3 Methodology

In this chapter, I shall first briefly describe the texts selected for the present study, then characterize my research method, and finally outline the system of FSP tags devised for the analysis of the texts.

3.1 The Analysed Texts

The language material selected for this study is formed by two articles. The first of them, entitled *Several Large Banks Worked to Help Enron Disguise Transactions* and representing the news register, was written by Greg Burns, a senior writer of The Chicago Tribune. It was published in The Chicago Tribune on 10 August 2003. Pagination data for the printed version were not found. The article was obtained from an electronic archive of newspaper articles at the following internet address:

`http://search.epnet.com/login.aspx?direct=true&`
`db=nfh&an=2W63977420207`

The second article represents the register of academic prose. It is entitled *Two Cheers for Formalism* and was written by Paul Krugman, Nobel Prize laureate and professor of economics and international affairs at Princeton University. His article was published in The Economic Journal, volume 108, number 451, November 1998, on pages 1829-1836, but its full text was downloaded from the following electronic source:

`http://www.ingentaconnect.com/content/bpl/ecoj/`
`1998/00000108/00000451/art00014`

As of February 2011, the article was also available at the internet address

`http://web.mit.edu/krugman/www/formal.html`

Neither of the articles contained any kind of linguistic mark-up. In the news article, the section entitled *References*, appended to the very end of the article and containing 13 items of references to other literature, was excluded from the analysis. In total, 588 finite clauses were identified in the articles and analysed

from the point of view of FSP, 196 clauses in the news article and 392 in the academic article.

The selected texts represent only one half of the registers covered by the *Longman Grammar of Spoken and Written English* (Biber *et al.* 1999) and from the viewpoint of modern corpus linguistics, a corpus of this size is truly miniature. Nevertheless, in relation to other monographs and studies dealing with functional sentence perspective, the 588 clause corpus appears to be sufficiently comparable, given the fact that automated or semi-automated FSP analysis of texts has not come to light to this day.

3.2 Description of the Research Method

In this study, I strive to follow research methods and results of the Brno approach to the study of FSP phenomena, presented in great detail in the monographs of Aleš Svoboda (1981a, 1989) and Jan Firbas (1992), which were already mentioned in section 2.1.

In sharp contrast with recent trends in linguistic research to heavily rely on automated or semi-automated methods of corpus tagging and parsing, the whole analysis of the corpus was carried out on a purely manual basis. This was largely due to the non-existence of a computational tagging/parsing system applicable to the FSP framework. In order to meet the aims laid down in section 1.2, the following measures were taken to make the aims attainable.

The core of the analysis, i.e. the assignment of communicative functions to the elements of text, was carried out at the level of clause seen as a *mezzostructure.*[1] Only finite clauses[2] were analysed. Each finite clause was treated as a communicative field, also called *clausal communicative field* in the subsequent parts of this study. Subordinate clauses were included in the analysis regardless of the character of the superordinate unit, and so, for example, subordinate clauses functioning as postmodifiers in noun phrases were also analysed.

Each clausal communicative field was assigned a number according to the following pattern:[3]

[1] The term is taken from Svoboda (1989: 9).

[2] For a definition, see Quirk *et al.* (1985: 992).

[3] The leftmost digit identifies the texts in the corpus of this study as follows: 0 = the news article, 1 = the academic article.

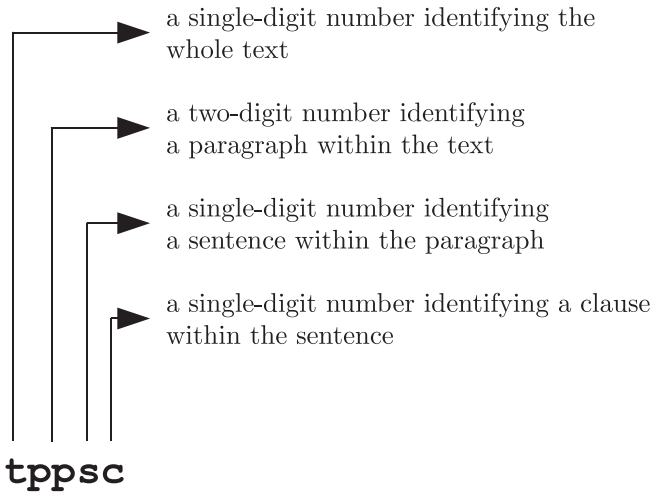

Figure 3.1: Pattern used to number clausal communicative fields in the corpus

The numbers assigned to individual fields are also used as pro-forms to signify mutual relations between the communicative fields or their parts. The boundaries of the communicative units of each clausal communicative field are marked using the braces. For example, the sentence

```
One type of transaction, which became a specialty of
Canada's CIBC, involved helping Enron sell a variety
of assets into a collection of off-balance-sheet
companies known as a ‘‘special purpose entities,’’ or SPEs.
```

would be divided into the following communicative fields:

```
01611;{One type of transaction [01612],}
01612;{which} {became} {a specialty of Canada's CIBC,}
01611;{involved} {helping Enron sell a variety of
      assets into a collection of off-balance-sheet
      companies known as a ‘‘special purpose
      entities,’’ or SPEs.}
```

The relative clause *which became a specialty of Canada's CIBC* is assigned a different number than the rest of the sentence because it forms a communicative field of its own. The superordinate unit *One type of transaction*, of which the relative clause is a part, shares the same clause number 01611 with the rest of the sentence (*involved helping Enron sell a variety of assets into a collection of off-balance-sheet companies known as a "special purpose entities," or SPEs.*), since together with it, it forms a separate clausal communicative field. The two clausal communicative fields, 01611 and 01612, are, however, structurally linked through the clause number 01612 appearing in square brackets. The

verbs *became* and *involved* function, actually, as two communicative units each, which cannot be shown by the braces themselves, but only by the number of CD tags specifying their communicative functions and degrees of communicative dynamism.

Each of the communicative units identified in the clausal communicative fields was then annotated with FSP tags specifying its dynamic semantic function, the degree of contextual dependence, and the communicative function. The tags, which are described in more detail in the next section of this chapter, are attached to the left end of the communicative unit if they describe dynamic semantic function(s), and to the right end of it if they describe the communicative function(s) and the degree of contextual dependence. In the result, the verb *became*, for example, will appear in the corpus in the following form:

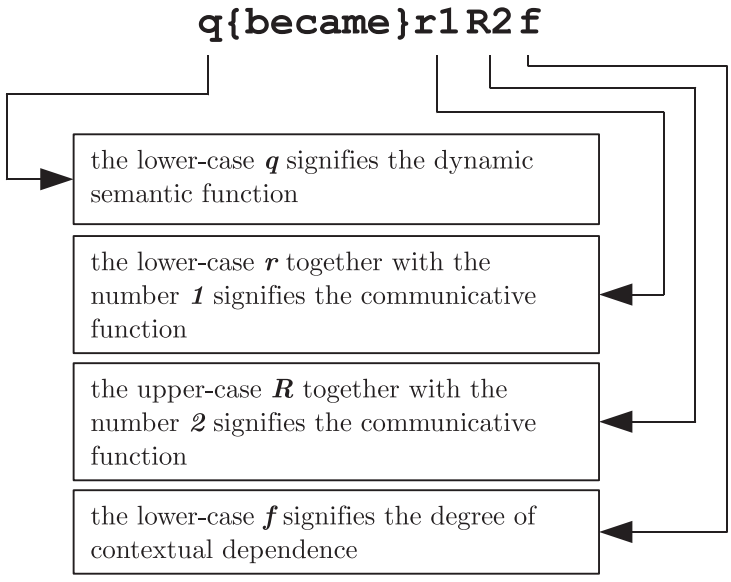

Figure 3.2: Example of FSP tags attached to a sentence element

Conjunctions appearing in the texts were not subjected to FSP analysis. With the exception of negation focus anticipator, which is considered here as a (part of) transition proper, any other element functioning as focus anticipator[4] is, for simplicity, tagged with the same degree of communicative dynamism as the focus which it anticipates, even though it is recognized that the communicative dynamism of a focus and the communicative dynamism of its anticipator cannot be of the same degree. The distribution of the FSP tags in the examined texts was then statistically evaluated.

An important methodological point or, more precisely, an adjustment to the

[4]See Firbas (1992: 97-104) for more information on focus anticipators.

FSP framework is associated with functional assessment of communicative units forming a reporting clause. I shall now only briefly outline this adjustment, since it is described in more detail in one of my previous studies (Drápela 2009).

It should be stressed in the first place that the assessment of reporting clauses is far from straightforward even on the syntactic level. Quirk *et al.* (1985) suggest that it is feasible to syntactically analyse the reporting clause in respect to the direct speech it introduces either as a superordinate structure:

> "Dorothy said, 'My mother's on the phone.' [4]
>
> In [4] the direct speech seems to be a direct object."
>
> (Quirk *et al.* 1985, p. 1022)

or as a structure which is "... subordinate, functioning as an adverbial" (Quirk *et al.* 1985, p. 1023).

In research publications on FSP, the functional interpretation of the reporting clause and the accompanying direct speech is, it appears, derived from the former view. The interpretation can be formulated as follows: irrespective of its position within the sentence, the direct speech functions as a semantic amplification of the verb of speaking and as such performs the dynamic semantic function of *specification* or *further specification*. Golková (1995), for instance, provides the following sentence and a comment:

```
6KS ,,To si počkáme,‘‘ řekl mladík dívce
    [,,(particle) (refl.pron.) we’ll-wait,‘‘ said young-man to-girl]
    ,,We’ll have to wait,‘‘ said the young man to the girl.
```

(Golková 1995: 51)

> "In ex. 6 ... the direct speech completes the action (of saying). In the Quality Scale (Firbas 1992.66-67), the direct speech of ex. 6 is a Further Specification, which conveys a higher degree of CD than Quality Bearer (*the young man — mladík*), Quality (*said — řekl*) and Specification (*to the girl — dívce*)."
>
> (Golková 1995: 56)

This interpretation correctly ascribes the semantic function of *bearer of quality* to the subject of the reporting clause. Nevertheless, it fails, in my opinion, to acknowledge the function of the reporting clause within the text as a whole:

> "Direct speech reproduces what has been said (thought of) by someone in a direct way, word-for-word. The reporting clause indicates who uttered the speech, in which way, under which circumstances etc."
>
> (Hajič *et al.* 1999: 252)

To account for this function, i.e. to indicate who uttered the speech, it is better, in my opinion, to view the reporting clause or, more precisely, its verbal element as performing not only the semantic function of *quality*, but implicitly also performing the semantic function of *appearance/presentation of phenomenon* on the scene. The best evidence for the presence of this dual function can be found, for example, in the transcripts of courtroom sessions; for the purposes of subsequent reviews, the courtroom transcripts must unambiguously convey information not only about what has been said, but also by whom. For example,[5]

```
JUDGE MOLOTO: The incidents under Foca High School constitute
              another count.

MS. UERTZ-RETZLAFF: Yes.

JUDGE MOLOTO: And then also Partizan and then also the fish
              restaurant. So it's four incidents --

MS. UERTZ-RETZLAFF: It's four locations.
```

From the point of view of the immediate development of discourse, the names of the speakers are irretrievable at the beginning of each of the turns. The speakers are being continually re-introduced onto the scene and their names, albeit performing a metatextual function in regard to the utterances, acquire the dynamic semantic function of *phenomenon appearing on the scene*.

In the system of FSP tags devised in the present study, this semantic multifunctionality in the sentences containing a stretch of direct speech and its reporting clause is solved by tagging the respective communicative units with DSF twin-tags, for example,

```
00813;S{00811-00812}T1f AQ{said}r1R2f PB{Duane Kullberg,
      a retired chief executive of the Chicago-based
      partnership, [00814]}R3f.
```

In this example, the direct speech represented by the {00811-00812} communicative unit has been marked with the *S* tag (*specification*), while the verb and subject were assigned with the twin-tags AQ (*appearance/presentation of phenomenon* and *quality*) and PB (*phenomenon to be presented* and *bearer of quality*), respectively. In such cases of semantic multifunctionality, the degrees of communicative dynamism of the communicative units are in the result determined on the basis of mutual co-operation of sentence linearity and context. Further discussion of this topic is, nevertheless, beyond the scope of this section.

The headline of the news article and the title of the academic article, which constitute independent (minimal) paragraphs and can also be looked upon as communicative fields, were not included in the analysis. In the case of the news

[5]The example is taken from a transcript available on the internet at the www address http://www.un.org/icty/transe23-2/070116MH.htm, see item *Page 435* in the list of References.

article, the content of the headline is in fact repeated in the second paragraph. The title of the academic article (*Two Cheers for Formalism*) does not satisfy the criterion of finite clauses set out above. The second paragraph of the academic article was excluded from the FSP analysis for the same reason. These methodological adjustments are reflected in the charts below, especially in the way of paragraph numbering in section 4.1.

My last note concerns the thematic progressions. The original idea was to disregard paragraph boundaries altogether and to identify the thematic progressions continuously from the beginning to the end of the text. Due to technical reasons, the thematic progressions were in the end examined separately for each paragraph.

3.3 The FSP Tagset

The FSP tagset, the system of annotation marks devised for the purpose of FSP analysis in the present study, has been derived from the abbreviations of FSP terms used in earlier studies of scholars developing the Brno approach to Functional Sentence Perspective. The tagset was conceived with respect to two requirements:

- to be easy to comprehend for human annotators familiar with the Brno approach to FSP and, at the same time,
- to allow its future incorporation into the computerized language corpora.

These two seemingly opposing criteria were dealt with in the following way: The key principle in the process of forming the FSP tagset was to keep it as minimalistic as possible, i.e. to use a single letter to represent an FSP value whenever possible.[6] The traditional terms like *Setting* or *Specification* cannot, of course, be abbreviated to a single letter because of apparent ambiguity of the result. To solve this, another aspect has been introduced to the FSP tagset: all letters forming the tagset are case-sensitive. Observing these principles, three subsets of FSP tags were devised.

3.3.1 The DSF Subset

The first subset is the *DSF subset* and is used to describe the dynamic semantic functions:

[6] As has been illustrated in the preceding section, in some cases multifunctionality may arise, which requires that a combination of letters be used instead of a single letter.

Table 3.1: DSF subset of FSP tags

DSF tag	its meaning (and abbreviation) in Firbas (1992)
s	Setting (Set)
A	Appearance/Presentation of Phenomenon (Pr)
P	Phenomenon to be Presented (Ph)
B	Bearer of Quality (B)
q	Ascription of Quality (AofQ)
Q	Quality (Q)
S	Specification (Sp)
F	Further Specification (FSp)

As can be seen from the table, the compatibility of the DSF tags with Firbas' system is very high with the only palpable difference in the tag signifying the dynamic semantic function of *Appearance/Presentation of Phenomenon*. Furthermore, the case-sensitiveness to a certain degree visually suggests the communicative potential (weight) of the tags *s* and *S*, or *q* and *Q*, with the upper-case tags being communicatively more dynamic than their lower-case counterparts.[7]

3.3.2 The C-DEF Subset

The second subset of FSP tags is the *C-DEF subset*. The tags of this subset represent the degrees of context dependence of the individual communicative units. The C-DEF tags are formed by lower-case letters and allow to distinguish at least three degrees of context dependence:[8]

Table 3.2: C-DEF subset of FSP tags

C-DEF tag	its meaning
d	the communicative unit is context-dependent
e	the communicative unit is context-semidependent
f	the communicative unit is context-free

The C-DEF subset has been constructed, on the one hand, to be compatible with the *d* abbreviation used by Firbas (1992: xiii) and Chamonikolasová (2007: 9)[9]

[7] The table does not include the lower-case *a* tag used in the corpus. With the exception of negation focus anticipators, the lower-case *a* is used in the analysis to label focus anticipators in place of the DSF tags listed in the table.

[8] Despite its fundamental importance to a study of this type, the notion of context dependence cannot be discussed here. More information on the treatment of this notion in relation to the study of information structure of language can be found in Firbas (1992: 31-40).

[9] As regards the *I* abbreviation used by Chamonikolasová to markup context independence, I chose to use the *f* tag instead for a purely practical reason: the alphabetical triplet *def* forms very conveniently also a visual scale whose polar values, i.e. the C-DEF tags *d* and *f*, are in mutual opposition, suggesting also opposition in respect to context in/dependence.

to signify context dependence, and on the other hand, to allow a more detailed annotation of the communicative units which can be considered heterogeneous from the point of view of context dependence:

> "Members of this group [synonyms and a wide range of co-referential expressions of other types] convey some additional meaning, which is irretrievable. In this way, they are not fully context-dependent; they are heterogeneous in regard to retrievability/irretrievability, and in consequence in regard to context-dependence/independence."
>
> (Firbas 1992: 32)

3.3.3 The CD Subset

The last FSP subset is the *CD subset*. It is a modified version of the labelling scheme used by Jan Firbas in one of his earliest studies on FSP (Firbas 1959). The main reason for introducing a set of new CD descriptors is to provide annotators (human or electronic) with a labelling system that allows instantaneous reading of functional sentence perspective and the degrees of communicative dynamism. This CD subset also disambiguates the distribution of communicative dynamism in communicative fields in which the number of communicative units is higher then the number of CD descriptors used in the current FSP nomenclature.[10]

In its core, the CD subset consists of four case-sensitive letters: *t*, *T*, *r*, and *R*. Unlike the tags in the other two subsets described above, each of these letters is used together with a number, a positive integer. The number, which is attached to the letters from the right, is used to signify the degree of communicative dynamism within either the thematic section of the communicative field (if attached to *t* or *T*), or within the non-thematic section of the field (if attached to *r* or *R*). In the thematic section, the tags with the letter *t* signify themes (proper or proper oriented), the tags with the letter *T* signify diathematic communicative units. Within the non-thematic section, the tags with the letter *r* signify transitions proper, the tags with the letter *R* denote other non-thematic elements. The lowest degree of communicative dynamism within the thematic and the non-thematic sections is marked by the number 1. If any of the sections contains more than one communicative unit, the degrees of communicative dynamism within the given section are determined by the (gradually increasing) values of numbers attached the letters describing the types of the communicative units of the section. The communicative unit conveying the highest degree of CD within the given section is marked by the number with the highest value in that section.[11]

[10] For example, the occurrence of two diatheme-oriented themes in Firbas (1992: 161, example AT 39.20 at the bottom of the page).

[11] In Drápela (2011) the CD subset is presented as a part of an overview of FSP labelling schemes used mainly by Jan Firbas and Aleš Svoboda.

Applied to the table 2.1, for example, the traditional FSP terms could be replaced by the tags from the CD subset as follows:

Table 3.3: Traditional FSP terms and the tags of the CD subset of FSP tags used in this study

traditional term	**CD tag**
Theme Proper	t1
Theme-Proper Oriented Theme	t2
Diatheme Oriented Theme	T3
Diatheme	T4
Transition Proper	r1
Transition	R2
Rheme	R3
Rheme Proper	R4

Of course, in a communicative field containing fewer communicative units than is listed in the table, the CD tags would appear in a slightly different form and distribution. As far as multifunctionality is concerned, the tags of the CD subset can also be combined to allow correct annotation of communicative units formed by, for instance, the predicative verb, which "is considered to represent two communicative units in FSP, one constituted by its notional component and the other by its categorial exponents" (Firbas 1992: 18). In contrast to the traditional FSP nomenclature, no special tag is reserved in the CD subset for the notional component of the predicative verb. In the majority of cases, transitions (non-proper) are marked with the R2 tag.

I firmly believe that the FSP tagset introduced here will prove useful to any analyst investigating the phenomena of functional sentence perspective. However, a much larger number of analyses will be necessary to assess the effectiveness of the tagset and its suitability for automated or semi-automated methods of FSP recognition.