consist of a series of vague instructions, among which is syntactic well-formedness. Communicative situations would however bring the communicating parties to recognize grammaticality. The concept would thus define a factor which, through interaction with others, constitutes acceptability. If the terms of the statements manage to evoke mental images, we are more likely to accept the statements themselves.

Beyond this strict sense, acceptability also has a broader sense. Acceptance is an action in its own right and entails entering into discourse interaction, with all attendant consequences. Refusing acceptance is conventionally accomplished by explicit signals. Participation in discourse would, as a default, be assumed to imply acceptance. If acceptance is denied, the textuality is compromised. It is also possible to block acceptance voluntarily by not maintaining coherence and thereby discouraging the interlocutor.

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<sup>49</sup>The gradual progress has been highlighted by the studies of McCawley (1972) and Lakoff (1973).

<sup>50</sup>The observations in Greenbaum (1973) are made in this direction.

## *Informativity*

The fifth criterion identified is informativity.<sup>51</sup> To illustrate this principle, the two authors begin with the now classical information theory of Claude Shannon and Warren Weaver.<sup>52</sup> It is based on statistical probability and argues that the value of information increases in proportion to the number of possible alternatives. In the view of the authors, it is fairly well agreed that this model of statistical probability is not applicable as such to natural language communication. To count up all the sequences of a language like English is out of the question. Even if it were not, the occurrence of most elements depends on factors other than the occurrence of the preceding element.<sup>53</sup> Nevertheless, according to de Beaugrande and Dressler the notion of probability cannot be eliminated from a textual theory and a model for the use of texts. Statistical probability should be replaced with contextual probability.

The procedural approach uses transition networks to represent cohesion and coherence, and these networks are based on contextual probability. In fact, what really matters are the classes of occurrences that are more or less likely to be linked to systematic combinations. The degree of probability would vary in the different systems. A sequence might be syntactically probable, but conceptually improbable. Contextual probability is a complex amalgam of factors because there is a progression of steadily more specialized expectations applying in various degrees during communication.<sup>54</sup>

The first source of the receiver's expectations comes from the real world. It is constituted, from the point of view of the receiver, by the social model that dominates the situation in which he lives and by its contours. In this world, certain propositions are held to be true; these are facts which a person or group considers to be generally applicable to some "real" or recoverable situation or event. As a whole, they form the system of beliefs. Some facts are so firmly entrenched in our manner of thinking that they act as defaults. Should any such facts be violated in a textual world, there must be explicit, unmistakable signals. Humans seem to apply consistent strategies of apperceiving and arranging the real world, and integrate their sensations into a model of the world via a highly skilled act of attention.<sup>55</sup> Whatever knowledge is acquired is continually used as a bridge to annex further knowledge. For instance, frames, schemas, plans, and scripts are used for matching, integrating, and controlling large amounts of current material.

The second source of expectations derives from the definitiveness of the language used in the text. In the principal modern European languages, many combinations derive from arbitrary conventions.

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<sup>51</sup>See de Beaugrande and Dressler (1981a, b), pp. 86–99.

<sup>52</sup>The theory is presented in Shannon and Weaver (1949).

<sup>53</sup>This is maintained by Sprung (1964).

<sup>54</sup>The whole discussion of these issues is based on Miller and Johnson-Laird (1976).

<sup>55</sup>See Miller and Johnson-Laird (1976).

A third source of expectations is the technical arrangement of the elements with respect to their informativity. For example, highly informative elements tend to appear toward the end of a clause and to receive a high key. It might be concluded that the first source of expectations about the real world and its facts would be independent of language altogether, whereas the second source (formal conventions) and the third (informativity signalling) would vary from one language to another. For the authors of the *Introduction* this issue is, however, in great dispute. The diversity of formal conventions among languages is uncontested; but there is little agreement about whether this diversity also impels the users of language to organize the world in different ways.

The fourth source of expectations is text type. Text types are global frameworks controlling the range of options likely to be utilized and affect the use of phonetic, syntactic and informative modules.

The fifth and final source of expectations is the immediate context where the text occurs and is utilized. If, as we claim, actualization can override the conventional organization of virtual systems, this source might modify the expectations drawn from the other four sources.

Some receivers can expect some sorts of occurrences to be more dominant and frequent than others; this corresponds to the notion of style. Informativity can be increased on occasion by breaking out of one's own established style. Style is of particular importance in literary or poetic texts, with the result that producers must expend considerable care and attention upon selection procedures and the receiver expects a higher than normal focus to be placed on it; in fact, the choices and production options vary more in poetic texts than in the standard organization of the language. As a yardstick to evaluate the novelty of the contents of a text, informativity plays a key role in choosing and arranging the various options within a text.

The *Introduction* proposes a scale consisting of three orders of informativity: first-order or upper degree, second-order or lower degree and third-order or apparently outside the set altogether. The first order corresponds to a rather trivial level informativity in that it contains elements that are well integrated into the system. The first order could be considered the standard case, that is, where selections are obvious in the absence of contrary indicators. When defaults or preferences are overridden, i.e., when occurrences are below the upper range of probability, we obtain second-order informativity. To get to the second degree, that of greater informativity, a mechanism of upgrading-downgrading can be used. Third-order informativity, composed of occurrences that are outside the set of more or less likely options, is comparatively infrequent; on the other hand, it is more interesting, because the text receiver must do a motivation search—a special case of problem-solving to find out what these occurrences signify and how they can be integrated back into the continuity of the context. A successful search will show that the occurrence in question was within the range of options after all, though accessible only via some mediation. Accordingly, the third-order occurrence will be downgraded to the second order and will thus become new knowledge. The same mechanism also applies to upgrading and it should be noted that it may be applicable to human relationships in general.

The presence of at least some second-order occurrences would be the normal standard for textual communication, since texts purely on the first order would be difficult to construct and extremely uninteresting. Through upgrading and downgrading, first- and third-order occurrences are transformed into second-order occurrences within a system constantly seeking to maintain the continuity of sense. In addition, a producer can design a text so that interest is kept at a high level through expectations and thus satisfy his intention. Informativity is of primary importance in providing a logical explanation of why certain options are used in any given context.

### *Situationality*

The sixth criterion of textuality that the scholars have identified refers to the communicative situation and is called situationality.<sup>56</sup> It refers to the factors which make a text relevant in a communicative situation. Usually, the effects of a situation are perceived through a form of mediation and are proportionate to how much a participant's own beliefs and goals are used in the communicative interaction.

There are significant correlations between texts, speech actions and communicative situations which do not constitute simple reactions to the perceptible evidence within a communicative situation. The standard case, however, is that in which the content of a text is distant from the evidence of empirical reality, due to the mediation based on the opinion, the beliefs and the purpose of the issuer. The acceptability of a text is more dependent on the credibility and the relevance the participants in the communication assign to attitude than the correctness of the references to reality. Speech actions can be considered as realizations of general strategies aimed at monitoring and managing the different types of situation in which people interact.

When, during discourse, texts are used that can steer communicative interaction in the direction of the aims of the participants, we are dealing with situation managing. The use of monitoring is typical of situations that do not reflect the expectations of the issuer, who, for his part, aims to overcome the discontinuity or to strengthen his expectations. On the other hand, managing calls into question higher purposes that require considerable mediation. The boundary between situation monitoring and managing is not clearly marked and varies according to the assessments of the individual participants. It seems that speakers are somewhat complacent when they disguise managing as forms of monitoring in order to give the impression that the situation is evolving spontaneously towards the desired goal.

From the theoretical point of view, the authors envisage a distinction between monitoring and managing in terms of dominances. A variant of monitoring could be

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<sup>56</sup>See de Beaugrande and Dressler (1981a, b), pp. 99–110.

the case in which texts are reactions to external inputs. To describe a material object in the form of the text is a case where normal classification strategies are used. At times these are disturbed by the presence of objects or events that the speaker considers highly unlikely. A fundamental case of improbability occurs because of an imbalance in frequency. If someone repeats something more frequently than normal, monitoring will be called into play; this can also occur in attempts to explain and thereby downgrade a surprisingly high frequency of repetitions. Monitoring can be a sign of lack of continuity and require downgrading when the actions do not appear sufficiently motivated. The monitoring of a communicative situation within the terms described is similar to problem-solving. The issuer of a text takes an object or an event and treats it as the main topic of his text.

There are two possible outcomes: either the receiver realizes this and does not express any reaction, or else he finds a way to downgrade it without making it seem a betrayal of expectations. By integrating the event, the problem becomes more apparent but arouses the willingness of participants to reaffirm their own criteria and to seek confirmation in the criteria of others. When they seem to be unsuccessful, expectations are reinforced in a contingent situation.<sup>57</sup> However, departures from the evidence of the situation are allowed in some text types, especially in dramatic texts.<sup>58</sup> As a subclass of literary texts, they have a different organization from standard objects and events and require the user to mediate intensively.

Situation monitoring may encourage the use of pro-forms instead of abstract and conceptual definitions to describe objects and events. For example, when

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<sup>57</sup>Edmondson (1980) considers such a process similar to negotiations. When several participants have different views on what is happening or is going in front of them, it is likely that the situation will be subjected to monitoring.

<sup>58</sup>The following is an exemplificative case in Plato: «**SOCRATES**: Of course! So that, in Epicharmus's phrase, "what two men spake erewhile" I may prove I can manage single-handed. And indeed it looks as though it must of sheer necessity be so. Still, if we are to do this, for my part I think we ought all to vie with each other in attempting a knowledge of what is true and what false, in the matter of our argument; for it is a benefit to all alike that it be revealed. Now I am going to pursue the argument as my view of it may suggest; but if any of you think the admission I am making to myself are not the truth, you must seize upon them and refute me. For I assure you I myself do not say what I say as knowing it, but as joining in the search with you; so that if anyone who disputes my statements is found to be on the right track, I shall be the first to agree with him. This, however, I say on the assumption that you think the argument should be carried through to a conclusion; but if you would rather it were not, let us have done with it now and go our ways. **GORGAS**: Well, my opinion is, Socrates, that we ought not to go away yet, but that you should go through with the argument; and I fancy the rest of them think the same. For I myself, in fact, desire to hear you going through the remainder by yourself. **SOCRATES**: Why, to be sure, Gorgias, I myself should have liked to continue discussing with Callicles here until I had paid him an Amphion's speech in return for his of Zetus. But since you, Callicles, are unwilling to join me in finishing off the argument, you must at any rate pull me up, as you listen, if it seems to you that my statements are wrong. And if you refute me, I shall not be vexed with you as you were with me; you will only be recorded in my mind as my greatest benefactor. **CALLICLES**: Proceed, good sir, by yourself, and finish it off» [Plato, *Gorgias* 505 e–506 c, with the English translation by Walter R.M. Lamb, M.A. sometime fellow of Trinity College, Cambridge, in the Loeb Classical Library (1946), volume 5, pp. 462–465].



monitoring occurs that is completely divergent from the situation or the events themselves, managing will entail. Situation managing can be profitably explored in terms of plan theory. Stabilized plans are developed only for situations whose managing is routinely demanded in a given society. In other situations, participants must adapt to a range of variable factors and protect their goals as best they can. They can scan texts from other participants to recognize the latter's goals; or they can simply postulate default goals by assuming that most other people will have the same desires as they do themselves. If resources are too limited for fulfilling every participant's goals, conflict can be expected to result. Conflicting goals lead to conflicts in how the same event or situation is monitored.

Monitoring must incorporate a set of methods to obtain the approval of others and favour their cooperation. It is called goal negotiation.<sup>59</sup> This negotiation occurs because many goals are not obtainable through the actions of one agent. You can simply ask someone to do or say something, or invoke a speech act or a piece of information about something; you might inform the person of reason why they should be co-operative or invoke that reason; you could bargain to do them a favour in return, or you could bargain to give them some object they would desire. If all these discourse actions fail, you could threaten people, overpower them, or steal what you want. When a planner moves down this list toward steadily more extreme actions, we can use the term planbox escalation. Planbox escalation entails a trade-off.

The individual creates a plan in which there is a balance between efficiency, effectiveness and appropriateness. Asking, invoking, and informing are easy and demand no expenditure except of the processing resources needed to produce the text. Bargaining commits you to an expenditure of material resources, but it provides a greater incentive in many cases (the authors point out that close friends might be offended by the suggestion that you won't help out without reward). Threatening, overpowering, and stealing commit you to an expenditure of physical resources, but they suppress further negotiation; their real disadvantage is that they render the goal unstable, because people will often try to avenge themselves or recover their property. Most societies have institutional measures for discouraging the extreme planboxes of overpowering and stealing. Threatening is easier to carry out and conceal, but also highly problematic. If threatened people don't believe in your ability to carry out the threat, it matters little whether you can or not: your goal will not be reached. Planbox escalation is therefore a normal response to continued failure.

## *Intertextuality*

According to the authors of the *Introduction*, the last criterion of textuality is intertextuality.<sup>60</sup> It means that there are interdependencies between the production

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<sup>59</sup>Schank and Abelson (1977) take into account the goal negotiation.

<sup>60</sup>See Chap. IX (de Beaugrande and Dressler 1981a, b, pp. 110–127).

and reception of a given text, depending upon the participants' knowledge of other texts. Through mediation this knowledge is applied proportionally to the expanse of time and to the processing activity between the use of current text and the use of prior texts. Generally, mediation occurs at different degrees: a deeper mediation is found when people develop and use text types, namely classes of texts expected to have certain characteristics for specific purposes. On the contrary, a smaller mediation is found when people refer to well-known texts, quoting or alluding to other texts, as it happens for literary works or famous speeches. A standard case of mediation is found in ordinary conversation, when people report, summarize, or just reply to other texts. Here, mediation is extremely slight.

Linguistic typology deals with systemization and classification of different text types. In the past, linguistic studies have compared typologically utterances coming from different modern European languages. This typology applies to virtual systems, i.e. the potential structures of languages. A text typology has to deal with actual systems in which selections and decisions are to be made. Many actualised instances do not illustrate the exact characteristics of an ideal type, neither according to their completeness, nor according to their accuracy. Expectations and demands related to a text type can be modified by the requirements of the communicative situation when text exchanging can occur; if this is the case, between actual occurrences and ideal linguistic types there are immanent discrepancies. In order to establish a textual typology, linguistic typology faces another challenge: to take into account text types *per se*.

According to Dressler and de Beaugrande, a text typology has to be correlated with typologies of discourse actions and situations. Unless the appropriateness of a text type to its setting of occurrence is judged, the participants cannot determine the means and extent of upholding the criteria of textuality. For example, the demands for cohesion and coherence are less strict in conversation, while they are elaborately upheld in scientific texts. In poetic texts, cohesion can be organized according to unconventional principles. Some text types can be defined considering their contributions to human interactions, thus might also recognize some dominances.

From their point of view, the authors affirm that knowledge spaces may be enriched. There are different kinds of enrichment: descriptive texts, whose control centres could be objects or situations, would enrich knowledge spaces proposing a frequency of conceptual relations for attributes, states, instances and specifications. Narrative texts, whose control centres could be actions and events, would enrich knowledge spaces proposing a frequency of conceptual relations such as cause, reason, facilitation and time proximity. Argumentative texts, whose control centres could be the acceptance of certain beliefs (as true vs. false), or the evaluation of certain ideas (as positive vs. negative), would enrich knowledge spaces proposing a frequency of conceptual relations such as reason, significance, volition, value and opposition. Although the descriptive, narrative and argumentative functions are theoretically separated, in actual texts they may be found at the same time; therefore, many texts often develop into a mixture of these functions.

Without doubt the argumentative function is dominant. It is not only the surface text to cause the assignment of a text to a text type, but its function in human

communication. Literary texts also contain these functions. ‘Literariness’ is a characteristic recognized in a text where “text-world” stands in a principled relationship of alternativity compared to the shared version of the “real world”. The socially accepted model of the “real world” often contains some discrepancies with regard to text-worlds of literary texts. Through the comprehension of such discrepancies in literary texts, we sharpen our awareness of the organization of the “real world”, which is not an objective datum. On the contrary, it is the result of the growing of social cognition, interaction and negotiation. What motivates insights into such an organization is alternativity. When ‘literariness’ is recognized as a property of the whole class of literary texts, poetic texts become a definite subclass. Taking into account the alternativity as a criterion, poetic texts show the highest level of alternativity; on the contrary, scientific texts alternativity show a standard level; moreover, didactic texts show the lowest level. In fact, according to the poetic function, the first class of text is intended to motivate insights into the organization of expression as negotiable; the second class serves to clarify knowledge referring to a special domain of facts; the third class requires the presentation of solid background knowledge, in order to disseminate widespread knowledge.

The question of text types goes beyond conventional linguistic methods and melts into the conditions of text usages in communication. A text type is a set of strategies in order to produce, predict and process textual occurrences, and so it acts as a main determiner of efficiency, effectiveness and appropriateness. However, it can hardly take into account the task to provide absolute boundaries between members and non-members of a class.

Another issue concerning intertextuality is that of text allusion, i.e. the ways people refer to previously known texts. Although a text producer can refer to any previous text from a theoretic point of view, in practice he uses only well-known texts, in order to facilitate accessibility to the receiver. Between the time of the production of the first text (the original one) and the time of the production of the following text (the genesis of the actual text) there might be a considerable distance.

It is in conversation that occurs the least mediation concerning intertextuality. During a conversation, intentionality and situationality regulate its organization, although both of them cannot offer a full account. In the same conversation, a text cannot just be relevant to producers’ intentions and to the circumstance, but it would be relevant to other previously used texts and in order to generate the subsequent ones. «Topics must be selected, developed and shifted» (de Beaugrande and Dressler 1981a, b, p. 114). An ordinary conversation may have one or different topics; generally, a single topic is prevalent only in a limited period of time. In order to individuate a topic of a conversation, you should investigate the density of concepts and relations within several textual worlds presented in the texts, that compound the whole conversation and are connected to each other. A single text has topics potentially susceptible to further developments. To decide what to say about a topic, participants in a conversation take in account the informativity of potential contributions. Usually the most problematic and variable aspects of a topic to be developed are those not yet established, because they are still subject to changes.

During a conversation, either participants may violate some social conventions or shared principles, or their intentions and beliefs may appear to be discrepant or unmotivated. If this is the case, a participant may resort to monitoring, which can be addressed to the style of the presentation and indirectly to the ability of the issuer; moreover, a participant's state may be monitored as inadequate for the discourse. The state of a participant may also become the object of monitoring, based on the evidence of his/her texts. During a conversation, the emergence of a problem will cause participants to monitor the behaviour, the manner of speaking, the state, the intention and the knowledge possessed by other participants. If a participant in a conversation makes some unpredicted object or event into a text topic, he integrates it into the "commonly shared real world". The unexpected elements arise in the external setting of the discourse, when situation monitoring occurs. A text receiver can request to know the motivation behind the unexpected occurrence; as a consequence, both the producer and the receiver can interact in solving the divergence. When the conversation requires negotiating standards for belief and behaviour, other problems arise: the conversation coherence is not univocally recognized in its component texts. Typical human activities and viewpoints have to be distinguished from specific events and situations that participants want to talk about.

In such a way, the notion of 'text-world model' might well be expanded to that of a 'discourse-world model'. The so called 'discourse-world model' would be an integrated configuration of concepts and relations lying beneath all the texts that compound a discourse. In order to minimize conflicts among the different 'discourse-world models', the situation monitoring would help for possible disagreements.<sup>61</sup>

It is a matter of fact that people's implicit knowledge is difficult to observe and study, because it only emerges when it leads to some disturbance or discrepancy. Obviously, even though it is necessary for making sense, a vast amount of information goes unnoticed. A substantial amount of implicit knowledge could be brought to light through experiments; when people are required to recall the content of a text, there is a systematic pattern of additions, omissions and changes, which may follow rules that could be systematized because of their analogy with cognitive processes.

The third and final issue of intertextuality is extremely important and concerns the making of reports and summaries of texts that have been read. The reception process of a text is guided by the receiver's placement of that text within a schema. A balance is always set between prior knowledge and knowledge presented by the text. All conflicts between a schema and a presentation should always be resolved in favour of the schema; and schema-related materials should always be recalled better than others. Dressler and de Beaugrande underline that these are trends and are certainly not infallible.

There is evidently a gradation in which trace abstraction, construction and reconstruction all participate to some extent, and are the results of processes of

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<sup>61</sup>This proposal is also supported by Reichman (1978), Rubin (1978) and Webber (1978).

inferencing and spreading activation. These constructive or reconstructive processes act upon the content of the text, and expand, update, develop or complement it. The first process occurs in the case of specific discontinuities, while the second is deployed for activating one point in a knowledge pattern. The type of linkage followed, evidently corresponds to the topic material and the frames that apply.

Considering text as a cybernetic system in which processing is devoted to a maintenance of continuity of sense, relation and access among elements within a level or on different levels are the centres around which the criteria of textuality are fixed. In understanding and recalling the content of a text, a receiver assumes as main priority the maintenance of a continuous pattern. In order to accomplish this task, the human mind draws a paradigm. If the actual traces of the presentation appear to be discontinuous, the receiver always uses previously stored knowledge.

Under normal conditions, a receiver has no clear motivation to create an exact trace of the text content of a precise text. Firstly, he tries to maintain the continuity of sense; when it is not possible, if typical world knowledge matches quite well the content of text-presented knowledge, he can prove a partial trace of the text content (i.e. trace abstraction).

It should be determined whether the interaction between stored world-knowledge and text-presented knowledge follows systematic tendencies. On the one hand, it is believed that strategies and trends must be similar in order to ensure reliable communication between different individuals. On the other, it is almost impossible to make predictions because of the amplitude of variations; there are, indeed, results of various experimental tests demonstrating that receivers perceive interference between text-motivated and text-unmotivated inferences.<sup>62</sup>

Afore mentioned systematic tendencies could concern text-presented knowledge and patterns of previously stored knowledge: (1) text-presented knowledge is privileged in understanding and recall if it matches patterns of stored knowledge; (2) text-presented knowledge is privileged if it is attachable to the main entries of an applied global pattern, such as a frame, schema, plan or script; (3) text-presented knowledge is altered to produce a better match with patterns of stored knowledge; (4) distinct elements of text-presented knowledge become conflated or confused with each other if they are closely associated in stored knowledge; (5) text-presented knowledge decays and becomes unrecoverable if it is designated accidental or variable in world knowledge; (6) additions, modifications and changes performed via spreading activation or inferencing become indistinguishable from text-presented knowledge.<sup>63</sup>

In consideration of the above, one has to wonder how two people can understand each other, since the understanding of each depends on the knowledge already possessed by the other.

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<sup>62</sup>The main studies in support of this are Johnson (1977), Meyer (1977) and Rumelhart (1977).

<sup>63</sup>These systematic tendencies are fully explained in de Beaugrande and Dressler (1981a, b), pp. 123–124.

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