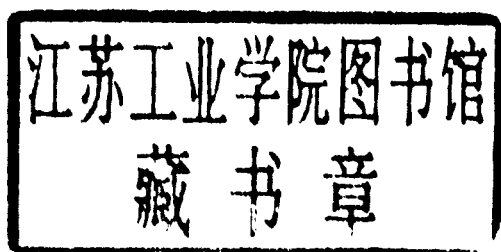# Subject-oriented Texts

Languages for Special Purposes and Text Theory

Edited by
Hartmut Schröder

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Acknowledgements

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> "Die Wissenschaften zerstören sich auf doppelte
> Weise selbst: durch die Breite, in die sie gehen,
> und durch die Tiefe, in die sie sich versenken".
>
> (Johann Wolfgang von Goethe)

0. *Introduction*

Since the sixties, the process of increasing specialisation and differentiation
into several disciplines and research fields in modern linguistics has gone hand
in hand with a tendency towards multidisciplinary research and integration.
Examples of this are the domain of discourse analysis and text linguistics as
well as modern LSP research (*Language for Special Purposes*), which are relatively
new autonomous branches of applied linguistics, and both involved in the
change of paradigm in linguistics in the early 1970s. At present, it seems that
both of these disciplines in their turn act again as a stimulus to the formation
of new research fields. And, at the same time, we can observe an increasing
influence of pragmalinguistic, psycholinguistic, sociolinguistic and, especially,
textlinguistic approaches upon the research of special texts; a phenomenon
that has, since the early 1980s, been expressed by new slogans such as
"Hinwendung zum Text" (taking into account the text level) and "Erwei-
terung des Blickwinkels" (broadening the perspective). As a result of this
new orientation of LSP research, we have recently been able to witness the
avoidance of the use of concepts like Fach*sprache* (*language* for special purposes)
and Fachsprachen*linguistik* (LSP *linguistics*), often substituted by such concepts
as Fach*kommunikation* (*communication* for special purposes) and *Fachkommunika-
tionsforschung* (*research in special communication*) or *Fachtextlinguistik* (*LSP text
linguistics*). As to the present state of the art in this new branch of linguistic
research, von Hahn, for instance, is, however, still very sceptical,

> "Über wenig Gebiete in der Fachsprachenforschung ist so viel formal Aufmunterndes (...)
> und gleichzeitig so wenig substantiell Inhaltliches geschrieben worden, wie über die fachliche
> Textstruktur. Andererseits ist die auffällige Strukturiertheit von Fachtexten auf mehreren
> Ebenen eine schon vorwissenschaftliche Einsicht." (1983, 119—120)

Nevertheless, a brief survey of current trends in LSP research reveals that some interesting results have been achieved in analysing special communication from a text-oriented point of view. However, it would be a misunderstanding to think that text linguistics plays the only and most important role in the new orientation of LSP research. The relationship between LSP research and text linguistics is multi-dimensional with considerable give and take on both sides. The present text-centred LSP research demonstrates that textlinguistic approaches have yet to adapt to specific purposes in analysing special texts. At the same time, I am convinced that text linguistics, too, can profit from the cooperation with LSP research.

I think that a real broadening of the perspective in LSP research means going beyond the framework of traditional text linguistics and towards semiotic textology.[1] As Petöfi states, it is necessary to develop a semiotic textology because neither text grammar, nor text linguistics, nor rhetoric, nor the theory of interpretation "is capable of investigating all of the (tightly interconnected) aspects of textuality, and none of them has been conceived so as to integrate the specific results of the particular branches of text-centred research. As to its integrative character, it is comparable to traditional philology, although their methods diverge." (1986, 545–46)

In this survey I am pointing out some developments in the discussion concerning the relationship between LSP research and text linguistics. Firstly, I look at the present state of LSP research. Then I give some comments on textlinguistic research and the text-centred approach of analysing special texts. In doing so I also intend to discuss the relationship between LSP research, text linguistics and pragmatics as well as other disciplines dealing with special communication. In the third chapter of my paper I outline the main concepts and paradigms in the analysis of LSP texts. In the fourth chapter, I report on the main research topics, trying to classify the present results of text-centred LSP research and to point out some trends and gaps in this research field. Because of lack of space, it is not possible to discuss and evaluate different approaches in the present text-centred LSP research; my main purpose here is to guide the reader into a new branch of applied linguistics.

The reason I am concentrating mainly on German literature is that text linguistics and LSP research — as I understand them — are branches of research of European origin par excellence and, therefore, bound to the traditions of philology in the German-speaking countries. The first monographs in this branch were published in 1900 in Germany. Also, the first international journal (*Fachsprache*) was founded in Austria (in 1979) containing mainly articles written in German; even after its renaming to *Special Language — Fachsprache*, the dominance of the German language can clearly be seen. Finally, the designation (***European Symposium on LSP***) and the venues

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[1] Cf. the report on research in *semiotic textology* by Petöfi 1986 and, furthermore, Petöfi 1987 and 1989.

(Vienna 1977, Bielefeld 1979, Copenhagen 1981, Bordeaux 1983, Leuven 1985, Vaasa 1987 and Budapest 1989) of the first international conferences on LSP research emphasize the European origin of this field of research.[2] Consequently Sager et al. in their book *English Special Languages*, which is the only large monograph published in English, have to admit that the German, Czech and Russian languages are "most fully explored, and those in which most studies of special languages have appeared" (1980, xxii). Refering to the literature that has appeared in English, Sager et al. write: "Nor is there a book in English dealing with the phenomenon of special languages as such, though there are three German publications of recent date which contain to varying degree elements of such a general theory."[3]

1.   Research on Languages for Special Purposes

1.1. The concept of Language for Special Purposes

The Longman's *Dictionary of Applied Linguistics* (1985) defines the concept of *languages for special* or *for specific purposes* as meaning "languages used for particular and restricted types of communication (...) and which contain lexical, grammatical, and other linguistic features which are different from ordinary language" (p. 159). Furthermore — according to the same dictionary — the concept *special languages* is defined as "a term used for the varieties of language used by specialists in writing about their subject matter, such as the language used in botany, law, nuclear physics or linguistics. The study of special languages includes the study of terminology (...) and register (...)" (p. 264).[4] The *register* is defined as a "speech variety used by a particular group of people, usually sharing the same occupation (...) or the same interests (...)" (p. 242).

At first glance over the subject field *special languages* one could be inclined to assume that LSP is the opposite of the so-called *common language* or the *language for general purposes (LGP)*. However, determining the relation between LSP and LGP is more complicated than that; this has constituted the focus of LSP research for many years (cf., for example, the joint publications of Petöfi, Podlech & Savigny 1975 and Mentrup 1978; and, furthermore, the research paper of Krischel-Heinzer 1987). As for the relationship between common and special language, I agree with Hoffmann (1987a, 298) that it is "practically impossible to demarcate the size of the so-called common vocabu-

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[2] Note that the next LSP symposium will be held in 1991 in Jerusalem.

[3] However, there are several monographs in English dealing with various aspects of learning and teaching English as LSP. Cf., for example, Beier (1980), Gerbert (1986), Robinson (1980), Trimble (1985), Swales (1985), Hutchinson & Waters (1987).

[4] Note Opitz' observation that "the concept of special purpose (...) is fused and confused with that of special language." (1980, 72). About the concept *register* cf. also Zwicky & Zwicky 1982.

lary, to give a complete list of its elements or to classify every word of a language as belonging or not belonging to it." This is why Hoffmann replaced the concept *common language* by "*total language* in the sense of the *language system* or *langue*," and introduced the concept of *sublanguages* meaning "subsystems of the total language system, actualized in the texts of specific spheres of communication" (298). In this way it is possible to understand common language or LGP simply as the "Language for the Specific Purpose of General Communication" (Strevens 1977, 146). Common language and special languages are both subsystems of our *total language system*. They use the same elements and structures of a certain language system. They use these elements and structures, however, in specific ways and with specific frequencies of occurrence, depending on the intention, purpose and the content of the text or discourse.[5]

Any language system includes an open-ended sequence of sublanguages. Most sublanguages are special languages, which belong to a definite subject field. Any special language "represents the totality of linguistic means used in a limited sphere of communication on a restricted subject in order to enable cognitive work to be done and mutual information to be conveyed by those acting in the said domain" (Hoffmann 1987a, 298).

Within this framework of so-called *horizontal disposition* (Hoffmann 1987a, 298), it is possible to differentiate languages for special purposes, depending on the subject field they belong to. This means that any subject field has its own special language, always taking into account the purpose and the content of a certain subject field. Because we can not estimate the number of various subject fields, the horizontal disposition of special languages "takes the shape of an open-ended sequence" (Hoffmann 1987a, 298).

According to Balboni (1986, 3), "from simple LSP to the most formal LSP there is a continuum." This means that most languages for special purposes "are characterized by a vertical stratification, i.e. they are used on different levels" (Hoffmann 1987a, 298—299; cf., furthermore, Hafner 1987). We can discuss the same subject matter from different points of view and on different levels. Criteria for these levels are, for example, the degree of abstraction and specification, orality vs. literality, the whole sphere of communication, the media and the purpose of the text (cf. also the article of Nordman 1985b on the concept of *minilects*).

But there is no "razor's edge" which could clearly distinguish common language from special languages and special languages from each other. Although there are some specific phonological, morpho-syntactic, lexical, textual, functional and extralinguistic features for each special language, they

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[5] Cf. about the concept of *sublanguage*, furthermore, the monograph of Naomi Sager et al. (1987; especially the definition on page 4), the reprint of Harris monograph from 1909 (1988; especially pages 33—56), the joint publication of Kittredge & Lehrberger (1982; especially the article of Moskovich), and the research paper of Krause (1988).

are "not enough to make a razor to cut the continuum" (Balboni 1986, 4). What we need to do is to consider the whole situational context and the function of language within the framework of communication. I will return to this question in connection with the discussion of special text types.

When considering the horizontal disposition and the vertical stratification of LSP we can say that special languages have little in common with *sociolects*, which are defined as sublanguages of social and/or professional groups "determined by the specific use they make of languages means" (Hoffmann 1987 a, 299). Special languages are always *functional languages* and belong to a certain subject field (cf. Otto 1981, 48). Sociolects, on the other hand, do not belong to a subject field but to a certain group. Special languages mainly strive for precision, clarity and economy of language means inside (and also partly outside) the communication of a certain subject field. Sociolects, however, aim at separation, and they use language means to exclude other people not belonging to the group. I agree with Gnutzmann (1980, 54) that the focus of special languages is in the subject field itself, whereas for sociolects the group is most important. On the basis of this distinction, Gnutzmann distinguishes, for example, the *special language of physics* from the *sublanguage of physicists* (= *sociolect*).[6]

In practice, however, it is difficult, and often even impossible, to make a razor to cut the continuum of LSP and sociolects. In order to avoid such difficulties by defining the concept LSP I will use this concept here only in a heuristic manner and dispense with a discussion of the definitions given by some linguists (cf. Drozd/Seibicke 1973, 81; Hoffmann 1976, 170; Möhn 1975, 175—176; Beier 1980, 13; Littmann 1980, 23—24 and 29—30). Following Möhn/Pelka (1984, 23) and von Hahn (1983, 64) I assume that a linguistic definition of the concept of LSP is indeed not possible; nevertheless, one can summarize the most important results of our current knowledge of the most important features of LSP. They are:

— LSPs are not defined as the opposite of common language; languages for special purposes are sublanguages belonging to a certain field of subject-oriented communication; they use the linguistic and other communication means of a certain language and culture system in a specific way and with a specific frequency of occurrence depending on the content, the purpose and the whole communication situation of a text or discourse.
— LSPs are differentiated through the horizontal disposition in an open-ended sequence of subject-oriented sublanguages, and through the vertical stratification in different levels of communication within the framework of one subject field.

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[6] Cf. about the concept of *sociolect*, furthermore, Möhn 1980, von Polenz 1981 and Steinig 1981.

— LSPs are functional languages whose main purpose is to make subject-oriented communication as effective as possible; they have nothing to do with sociolects.
— LSPs are variables in a historical perspective, too; thus we always have to relate the concept of LSP to a certain date/timing in the historical development of the respective subject field (Hornung 1983, 196).
— LSPs are neither only stylistic variants, nor only terminological subsystems (Hoffmann 1982a, 18). What we need to do is to consider all essential features of special texts in their entirety.
— LSPs include also the use of non-verbal features in textualisation. Thus, the concept of *special communication* (*Fachkommunikation* by von Hahn 1983) would be more precise than the concept of *Language for special purposes* (*Fachsprache*).

However, last but not least, one must ask, "How does special purpose in communication result in special language?" (the title of Opitz's article 1980). I agree with Opitz's answer that "it is not the language that is specialized, but the purpose to which it will be applied." This leads us to a further question, "What happens to language when communication focuses on a special purpose?" (Opitz 1980, 79), and, thus, to a text-oriented perspective of LSP research.

1.2. The place, object and aims of LSP research

According to Hoffmann (1987b, 653), LSP research "has been defined as a branch of applied linguistics (...), but is nevertheless linked with nearly all other branches" of linguistics. Furthermore, LSP research "is an interdisciplinary domain, which investigates the use made of language(s) in specialized spheres of social or professional activity, particularly in science, technology and production" (Hoffmann 1985, 9). Thus, the objects of LSP research are *sublanguages*, which are, as Hoffmann points out, "the object of sociolinguistics, too, but from another point of view, because languages for specific purposes are in sociolinguistics not primarily characterized by the whats and hows of communication, but by who communicates with whom" (Hoffmann 1987b, 654). The subject of LSP research includes the linguistic manifestations of special languages, i.e. various text types within a certain field of subject-oriented communication. The main purpose of LSP research is "to give an exact description of these texts, of their constituents on all relevant levels, of the network of relations between the constituents and of suprasegmental phenomena" (Hoffmann 1985, 9).

LSP research makes use of methods and research techniques from different disciplines and research traditions, but, according to Hoffmann (1984, 28), the following seven methodological currents are characteristic of LSP analysis and description:

(1) **Lexicological or terminological work** which is concentrated on the level of words, and deals especially with the subject-oriented meaning of special words, with the structure of terms and the defining of concepts.

(2) **Functional speech analysis** in the tradition of the *Prague School of Linguistics*, which "is concentrated on the different uses of all language elements and configurations in texts according to the various functions of the latter" (Hoffmann 1984, 30).

(3) **Functional stylistics** "as a relatively independent component of functional speech analysis", which "examines functional styles as complexes of stylistic features at various levels" (Hoffmann 1984, 31). This direction of LSP research is currently mostly represented by the *Moscow School* and their concept of *functional style*.

(4) The **study of the language of commerce** "as an unusual combination of subject-matter and language (...) which was carried out by some commercial colleges in the Netherlands, Switzerland, Germany and above all Czechoslovakia, mainly during the 1920s and 1930s" (Hoffmann 1984, 32).

(5) The **philosophical and the scientific view**, meaning the reflections of philosophers and researchers from the individual sciences on the cognitive and communicative function of the language they use in their fields (cf. the joint publications "Sprache und Wissenschaft" 1960, the monograph of Wagenschein 1986 and the article of Habermas 1981).

(6) The **improvement of scientific and technical translation** dealing with certain characteristics of special languages and with universals and problems in translation.

(7) The **theory of sublanguages** which "aims at a synthesis of all positive components of the foregoing approaches to LSP" (Hoffmann 1984, 34—35) and which is represented, for example, by Hoffmann & Piotrowski (1979).

The **present state of the art** is briefly summarised by Hoffmann as follows,

"LSP research has emancipated itself from one-sided views, either lexicological or stylistic, paradigmatic or functional. It strives for a synthesis of competence and performance, of language system and communication. The future path is already indicated by slogans like 'language-in-function', which is easily replaced by 'sublanguage-in-function', and 'text linguistics', which reads in our case 'the linguistic analysis of special texts in their respective communicational frames'." (1984, 36)

1.3. *Attempts to classify the domain of LSP research*

Beginning in the early 1970s several monographs, readers and textbooks on LSP were published in German. The first extensive surveys of LSP were written by Drozd & Seibicke (1973), Fluck (1976, 3. edition 1985) and Hoffmann (1976, 3. edition 1987). Additionally, Hoffmann & Piotrowski (1979) published an introduction to LSP research within the framework of quantitative linguistics. The following books deal with LSP by concentrating

mainly on a specific individual language: Beier (1980) and Sager et al. (1980) on English special languages (cf. also the joint publication of Gläser 1987), von Hahn (1983), Möhn & Pelka (1984) and Oksaar (1988) on German special languages (cf. also the joint publications of von Hahn 1981 and Weber 1989), Kocourek (1982) on French special languages (cf. also the joint publications of Dahmen et al. 1989 and Kalverkämper 1988), and, Laurén & Nordman (1987) on Swedish special languages (cf. also the joint publication of Gunnarsson 1987).

Most of the LSP joint publications only focus on certain aspects of special language. They deal, for example, with the problem of "special language vs. general language" (cf. Petöfi, Podlech & von Savigny 1975, Mentrup 1979) with analyses of lexical and syntactical features of special texts (cf. Hoffmann 1975, Hoffmann 1978), as well as the phenomenon of language in science and technology (cf. Bungarten 1981, Bungarten 1986 and Knobloch 1986) including questions of LSP research applications (cf. Gnutzmann & Turner 1980, Gnutzmann 1988, Richart, Thome & Wilss 1982, Kelz 1983) and (recently) with textual features of special languages (cf. Gläser 1985, 1987, 1988; Hoffmann 1987, Kalverkämper 1988, Arntz 1988). There are also joint publications on LSP containing the papers of the *European Symposiums on LSP* which take place every two years at various locations around Europe (cf. Fachsprache 1979, Hoedt, Lundquist, Picht & Qvistgaard 1982, Perrin 1985; Cornu, Vanparijs, Delahaye & Baten 1986, Laurén & Nordman 1989 a, 1989 b). Furthermore, let me mention the joint pulications of Hoedt & Turner (1981), Retard & Wyler (1987), Sprissler (1987) and Nuopponen & Palmberg (1989) which deal with general aspects of LSP research including questions of LSP research applications. Since 1979 an international journal on LSP research called *Special Language — Fachsprache* has also been in publication. The LSP Centre of the Copenhagen School of Economics has, since 1977, published the *UNESCO ALSED LSP Network and Newsletter*. With regard to English special languages, we have to mention the *ESP-Newsletter* and *THE ESP JOURNAL* (cf. also section A in my bibliography).

The most extensive bibliography on LSP research, containing 10,000 titles and beginning with the year 1965, was made by Leube (1976−78), Lehmann & Leube (1979−85) and Lehmann & Puchta (1986). This bibliography divided the complete field of LSP into the following categories:

— Bibliographies
— Readers
— Special languages in general
— Terminology
— Translation studies and LSP
— Language learning and language teaching LSP
— Frequency dictionaries in certain subject fields.

Another extensive bibliography was published in 1989 by Kromann & Mikkelsen in book form (1,170 titles) and by Mikkelsen & Kromann in the

form of a data disc (more than 10,000 titles) in Danish. Mikkelsen and Kromann classify LSP research more distinctly than Lehmann et al.:

— Bibliographies, journals and readers
— Theory of LSP and research designs
— Diachronic LSP research
— Special communication (general language and special languages; functional styles; external special communication; internal special communication)
— Textual and morpho-syntactical features of LSP texts (text types, micro structures: connection and coherence; grammar: morpho-syntactical features, valence, nominalisation, modality)
— Terminology and subject-oriented lexicography
— Interlingual special communication (translation studies and cross-cultural communication, a culture and ideology bounded dictionary, translation problems on the level of grammar and discourse)
— Learning and teaching LSP
— Corpora in LSP research.

However, there is not yet any distinguished bibliography of text-centred LSP research.

1.4. *The history of LSP research*

As regards the general situation of LSP research, the 1970s were, according to Max Gorosch, the "decade of LSP" (quoted by Drozd 1984, 43). In the 1970s LSP research established itself as a relatively independent discipline within the framework of applied linguistics. Present state-of-the-art research, recent tendencies and shortcomings are best mentioned in a retrospective view. Roughly speaking the history of LSP research can be classified in the following way,

1. The lexical stage: LSP research is mainly reduced to terminology studies; special language is often identified with the special dictionary.
2. The morpho-syntactical stage: The object of LSP research is extended to the level of the sentence; typical features of LSP are identified on the level of the syntax (cf. especially the monographs of Schefe 1975 and Littmann 1981; furthermore, the articles of Bénes 1981, Schwanzer 1981, Spillner 1981 a and Hoffmann 1987 d).
3. The text-oriented stage: the special text itself becomes the starting point. At this stage LSP research intends to deal completely with all levels of textualisation, including the pragmatic and extra-linguistic levels.

A more fine-grained classification was presented by von Hahn (1981, 3—5), according to whom we have to distinguish between several stages concerning the content of research:

1. The external characterisation of LSP
2. The referential characterisation of LSP
3. The lexical-oriented approach
4. The syntactical description of LSP
5. Additional textlinguistic descriptions of LSP (which became a part of stages 7 and 8)
6. The communicative establishment of LSP
7. Pragmatic analyses: explanations within the framework of the theories of action
8. Pragmatic analyses: problem-solving strategies.

The above classifications are of course to be understood only as generalisations of certain tendencies, disregarding the real complexity in the development of this branch of science. However, another problem of these classifications has to be seen in the fact that the early beginnings of LSP research have been overlooked. The earliest research dates back to the turn of the last century. As early as the 1920s and 1930s, LSP research had culminated in the formation of terminological studies and the study of the language of commerce. But if we do not take into consideration this early episode of LSP which ended with the beginning of the Second World War, we have to admit that the simplification of its development into three stages takes place indeed in a certain way. Of course it does not hold true when applied to each individual researcher. One important exception, for example, is the area of LSP research which is involved with the tradition of functional stylistics. Functional approaches have dealt with textual features of LSP since the 1930s. Considering the functional approach in the history of LSP, we have to distinguish between the following two mainstreams of research which were developed in the past for the most part along two separate lines but, to some extent, overlaping. These two lines were the more terminology-oriented approach and the more functional approach. Both existed in relative isolation, one from the other, and are now becoming integrated in a text-centred approach.

As for the 1980s, we have to admit that a new orientation to LSP research has developed which consists, according to Weber, of the following,

"The recent trend in the field of LSP research seems to be characterized by a reaction against the traditional approaches which have concentrated on the analysis of the formal lexical and syntactical features of special languages. It is now widely argued that LSP research must primarily be concerned with the classification and analysis of special-purpose text types." (1982, 219)

However, it seems that the new orientation, that is the broadening of the research object to take into account the level of the text and the involvment of text linguistics, is not yet competent to include all the complexities of special communication. Hoffmann, for example, pointed out that the framework of text linguistics is not yet able to give answers to the most important questions of recent LSP research.

"Zu kurz kommt bei fast allen Untersuchungen dieser Art das Kriterium des Inhalts. Die Kategorie der Subsprache wird übersprungen. Am Ende steht gewöhnlich wieder eine sehr allgemeine Charakterisierung des wissenschaftlichen Stils insgesamt." (1982 b, 32)

Hoffmann required a change from "quantitativen Parametern zur qualitativen Wesensbestimmung, von der Analyse der Form zur Analyse der Bedeutung, von der Betrachtung isolierter sprachlicher Elemente zu ihrer Erfassung in komplexen Einheiten, von der Syntagmatik zur Paradigmatik, von der Linearität zur Struktur, von den innersprachlichen Gesetzmäßigkeiten zu den außersprachlichen Faktoren." (1982 b, 25)

2.   Text linguistics and LSP research

2.1.   Text linguistics

Typical of text linguistics for many years was the confinement to the study of narrative texts as the most important research object. LSP texts, often containing argumentative and explicative structures, have only very seldom become an explicit object of textual research. Consequently, most of the introductions into text linguistics deal with literary texts (cf., for example, the monographs of Dressler 1973, Schmidt 1976, Klein 1977 and Plett 1979). As an example, one could mention the (German) standard textbook *Linguistische Textmodelle* by Gülich & Raible (1977, 12—13) which is confined to the "Darstellung von Erzähltextmodellen" (explanation of narrative text models). The bibliography of semiotic textology made by Petöfi (1986) confirms this observation/supposition and demonstrates that textological research mainly includes analyses of literary texts and analyses of impromptu speech, whereas research on textual aspects of scientific and technical communication has as yet not come into the focus of textological research. There are, however, some exceptions. Van Dijk (1980), for example, deals in his book *Textwissenschaften*, in the chapter on super structures, not only with narrative structures but with argumentative structures as well. As an example, let me quote the basic scheme for argumentation: Van Dijk supposed that the argumentative scheme consists in general of the sequence *"premise — consequence"*, by which, in scientific and technical communication, this sequence is extended by *stating the problem for analysis* and other intermediate stages (1980, 144).

Suggestions for analysing LSP texts within the tradition of text linguistics are made in principle by Petöfi (1981) and Lundquist (1989 a, 1989 b and her article in the present volume; see also the contribution of the *Tekstlingvistikgruppen* 1983). The latter, for example, suggested a complex model of LSP text analysis by taking into account pragmatic, thematic, semantic and cognitive aspects of LSP texts. Viehweger (1987) pointed out the relevance of *procedural models* for LSP analysis; he supposed