RESEARCH – EVOLUTION – APPLICATION

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# PROFESSIONAL COMMUNICATION

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*Langues de spécialité et communication professionnelle*
*Fachsprachen und Fachkommunikation*
*Lenguajes Especializados y Comunicación Profesional*

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# EDITORIAL:

Dans un article récent, publié par le journal anglais ”The Guardian”, le professeur Nigel Vincent de l'université de Manchester exposait le résultat des recherches effectuées par son université sur la disparition des langues. Selon lui, sur les quelque 6000 langues existantes, 90% auront disparu en 2050. Ce qui se dessine n'est donc rien de moins que l'équivalent linguistique d'une catastrophe écologique, à la différence près, toutefois, que si les gens sont généralement bien conscients des dangers qui menacent sur le plan écologique, ils ne réalisent pas que nous laissons mourir les langues. A juste titre, le professeur Nigel Vincent fait observer que chaque langue est dépositaire de la culture des gens qui la parlent, et que chaque fois qu'une langue disparaît il y a aussi une perte au niveau de la diversité culturelle dans le monde. Il souligne cependant que 4% des 6000 langues actuelles sont parlées par 96% de la population mondiale, et sur ces quelques 240 langues une dizaine sont même parlées chacune par plus de 100 millions de personnes. Ces langue ne craignent rien, dit-il, ce sont les langues dites minoritaires qui ont besoin d'aide pour survivre.

On peut alors se poser la question de savoir si les langues qui, selon Manchester, sont supposées survivre à la première moitié du siècle sont, elles, à l'abris de tout danger ? Nous pensons que ce n'est pas le cas, même pas lorsqu'il s'agit de langues nationales parlées par plusieurs millions. Ces langues ne risquent certainement pas une mort subite, mais elles peuvent se trouver peu à peu appauvrie, ce qui, à long terme, peut être néfaste. Il est généralement reconnu, que pour survivre, une langue doit être complète, c.à.d. un instrument de communication qui permette de traiter sans restriction tous les aspects de la société moderne. Cependant, pour les même raisons que celles qui feront disparaître plus de 5000 langues en 50 ans (désir de succès, prestige ou simple laisser-aller), certains pays cèdent aujourd'hui insensiblement du terrain à une autre langue, plus dominante (par exemple le russe dans une partie du monde ou l'anglais dans d'autres) et ceci sans même faire un effort pour doter leur langue nationale des outils nécessaires (terminologies scientifiques et techniques par exemple) pour la rendre opérationelle.

L'article du Guardian montre l'urgence des mesures à prendre et la nécessité pour chaque pays d'adopter une politique des langues. Sans laisser de doute sur la nécessité d'apprendre et d'utiliser des langues étrangères, ces politiques devront nécessairement prévoir aussi la défense et le développement des langues nationales.

En Europe on pouvait espèrer un encouragement dans ce sens de l'Union Européenne qui, en 2001, célébrait « la diversité linguistique européenne » et proclamait par la même occasion que cette diversité était « un élément essentiel de l'héritage culturel de l'Europe et de son avenir ». Aussi peut-on s'étonner que Bruxelles ait utilisé récemment contre la France une directive de 1978 concernant l'étiquetage des denrées alimentaires et qui, soi-disant, interdirait à une nation d'imposer sa langue sur les étiquettes et l'obligerait à accepter « la possiblité qu'une autre langue facilement comprise par les acheteurs soit utilisée. » Cela faisait dire à Claude Duneton, écrivain et linguiste, dans le Figaro du 27 juillet :

- « C'est un élément de la guerre larvée que livrent, en Europe, les tenants d'une langue unique qui ne pourrait être que l'anglais compte tenu de sa force actuelle. En effet, ce n'est ni le finnois, ni le flamand ou encore le grec qui peuvent être des langues « facilement » comprises par le consommateur européen…

  Cela conduit à reconnaître pour ne pas dire créer deux citoyennetés européennes. Celle qui parle et comprend l'anglais et celle qui en est exclue. Une telle situation ferait la part belle à une élite instruite et condamnerait la grande masse des Européens à l'illettrisme. »

Le comité rédacteur

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**DÉLAIS**

Toute contribution destinée à être publiée dans notre revue "LSP and Professionel Communication" doit nous parvenir dans les délais suivants:

Avril (Vol.3., No.1, April 2003): **le 1er décembre 2002**
Octobre (Vol.3, No. 2, Octobre 2003): **le 1er juin 2003**

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# EDITORIAL:

In an article recently published in the Guardian, Professor Nigel Vincent of Manchester University unveiled the results of his university´s research into the disappearance of languages. According to the Professor, ninety per cent of the about 6000 languages now in existence will have died out by 2050. This represents nothing less than the linguistic equivalent of an ecological catastrophe with the difference, however, that although most people are well aware of the dangers that threaten them in the ecological sphere, they are generally unaware that we are allowing languages to die out. Appositely, Professor Nigel Vincent points out that each language is the repository of the culture of its speakers and that, each time a language becomes extinct, there is a corresponding loss in the world´s cultural diversity. He does, however, point out that four per cent of the 6000 languages now extant are spoken by 96 per cent of the world population and that, of these around 240 languages, about ten of them are spoken by more than a 100 million speakers each. These latter languages have nothing to fear, he says, it is the so-called minor languages that need help in order to survive.

One could then ask oneself the question of whether those languages deemed by Manchester University as likely to survive the first half of this century are entirely unthreatened? We do not believe this to be the case, even for national languages spoken by several millions. While it is true that these languages do not run the risk of a sudden death, they might find themselves gradually impoverished which, in the long-term, could do untold harm. It is generally acknowledged that, in order to survive, a language must be complete, i.e., an instrument of communication which allows the unfettered treatment of all aspects of modern society. For the same reasons, however, that will drive about 5000 languages into extinction over the next fifty years (hunger for success, prestige or, simply, just letting go), certain countries are imperceptibly giving way to another, more dominant language, Russian, for instance, in some parts of the world just like English in others. This process is taking place as the countries in question do not even make the effort to equip their national language with tools such as technical and scientific terminologies necessary to make it truly operational.

The Guardian article illustrates the urgency of the measures to be adopted as well as the necessity for each country to adopt and implement a language policy. These policies, without in any way casting doubt on the necessity of learning and using foreign languages, must also necessarily pre-empt the needs posed by the future defense and development of the national language.

In Europe, one might have hoped for some encouragement in this general direction from the European Union since it, in 2001, celebrated the ”linguistic diversity of Europe”. At the same time, it proclaimed that this diversity was an

”essential component of the cultural heritage of Europe as well as of its future”. Hence the surprise when Brussels used a 1978 Directive on the labelling of foodstuffs against France which could forbid a nation to impose its own language on such labelling and oblige her to accept ”the possibility that another language, easily comprehensible to the consumer, be used”. This provoked the following remark from Claude Duneton, writer and linguist, in the columns of le Figaro dated 27 July:

> ”This is an element in the low-intensity war fought in Europe by those believers in a single language which could not be any other than English in view of its strength at present. In fact, neither Finnish, nor Flemish, let alone Greek can be considered to be languages ”easily” comprehensible to the European consumer…
>
> This leads to the recognition of, if not the creation of, two European citizenships. One that speaks and understands English and one that is left out. Such a situation would favour an educated élite while condemning the greater mass of Europeans to illiteracy.”

The Editorial Board

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**DEADLINES**

Any contribution to be published in the International Journal ”LSP and Professional Communication” should reach us within the following deadlines:

April (Vol.3, No.1, April 2003): **December 1st 2002**
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**ARTICLES:**

# News Graphics: Some Typological and Textual Aspects

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## 1. Introduction

The article deals with a research project aiming at doctoral theses in applied linguistics. The main purpose of the project is to find out what the division of labor between the different semiotic elements of the text is, how the textual and visual elements convey meanings and mediate information in news texts. Besides the written news text, the research project, as a whole, covers all types of visuals including news graphics and news photographs. In this article, a typology of news graphics is presented. In addition, the relations between the information contents of written news text and news graphics are discussed and some preliminary suggestions are presented about the role of news graphics as a mediator of information in news stories.

The research material consists of news articles and features that include news graphics. The material of the whole research project has been published in the daily *Helsingin Sanomat*, the largest newspaper in Finland, on a period of six months from the beginning of January to the end of June, the year 2001. The total amount of news articles and features in the research material is over 1800 items. A typological content analysis of 359 items of news graphics in 274 news articles and features is presented in this paper. Additionally, an example of a thematic analysis is presented. The news articles and features have been published in January 2001.

The material of the study origins from one newspaper and, consequently, the aspects of comparison have been left out. It would have been problematic to make a comparison between two or more newspapers for two reasons. The first reason is the lack of Finnish material that could be compared with Helsingin Sanomat. Helsingin Sanomat is the only large daily newspaper in Finland. The smaller Finnish newspapers use less news graphics and they often buy it ready-made from news services. Therefore, it is assumable that the use of news graphics does not differ very much between the smaller newspapers and it cannot be compared with the news graphics of Helsingin Sanomat. The second reason is that a comparison with newspapers from other countries would have brought cultural aspects into this work. Albeit very interesting, this aspect is left to be dealt with in future studies. The present work is an intracultural study, an analysis of news graphics in one newspaper within one language and culture.

At first, I will discuss the theoretical background of the research project. Thereafter, I will present a typology of news graphics and results of the analysis concerning the frequencies of the different types of news graphics in the material. This part of the analysis has been made in order to find out the conventions in the use of news graphics. Thematic analysis is applied to reveal the relationships between news graphics and the other elements of the news text (in this case, written text). Thematic analysis is presented with the help of a practical example.

## 2. News graphics as a research object

News articles belong to multisemiotic texts. These are texts that consist of several types of signs that belong to different semiotic systems, such as written language, iconic and typographic systems. News articles and news graphics include diverse semiotic systems that, in turn, require a command of different codes in order to be interpreted in a correct way. (See also Järvi 1996, 1997; Kress & van Leeuwen 1996.)

News graphics, or information graphics, is usually defined as a combination of text and other visual elements, e.g. different types of graphs, charts, maps, tables and lists, diagrams and drawings, that complement the written news texts. News graphics is also described as the third language of news apart from verbal texts and news photographs. Thus, it is understood to have an independent position as the mediator of information in news texts. (Henning 1988; Mervola 1995; Salo 2000; Åberg 2000.)

In this study, the definition of 'news article' follows van Dijk (1988: 5). Consequently, all frequently reappearing material, such as weather reports, the lists of radio and TV programs, listings of sports results or the stock exchange etc. has been excluded from the study, and the analysis is focused only on genuine news articles of Helsingin Sanomat. At this stage, news articles and features are studied as one group and the differences between the use of news graphics in news articles and features will be dealt with in more detail in future studies. Therefore, the terms *news article* and *news story* refer to both news articles and features in this paper even though some preliminary differences between news articles and features will be discussed in connection with the presentation of results of the study (see Tables 2 and 3).

Both news graphics and news articles in the material are assumed to include specialized knowledge since the texts deal with such matters as politics, economics, technology, culture, sports or topics related to scientific work. In the context of newspaper texts, the sign systems of news graphics are perceivable by vision and the medium is the printed newspaper. News graphics can also be presented in other media such as television or the web but these channels and the corresponding sign systems are not dealt with in this study. (See e.g. Huovila 2001.)

The use of news graphics is related to a phenomenon called *visualization*, which means that information, in general, is disseminated not only by words but to a growing extent with nonverbal means, such as images, graphs and other visual representations. Different contexts produce different types of sign systems, and their correct interpretation also requires the existence of shared codes. (For the different sign systems, see Järvi 1995; 1996; 1997.) Visual representations are not any more considered to belong only within the realms of fine art or personal creative work. Instead, they are understood to have the capacity to represent various types of information content. (See e.g. Horn 1998; Tufte 1991; 1992; 1997; Ware 2000.) Illustrations in user manuals are one example of this (e.g. Schriver 1997). Visual representations are also considered to be tools that are used to create and push forward meanings. For example, van Dijck (1998) argues that popularization of science, especially in genetics, is a kind of theatre where spectacular popular images are produced in order to raise the interest of the possible investors to scientific research. (See also Henning 1988; Salo 2000.)

The semiotic approach, as a starting point for analysis, is well known in applied linguistics. Languages for special purposes, lexicography and terminology science have long traditions of semiotic research (e.g. Hupka 1989; Picht 1994; Pilke 2000; Wüster 1970 [1931]) and the need for this kind of research is constantly growing. Concurrently with the globalization, the importance of visual communication is widely recognized. (E.g. Horn 1998; Marcus 1996; Schriver 1997.) The semiotic approach is also connected with discourse analysis through functional grammar. Semiotics and functional grammar share the conception of language as a semiotic system (Eggins 1994; Hakulinen & Karlsson 1995; Halliday 1994) and the same applies to visual grammar presented by Kress and van Leeuwen (1996).

The study of news graphics belongs also to the area of media studies and thus the use of news graphics could be analyzed as a part of journalistic practices. The starting point for the present research is, however, not media studies but applied linguistics and a semiotic perspective on language. In this research project, news graphics is analyzed in its context, which is the news article as a whole including news text, photographs and other types of illustrations.

There are only few Finnish studies on news graphics. Elonen (1998), Kiimalainen (1993) and Åberg (2000) are master's theses. All these works are comparative, intracultural works that focus on the use and production of news graphics with journalistic practices as starting points. Mervola (1995) has studied the changes in the outward appearance of Finnish newspapers from the 1770's until the 1990's and Huovila (2001) has made a comparison between news in newspapers, television, World Wide Web and cellular telephone. Both Mervola and Huovila discuss news graphics on a general level and do not give any exact information about different types of news graphics or about their contents. Salo (2000) discusses visual journalism, but only shortly and without a special focus on news graphics. Most of the literature on news graphics is more practically orientated, e.g. Sanomalehden ulkoasuopas (1988), Uutisgrafiikka (1989) and Visuell visjon - i fritt fall? (1995).

## 3. Research methods

The analysis of multisemiotic texts requires a combination of different methods due to the interdisciplinary nature of the research material. One method alone cannot be applied to analyze the different aspects of the research material, such as the use of colors, principles of composition of news photographs, analysis of statistical graphs or written news texts.

The research methods that are applied in the research project as a whole are content analysis and thematic analysis. These methods are complemented with two other methods: image analysis and analysis of image and text relations.

Content analysis is used as a research method in order to create a typology of news graphics and to reveal the conventions in the use of it. (About content analysis, see Titscher, Meyer, Wodak & Vetter 2000.) The basic conceptual framework of the thematic analysis derives from Koskela (1996). Koskela has analyzed theme-rheme structures in Swedish scientific and popular scientific texts. She has analyzed whole texts and their thematic structures and used utterances (main clauses together with their complements) as the unit of analysis. On the textual level, the basic concepts in her analysis are 'textual themes' and 'hyperthemes'. Textual theme is "the overall knowledge frame that motivates all the thematic elements in a text" and hypertheme "an overall theme for a longer stretch of a text, for example a paragraph" (Koskela 1996: 210-211). Hypertheme – or hyperthemes – are always in a subordinate position in relation to the textual theme of a text. They take up different aspects of the textual theme and can be identified for example, with the help of subtitles of the text. The concepts 'textual theme' and 'hypertheme' correspond to the concepts of 'makrotema' and 'mikrotema', as presented in Hellspong (2001: 35-36) and Hellspong and Ledin (1997: 117-122).

According to Koskela (1996: 74; 211) the definition of textual theme and hyperthemes in a text is an intuitive process that can proceed either in a top-down fashion, i.e. from the point of view of the context, or in a bottom-up fashion, i.e. starting from the single utterances and their thematic elements. In the present work, the process follows the top-down fashion starting from the context of news texts. The units of analysis are the texts as wholes as well as the written parts of the texts and the news graphics. After the identification of themes in the material, the thematic relations between written texts and visuals are studied with the help of a classification presented by Schriver (1997: 412-432).

The relationships between verbal and visual elements of texts presented by Schriver are redundant, complementary, supplementary, juxtapositional and stage-setting relationships. In redundant relationship, identical content appears both visually and verbally. The same key ideas or themes of the text are repeated in different modes. In complementary relationship, different contents are presented in different ways but both modes are equally important in making the text understandable. In supplementary relationship, one mode (verbal or visual) dominates the other while the other elaborates, reinforces, or instantiates the themes brought up by the dominant mode. In juxtapositional relationship, different contents are also presented in different ways, but there is a clash or tension between them that underlines the key ideas of the text. Juxtapositional relationships between written text and images can often be found in advertisements. In stage-setting relationship, there are different contents in visual and verbal elements but one of the modes forecasts the themes presented in the other mode. An image on a book cover is an example of a stage-setting relationship between a visual element and the written text since the image should give some kind of an idea about the contents of the book.

## 4. Typological content analysis of news graphics

News graphics in my material divides into five main categories. These are: statistical graphs, maps, images, tables and combinations of two or more types of categories. ‘A statistical graph’ is a graphic representation of statistical, quantitative information. Pie charts, area graphs and line graphs are some examples of statistical graphs. ‘A map’ is a pictorial representation of geographical information. Cartograms carry geographically distributed statistical information and thus they, according to the definition, are not counted into maps but into the group of statistical graphs. ‘An image’ is a pictorial representation of a person, a situation or any kind of an object. Images do not present any statistical or geographical information. They are pictorial in the sense that they resemble the objects they represent even though some image types are quite schematic. Flow charts, organization charts and process charts are examples of more schematic images. The group ‘tables’ consists of news graphics in which information is presented with the help of vertical and horizontal lines that form a grid. Especially in text charts, vertical lines (and sometimes also horizontal) are left out but the idea of grid remains because of the grouping of the text. In case a table presents quantitative, statistical data, it is grouped into data matrices, a subcategory of statistical graphs. Data matrices and cartograms have many common features with the other types of news graphics, especially tables and thematic maps, but statistical information is the basic characteristic that distinguishes these categories from tables and maps. The group ‘combinations’ consists of combinations of news graphics that belong to different categories. (For different types of news graphics, see Harris 1996.) The distribution of the main categories of news graphics in the material is presented in Table 1.

**Table 1**. Distribution of news graphics in Helsingin Sanomat in January 2001.

| Type | Statistical graphs | Maps | Images | Tables | Combinations | Items Total |
|---|---|---|---|---|---|---|
| Items | 121 | 130 | 33 | 36 | 39 | 359 |
| % | 33,7 | 36,2 | 9,2 | 10,0 | 10,9 | 100 |

The most frequent groups among the different types of news graphics in Helsingin Sanomat are maps and statistical graphs. Two thirds of all items of news graphics are either maps or statistical graphs. The percentage of maps is slightly higher than that of statistical graphs, but the difference between the two groups is only 3 percent. Images, tables and combinations form three minor categories of approximately 10 percent each. Of these, the least frequent category is images and the most frequent is combinations.

One third of the news graphics consists of statistical graphs of which the most frequent types are bar graphs, line graphs, pie graphs, data matrices, cartograms and different combinations of statistical diagrams. Statistical graphs are figures that are also used in scientific contexts. Even though they are used in newspaper stories, they still have a strong connection to statistics and require a command of the mathematical code to be created and interpreted correctly. Statistical graphs are, however, easy to produce with modern desktop computers and illustration software.

The largest group of news graphics, maps, has been divided into subcategories of locator maps, structure maps, planning maps, thematic maps and combinations of maps. A locator map shows where something is located or where something happens. Structure maps give an idea of how parts are related to a whole. Planning maps, according to their name, show future development and thematic maps show a local or global distribution of ideas or practical matters without a statistical point of view. The majority of the maps in the material are locator maps.

Images are, probably, the most spectacular type of news graphics but, at the same time, they are the smallest group in the material. This is understandable since the production of images is time-consuming and journalists compete with deadlines in their practical work. The other types of news graphics are more easily produced and they are in many cases available as ready-made via news services and other sources of information.

Tables are listings of text, images, figures or combinations of these that include other than statistical information. A temporal aspect is often connected with tables.

In such cases, the information is presented in the form of timetables. Tables often include typologies and offer a possibility to make comparisons between different categories.

Combinations offer readers a possibility to receive multifaceted information about the matters dealt with in the news story.

In order to find out how the different categories of news graphics are related to the contents of the news stories, the distribution of news graphics in the different sections of Helsingin Sanomat was analyzed. The results of this analysis are presented in Table 2.

**Table 2**. Distribution of news graphics in the different sections of Helsingin Sanomat in January 2001.

| Type | Statistical graphs | Maps | Images | Tables | Combinations | Items Total |
|---|---|---|---|---|---|---|
| Finnish News | 35 | 30 | 3 | 1 | 2 | 71 |
| Finnish Politics | 10 | 3 | - | 1 | 2 | 16 |
| Helsinki News | 13 | 20 | 2 | 6 | 6 | 47 |
| Arts and Culture | 1 | 3 | - | 5 | - | 9 |
| Sports | - | 3 | - | 9 | 2 | 14 |
| International News | 5 | 42 | 3 | 2 | 6 | 58 |
| Business | 34 | 9 | 5 | 6 | 12 | 66 |
| Features | 18 | 17 | 19 | 6 | 10 | 70 |
| Other pages (Editorial, Letters to the Editor, Front Page) | 5 | 3 | - | - | - | 8 |
| Total | 121 | 130 | 32 | 36 | 40 | 359 |

As the results show, news graphics can be found in all sections of Helsingin Sanomat, including editorials, arts and culture and even letters to the editor. It would be interesting to compare these results with other Finnish studies, e.g. with Mervola (1995) who has studied the changes in the outward appearance of Finnish newspapers from the 1770's until the 1990's or Huovila (2001) who compares news in newspapers, television, World Wide Web and cellular telephone. However, both Mervola and Huovila discuss news graphics on a more general level and do not give any exact information about the distribution of different types of news graphics. Åberg (2000) has studied the use of news graphics in Swedish newspapers in Finland. She, however, divides news graphics only into maps, statistical graphs and the group 'other news graphics' and does not report her results in detail when it comes to the different groups on different pages. In Åberg (2000), the results of the use of news graphics in general on pages concerning e.g. Finnish news vary between 9 % and 78 % depending on the newspaper. In Hufvudstadsbladet, the largest Swedish newspaper in Finland, the percentage of news graphics on Finnish pages is 41 % (year 1996) and 51 % (year 1998). On business pages, the percentage is 27 % (year 1996) and 10 % (year 1998), on international pages 13 % and 10 %, on sport pages 2 % and 9 % and on Sunday feature pages 14% and 16 %. The matching percentage for Finnish pages in my study is 37 % (Finnish news, Finnish politics and Helsinki news), business pages 18 %, international pages 16 %, sport pages 4 % and features 19 %. The trends in my study and Åberg's study seem to be unidirectional since the highest percentage of news graphics is on Finnish pages, the lowest on sport pages and the next lowest on international pages. However, the results cannot be compared directly.

It is not surprising that maps, especially locator maps, are used abundantly in international news, but it is striking that they form a very large group also in Finnish and Helsinki news. Why this is so, needs more consideration. Griffin and Stevenson (1994) have studied locator maps in foreign news. According to Smith and Hajash (1988) maps account for almost 46 % of news graphics in 30 US newspapers. However, only one half of these are locator maps and the other half is weather-related maps which are not included in the present study.

Statistical graphs are found on all pages except sport pages. Especially the Finnish news pages include a large amount of statistical graphs. Tables, in turn, are more common on sport pages than in the other sections of the newspaper. Combinations are most common in the feature section.

In this material, there also seems to be a difference between features and news articles. The division between the different types of news graphics seems to be much more even in features than in news articles. Some explanations for this can be offered. Firstly, the discourse practices in features and news articles are probably different since features are more general and sometimes also more entertaining to their nature than traditional news articles. This probably also causes some special practices in the use of visuals. Secondly, there is a large variation between the subject matters on the feature pages and thus also between the uses of news graphics as can be seen in Table 3.

**Table 3**. Distribution of news graphics on feature pages of Helsingin Sanomat in January 2001.

| Type | Statistical graphs | Maps | Images | Tables | Combinations | Items Total |
|---|---|---|---|---|---|---|
| Food | - | 1 | - | - | - | 1 |
| Computers | - | - | 3 | - | 1 | 4 |
| Travel Pages | 2 | 10 | - | - | - | 12 |
| Science and Environment | 1 | 2 | 9 | 2 | 1 | 15 |
| Leisure | 4 | 1 | - | - | 2 | 7 |
| Cars and Traffic | 5 | 1 | 2 | 1 | 2 | 11 |
| Consumer Pages | 2 | - | 1 | 1 | 2 | 6 |
| Sunday Special | 4 | 2 | 4 | 2 | 2 | 14 |
| Total | 18 | 17 | 19 | 6 | 10 | 70 |

The distribution of news graphics in features is not as even as it looks at the first glance, especially when it comes to travel pages and science and environment pages. The subject matters 'tourism' and 'travel' explain the notable number of maps in this part of the material. The considerable number of images in science and environment pages also results from the contents of the stories. News graphics is here used to produce simplified and popularized explanations about complicated processes in the nature. The number of statistical graphs is large even in this part of the material. A reason for this is probably the fact that journalists quite often use statistical reports as sources for the news stories. The use of statistical graphs may also serve a rhetorical purpose in the news texts since graphs probably maintain the idea of reliability.

## 5. Thematic analysis of the news story *The Expected Length of Life*

The news story that deals with the concept 'the expected length of life' (in Finnish, *Elinajanodote*) is a short two-column article on page A 6 in the section of Finnish affairs. The text is probably based on statistical information material since the source of the news graphics is Statistic Finland, a statistical bureau that operates under the Ministry of Finance and produces two thirds of all government statistics in Finland. The story is built around an illustrative example, a baby boy Veeti and his family. Veeti was born in November 2000 and he has some health problems. He is the third child in a family that can be characterized as a typical modern Finnish working class family. Veeti's parents are quite young and they seem to have only basic education from the upper secondary level. Veeti's mother smokes and some relatives have died in heart attacks and strokes. In spite of all this Veeti's expected length of life is 73 years 10 months. (See appendix 1.)

Some other facts about the expected length of life are gathered around the story about Veeti. These are the technical definition of the key concept: “The expected length of life of a newborn baby tells how long he or she will live on an average if the mortality in the same age group remains on a normal level” (*Elinajanodote kertoo, kuinka vanhaksi vastasyntynyt keskimäärin elää, jos hänen ikäryhmänsä kuolleisuus säilyy ennallaan*) and the more popularized definition ”The standard measure of well-being” (*hyvinvoinnin mitta*). Some theoretical and practical matters that affect the length of life are also presented (sex, the way of life, social background, the level of education, the standard of medical care and the innovations in medicine). The written story of Veeti creates a contrast between the practical problems of average people and the more analytic and theoretical considerations on the length of life from the statistical point of view.

The black-and-white item of news graphics in the same story is a statistical graph, a line graph that presents statistical information about the expected length of life in Finland during the years 1750-2000. There are two lines, one for men and the other for women. The item also includes a vignette, an emblem of a newborn baby and two square-formed dialog balloons that indicate the number of expected years for men and women born in the year 2000. No other visuals are included in the news story.

Vignette is a small picture that is used repeatedly in connection with certain types of news stories, for example on the sport pages small pictures of cars are used as vignettes in news graphics concerning car racing. The same emblem of a newborn baby has also been used elsewhere in Helsingin Sanomat in connection with news graphics that deals with babies. The vignette functions as a visual anchor between the line graph and the written text. It is connected to Veeti and all the babies born at any time between the years presented in the news graphics.

Square-formed dialog balloons, quite similar to those in comic strips, are frequently found in news graphics. According to Kress and van Leeuwen (1996: 67), dialog balloons are representations of narrative speech processes or mental processes that the participants of semiotic acts produce and interpret. In the case of news graphics, there seem not to be any perceivable “senders” of the dialog at present and the message itself, based on statistical data, is quite unambiguous. Probably the use of dialog balloons in news graphics is rather a matter of convention than a matter of narrative discourse practice.

The textual theme of the news story is ‘the expected length of life’. Everything in the whole text is related to this key concept. The story of Veeti, the definitions of the concept and the matters of influence are hyperthemes in the written part of the text. The statistical graph includes one extra hypertheme, the expected length of life during the years 1750-2000. This historical information is found only in the line graph, not in the written text. At this point, the relation between the visual and verbal modes is supplementary. However, redundant information can also be found. The expected length of life of men and women born in the year 2000 appears both in the written text and in the line graph. The uses of the vignette and the dialog balloons are conventional in the same way as the use of titles and subtitles in the written text or the use of title in the item of news graphics.

## 6. Conclusions

News graphics in this material has been divided into five main categories: statistical graphs, maps, images, tables and combinations of two or more types of categories. The analysis shows that maps and statistical graphs form the two largest groups in the material. Combinations, tables and images form smaller groups that do not have notable differences when it comes to the frequencies. Maps are found abundantly both on Finnish and international pages, statistical graphs are used on all pages except sport pages. Especially the Finnish news pages include a large amount of statistical graphs. Tables, in turn, are more common on sport pages than in the other sections of the newspaper. Most images are found on feature pages, especially on science and environment pages. Combinations are most common in the feature section. Items of news graphics can be found on all sections of the material, including e.g. editorials. There are some differences between news articles and features but more research is needed to find out the underlying reasons for these. There probably are differences in discourse practices between news articles and features and the variety of subject matters may also have an effect on the use of news graphics.

Journalistic practices may offer explanations for the use of some types of news graphics. The abundant use of statistical graphs may result from the use of statistical materials as sources for the news stories. The large number of locator maps on international pages as well as in Finnish sections may result from the journalist's answer to the traditional question "where". Even though images are traditionally considered to be the most prominent group of news graphics, they are the smallest category in Helsingin Sanomat. Working practices may also here render an explanation since the creation of images is more time-consuming than the production of the other types of news graphics.

The use of news graphics probably serves the principle of economics in language. For example, statistical graphs and tables offer the possibility to make very detailed comparisons between the different aspects of information in the news article. If presented in a verbal form, these comparisons would be long and uninteresting. Now, only the most striking details can be brought up in the verbal text and the rest is presented in the form of news graphics. In this respect, the use of news graphics seems to, at least to some extent, resemble the use of visuals in research articles (Magnet 2001). Since news graphics is also capable to bring new hyperthemes into the text, more information is provided for the readers who are able to read news graphics, e.g. statistical graphs. However, news graphics also makes it possible to convey complex information in a simplified way. In other words, news graphics can be defined as a means to popularize the text. (Cf. Miller 1998.) Additionally, the reliability of the news article may be enhanced with the help of news graphics, since relevant information can be loaded in the graphics. This can also give the reader the idea that the text is more reliable than it necessarily is.

## 7. References


Dijck, José van (1998). *Imagenation. Popular Images of Genetics*. Houndmills, Basingstoke, Hampshire, London: Macmillan Press Ltd.

Dijk, Teun A. van (1988). *News as Discourse*. Hillsdale, New Jersey, Hove, London: Lawrence Erlbaum Associates Publishers.

Eggins, Suzanne (1994). *An Introduction to Systemic Functional Linguistics*. London: Pinter Publishers Ltd.

Elonen, Janne (1998). *Uutisgrafiikan käyttö viidessä suomalaisessa sanomalehdessä*. Pro gradu –työ. Tampereen yliopisto, tiedotusopin laitos.

Griffin, Jeffrey L. & Robert L. Stevenson (1994). The Effectiveness of Locator Maps in Increasing Reader Understanding of the Geography of Foreign News. In: *Journalism Quarterly*. Vol.71, No 4. Winter 1994. 937-946.

Hakulinen, Auli & Fred Karlsson (1995). *Nykysuomen lauseoppia*. 3. painos. Helsinki: Suomalaisen kirjallisuuden seura.

Halliday M.A.K. (1994). *An Introduction to Functional Grammar*. Second Edition. London etc.: Arnold.

Harris, Robert L. (1996). *Information Graphics. A Comprehensive Illustrated Reference*. Atlanta, Georgia: Management Graphics.

Hellspong, Lennart (2001). *Metoder för brukstextanalys*. Lund: Studentlitteratur.

Hellspong, Lennart & Per Ledin (1997). *Vägar genom texten. Handbok i brukstextanalys*. Lund: Studentlitteratur.

Henning, Carl (1988). Tietografiikka.In: *Sanomalehden ulkoasuopas*, 34-43. Carl Henning & Esko Ojala & Jukka Pellinen (eds). Sanomalehtien Liitto: Forssan kirjapaino.

Horn, Robert E. (1998). *Visual Language. Global Communication for the 21st Century*. Bainbridge Island, Washington: MacroVU, Inc.

Huovila, Tapani (2001) *Uutinen eri välineissä. GSM-sähkeestä taustajuttuun*. Vantaa: Inforviestintä.

Hupka, Werner (1989). *Wort und Bild: die Illustrationen in Wörterbuchen und Enzyklopädien*. Tübingen: Max Niemeyer Verlag.

Järvi, Outi (1995). *Språket på datorskärmar*. Licentiatavhandling i svenska. Vaasa: Vaasa University Library.

Järvi, Outi (1996). Språket på datorskärmar - funderingar kring termbildning utgående från en semiotisk synvinkel. In: *Fackspråk i olika kontexter*. Forskning i Norden. 49-67. Christer Laurén & Marianne Nordman (eds). Vaasa: Vaasa University Press.

Järvi, Outi (1997) The sign theories of Eugen Wüster and Charles S. Peirce as tools in research of graphical computer user interfaces. In: *Terminology Science & Research. Journal of the International Institute for Terminology Research IITF*. 63-72 Heribert Picht (ed.). Vienna: International Network for Terminology (TermNet)

Kiimalainen, Kimmo (1993). *Uutisgrafiikka suomalaisissa lehdissä*. Pro gradu –työ. Tampereen yliopisto, tiedotusopin laitos.

Koskela, Merja (1996). *Tema och rema i populärvetenskaplig text*. Vaasa: Vaasan yliopisto.

Kress, Gunther & Theo van Leeuwen (1996). *Reading Images. The Grammar of Visual Design*. London, New York: Routledge.

Magnet, Anne (2001). Diachronic Analysis of the Visuals in Research Paper. A Corpus-Based Study on the Strategies and Semiotics of Visual Representation in Nutrition Biochemistry. Julkaisussa: *LSP & Professional Communication*. Volume I, Number 1, April 2001, 55-77.

Marcus, Aaron (1996). Icon and Symbol Design Issues for Graphical User Interfaces. In: *International User Interfaces*, 257-270. Elisa M. del Galdo & Jakob Nielsen (eds). New York etc.: John Wiley & Sons, Inc.

Mervola, Pekka (1995). *Kirja, kirjavampi, sanomalehti. Ulkoasukierre ja suomalaisten sanomalehtien ulkoasu 1771-1994*. Helsinki: Suomen Historiallinen Seura; Jyväskylä: Jyväskylän yliopisto.

Miller, Thomas (1998). Visual Persuasion: A Comparison of Visuals in Academic Texts and the Popular Press. Julkaisussa: *English for Specific Purposes*. Volume I, Number 1, 29-46.

Picht, Heribert (1994). On Concept and Concept Representation with Focus on Non-verbal Forms of Representation. In: *International Conference on Terminology Science and Terminology Planning*. 231-254. Jennifer Draskau & Heribert Picht (eds). Vienna: TermNet.

Pilke, Nina (2000). Icke-verbala representationsformer och dynamiska begrepp. In: *Erikoiskielet ja käännösteoria. VAKKI-symposiumi XX. Vaasa 11.-13.2.2000*. 314-329. Päivi Jauhola & Outi Järvi & Detlef Wilske (eds). Vaasa: Vaasan yliopisto.

Salo, Merja (2000). *Imageware. Kuvajournalismi mediafuusiossa*. Taideteollisen korkeakoulun julkaisu B 59. Helsinki: Taideteollinen korkeakoulu.

*Sanomalehden ulkoasuopas* (1988). Toim. Henning, Carl & Esko Ojala & Jukka Pellinen. Rauma: Sanomalehtien liitto.

Schriver, K. A. (1997). *Dynamics in Document Design. Creating Texts for Readers*. New York etc.: John Wiley & Sons, Inc.

Smith, Edward J. & Donna J. Hajash (1988). Informational Graphics in 30 Daily Newspapers. In: *Journalism Quarterly* 65 (Fall 1988). 714-718.

Titscher, Stefan & Michael Meyer & Ruth Wodak & Eva Vetter (2000). *Methods of Text and Discourse Analysis*. London, Thousand Oaks, New Delhi: Sage Publications.

Tufte, Edward, R. (1991). *Envisioning Information*. Second printing. Cheshire, Connecticut: Graphics Press.

Tufte, Edward, R. (1992). *The Visual Display of Quantitative Information*. Twelfth printing. Cheshire, Connecticut: Graphics Press.

Tufte, Edward, R. (1997). *Visual Explanations. Images and Quantities, Evidence and Narrative*. Third printing, with revisions. Cheshire, Connecticut: Graphics Press.

*Uutisgrafiikka* (1989). Rauma: Sanomalehtien Liitto.

*Visuell visjon - i fritt fall?* (1995). Toim. Per H. Baugstø og Trond Dagnes. Oslo: Universitetsforlaget.

Ware, Colin (2000). *Information Visualization. Perception for Design*. San Fransisco, San Diego, New York, Boston, London, Sydney, Tokyo: Morgan Kaufmann Publishers.

Wüster, Eugen (1970) [1931]. *Internationale Sprachnormung in der Technik besonders in der Elektrotechnik*. Dritte, abermals ergänzte Auflage. Bonn: Bouvier u. Co. Verlag.

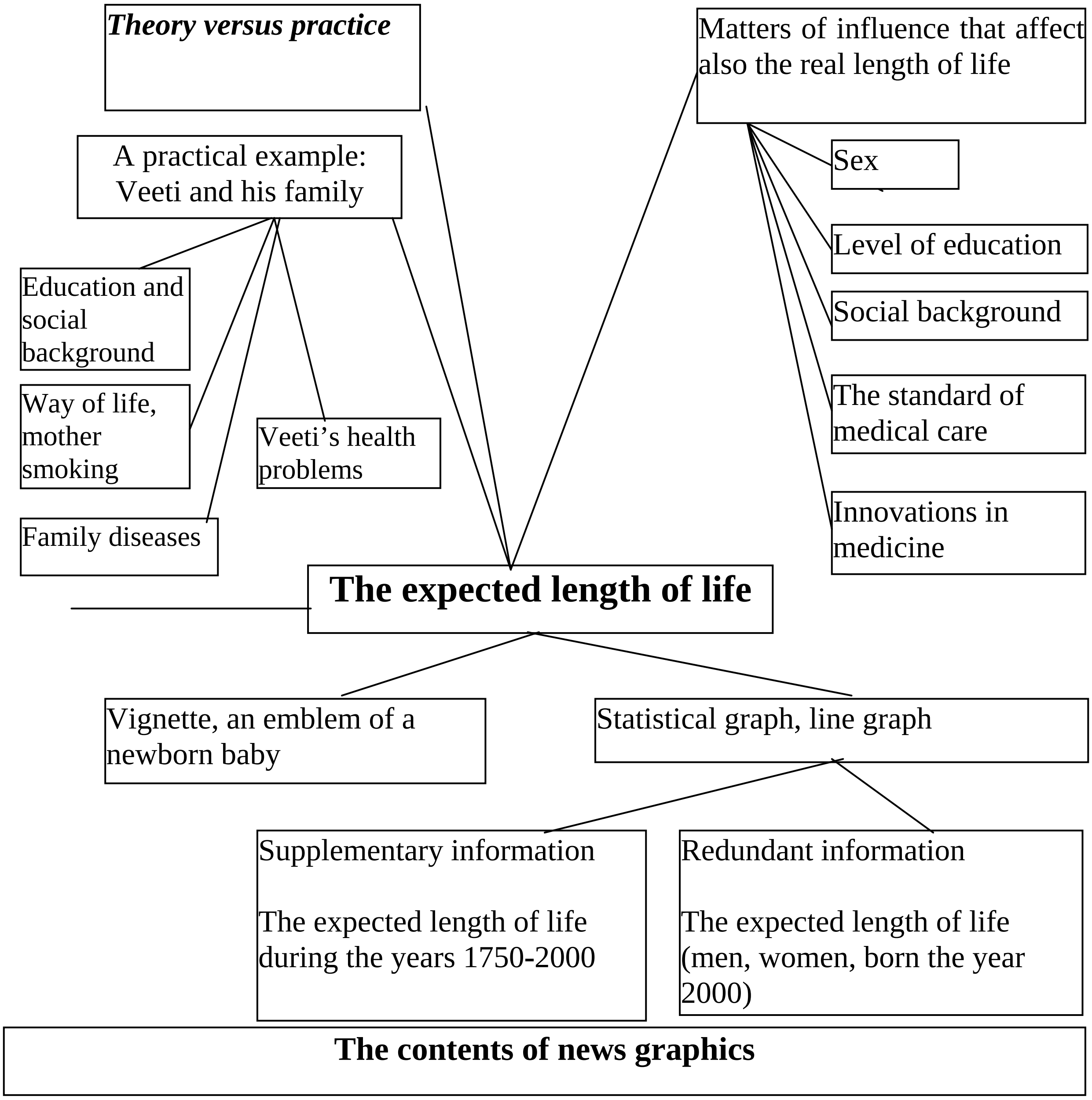
Åberg, Magdalena (2000). *Nyhetsgrafik i dagstidningar. Fallstudie: finlandssvenska dagstidningar*. SSKH Meddelanden 58. Helsingfors: Universitetstryckeriet.

## Appendix 1.

**The contents of the news text**

Definitions of the theoretical concept ‘the expected length of life’: ”The measure of well-being”

The expected length of life of a newborn baby born the year 2000 is 73,8 years (male), 81 years (female) if the mortality in the same age group remains on a normal level.


Theory versus practice
Matters of influence that affect also the real length of life
A practical example: Veeti and his family
Sex
Level of education
Education and social background
Social background
Way of life, mother smoking
Veeti's health problems
The standard of medical care
Family diseases
Innovations in medicine
The expected length of life
Vignette, an emblem of a newborn baby
Statistical graph, line graph
Supplementary information
The expected length of life during the years 1750-2000
Redundant information
The expected length of life (men, women, born the year 2000)
The contents of news graphics

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# ABSTRACT

## News Graphics: Some Typological and Textual Aspects

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The aim of this article is to present a research project of news graphics. In this article, some results of an analysis concerning the frequencies of the different categories of news graphics in the material are presented. This part of the analysis also tries to examine how the different types of news graphics are related to the subject matters of the news stories. The relations between news graphics and the written text are analyzed with the help of a thematic analysis. The analysis model is presented with the help of a practical example. At the end, some preliminary suggestions are brought up into discussion about the role of news graphics as the mediator of information in news stories. The research material consists of 274 items of news articles and features that include news graphics. The material has been published in the Finnish daily *Helsingin Sanomat* in January 2001.

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# Language and domains: a proposal for a domain dynamics taxonomy

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## 1. Introduction

In Nordic contexts there is at present, at the beginning of the new millenium, a discussion about the phenomenon of loss of domain. Loss of domain is complained about although no real research findings are available that prove anything or make explicit what exactly there is to worry about. The concept thus becomes more of a language policy catchword than a concept within the systematics of language planning. We should begin by asking ourselves: What is a domain? What do we in fact loose through a loss of domain? We will start by considering these two questions, beginning with the latter. But the principal aim of our article is to present a proposal för a taxonomy of what we will call domain dynamics.

In the research team "Nordens språk som vetenskapsspråk" (the Nordic languages as languages of science) we have since 1996 been concerned with domain dynamics in the Nordic languages. Our starting-point has been that our languages, mainly in the nineteenth century, conquered most essential domains for language usage, domains that were necessary for the general access to knowledge that has been the prerequisite for very advanced general education in the Nordic countries. This general education has given the relatively small Nordic ethnic groups a strong competitive position within culture, science and enterprise. Without it, our Nordic democracy would not be able to function so well as it does.

When a so-called expert body within the OECD in June 2002 expresses an opinion to the effect that Finland must reintroduce term fees at the universities based on the argument (presented by the chairman of the body) that those who do not receive a university education will not want to pay tax on it, this is a violent confrontation with Nordic democracy. Access to knowledge on the highest level must, in the opinion of the citizens of the Nordic welfare states, be guaranteed anyone irrespective of his/her economic resources. Social mobility should be both a possibility and a goal. The expert body of the OECD represents a static social view. The small Nordic ethnic groups are competitive because they do not waste their resources of talent in the way more populous countries think they can afford to do. The possibility of acquiring a language fit for the domains of science must not depend on the personal financial position of the individual.

It is usual to refer to J. A. Fishman as the source of the use of domain in sociolinguistic contexts. But Fishman himself refers to Schmidt-Rohr, who in 1932 worked with expatriate Germans in multilingual environments, as the one who first spoke about domains. Fishman also stresses that Schmidt-Rohr's domain taxonomy (the family, the playground and the street, the school, church etc.) was advanced and similar to others which have been put forward during the 1960s. Fishman's own point of view (Fishman 1972/79, which is a revised version of an article written in 1965), is that different divisions of domain are needed for language for different purposes. His own definition of domain is this: domains can be seen as institutional contexts or socio-ecological co-occurrences. They are therefore names for "major clusters of interaction situations that occur in particular multilingual settings" (Fishman 1979, 19). A study of domains of language usage reveals the connection between macro- and microsociolinguistics (Fishman 1979, 29).

In a report entitled Språkideologi og språkplanlegging i Noreg (1990) the terms domænespecialisering (Gregersen 1990, 63) and domænetab (Lund 1990, 192f) are used by two Danish researchers in connection with language planning and LSP communication. It is symptomatic that domain loss is the first thing paid attention to.

Our project "Nordens språk som vetenskapsspråk" has started from the notion that there are other elements in domain dynamics than domain loss. Even if our main focus is on LSP communication, we are aware that the following concept system, which we here present for the first time, is generally applicable; the proposals for terms are given in Swedish, Danish, Norwegian, German and English:

1. domänförlust / domænetab / domenetab / Domänenverlust / domain loss
2. domänövergivande / domænefraskrivelse / domenefråskriving ('Bokmål': fraskrivelse / fraskriv(n)ing) / Domänenaufgabe / domain renouncement
3. domänerövring / domæneerobring / domeneerobring / Domäneneroberung / domain conquest
4. återerövring av domän / domænegenerobring / domenegjenerobring / Domänenwiedereroberung / domain reconquest
5. domänutvidgning / domæneudvidelse / domeneutviding ('Bokmål': also -utvidelse) / Domänenausbau / domain expansion

6. domänuppodling / domæneopdyrkning / domeneoppdyrking ('Bokmål': also oppdyrkning) / Domänenaufbau / domain cultivation

We ourselves see the domain of language usage as a specialist field for which a language is capable of being used, i.e. it has at its disposal the necessary means of expression and is therefore of use within this domain. A specialist field can in casu be defined as the domain of a science, a practical occupation or a category at a suitable level of the international Universal Decimal Classification system.

## 2. Domain loss

It is a fact that no language covers all possible domains at all LSP levels. This means that domain loss cannot befall a language if the language usage of the domain has never so far been fully developed.

Domain loss can be defined as loss of ability to communicate in a language on all levels of an LSP field because of deficient further development of the necessary LSP resources.

Domain loss thus always occurs when and if a language community fails to develop suitable means of communication. We can distinguish between conscious and unconscious domain losses.

To the conscious decisions which lead to (unintentional?) losses of domain we can assign for instance:

a) the publishing policy of Nordic universities, when researchers are encouraged to use especially English as the language of their publications. In the internal evaluation these publications are considered more valuable than those written in a first language;

b) language policy concerning research in enterprises where English plays such a predominant role that domain loss has been evident;

c) tuition in English in Nordic universities and other educational programmes in non-linguistic disciplines. Internationalizing and globalizing are pleaded as excuses and there is also the wish to attract exchange students.

In this connection it is taken for granted that all students (Danish, Finnish, Icelandic, Norwegian, Swedish etc.) know enough English to pursue their studies successfully. To call these language proficiencies in question is taboo, even if Canadian and Finnish immersion research has indicated the need for deliberate pedagogical measures; the same research has shown that a certain type of bilingual curriculum is needed for effective first language development (Laurén 1999). As a rule, neither circumstance has been taken into consideration when instruction in the Nordic countries is provided in English.

This anglifying tendency is in contrast to the intentions expressed in the descriptions of aims of all Nordic organizations concerned with language planning. Here the preservation and development of the national language(s) for all spheres of life are of central importance and the basis of the existence of these institutions.

An unconscious loss of domain on a different level is the loss of proficiency in Latin and a decreasing interest in other languages than English. German and French gave and give access to other ways of thinking, working and living. The three unconscious current losses of domain also imply abrupt breaks in the connection with settings that for centuries and even millenia have influenced the Nordic cultures.

It could also be argued that the last mentioned case (loss of proficiency in Latin, German and French) is connected with the following point, domain renouncement, which, however, primarily demands active measures; here it is above all a question of a gliding transition from one state into another.

## 3. Domain renouncement

Voluntary or forced abandonment of the possibility of using one's first language / national language / native language in communicative LSP contexts in multilingual settings, could serve as a definition of domain renouncement.

The term and the concept have been used by Ellingsve (1999: definition p. 114) with reference to Norway's abandonment of Norwegian terms for the international Gas Union's multilingual glossary, Chap. 10, which was intended to provide terms and definitions to be used when buying and selling gas.

Domain renouncement occurs when one renounces the use of one's language in LSP communication even if the field of knowledge, the domain, is well developed in regard to communication. The motives behind such an explicit or implicit decision are often of economic character and are mostly in contrast to an explicitly national language policy. Domain renouncement often contains an opposition between intentions and reality.

Examples of this are:

a) that contracts between parties with different first languages are drawn up in English only. The English text alone has legal validity even if there may be informative translations;

b) that language policy decisions are made to the effect that the language of a multilingual enterprise is to be English, even if by no means all employees at different levels speak English as their native language;

c) that the EU for economic reasons refrains from using all EU languages at all levels (sections, committees etc.), which means that a number of countries have voluntarily (?) abandoned any claims that their languages should be used. The

consequences can be distinctly negative or perhaps latently negative, even if this is denied in political quarters;
d) that Namibia and many other countries have deliberately chosen English (in considerably fewer cases other languages, Portuguese, French and Spanish) as the language of instruction in schools, to the great detriment of the pupils' possibility of keeping up with the instruction at all; one reason that is given being lack of confidence in the indigenous languages (cf. the history of Europe, the original denial of the raison d´être of the national languages before the fight for them, against the Latin school), another reason being lack of confidence in a country's possibility of functioning multilingually (a view encouraged by Europeans, mainly English-speaking ones, with their internationally non-applicable traditions; see Laurén 2002).

## 4. Domain conquest

This term implies that a language develops means of communication needed for communication at all levels of a field of LSP for which previously means of communication were lacking or only available in an insufficient degree. In other words, it is a question of creating LSP means of communication for domains which, for sociocultural or economic reasons, have achieved a different status in a language community. Ellingsve (1999, 133) mentions "nasjonal erobring av domene" as a possible concept without entering upon the topic in more detail.

Examples of this are:

a) that a Norwegian stock of oil terms has been created (Myking & Sæbøe 2001);
b) that terms and phraseology in regional languages for parliamentary legislation have been created in Nigeria (Antia 2000);
c) that a basic set of terms in Sami language has been created for mathematics, linguistics, chemistry and physics to be used in the comprehensive school.

## 5. Reconquest of domain

Reconquest of domain occurs when a language community originally had means of expression for a field of knowledge but for different reasons failed to develop these concurrently with the development of the field of knowledge in question. Often the language used for this field has been changed. A precondition for reconquest is that a language community becomes aware that it is of crucial importance to be able to communicate in this domain in the native language. The degree of essentiality can be decided on the basis of different factors such as language policy, sociocultural or economic reasons.

Examples of this are:

a) that modern Icelandic terminology has been created for areas such as fishing, shipping, philosophy and mathematics (Jónsson 2001 a and 2001 b)

b) elements in the development of Hebrew in modern times; elements in the planning of Baltic languages and Ukrainian as well as other languages in the former Soviet Union in post-Soviet times.

## 6. Domain expansion

It is possible to talk about domain expansion when the substantial development within a field of knowledge demands the creation of means of expression in order to enable people to discuss and write about the expansion of knowledge. This domain expansion implies that the means of expression are created simultaneously with the growth of the the field of knowledge or shortly after
the new knowledge has been introduced into society.

Changes in the status of a language which has been shown lower priority or suppressed can also be seen as an instance of domain expansion.

Examples of this:

- the creation of a stock of terms for the field of environmental knowledge, where also previously existing fields of knowledge are included in new contexts; incidentally a phenomenon that occurs in many fields of knowledge; linguistic expansion follows cognitive expansion.

## 7. Domain cultivation

Domain cultivation has certain features in common with the previous concept (for instance simultaneous development), but the difference lies in the fact that the whole field of knowledge is in the process of being created. The new knowledge has not existed before, nor has it formed parts that can be marked off from other already well-developed fields.

Examples of this are:

a) the creation of a set of terms for IT, the theory of designing, gene technology;
b) the change of the status of Sami, Catalan and Basque by law.

## 8. Final words

The concept system for domain dynamics which we have briefly presented above is a tool that is needed for language planning from both a synchronic and a diachronic point of view, both for the practical work of language planning and for purely theoretical analysis. As a means of assistance it makes us conscious of the dynamics which is connected with the applicability of language. Some elements of the dynamics are of a conscious kind, some of an unconscious kind.

The concept system is applicable on both the individual and the collective level, and there is a simple causal connection between these levels. The present one-sided favouring of English on the part of the Nordic universities has the result that some individual researchers never themselves learn to master the scientific language usage of their own field completely in their first language; that is, their personal domain conquest never takes place. When sufficiently many individual researchers in the field have failed to make this domain conquest, the language community will suffer a domain loss with regard to its language usage. Such a domain loss with all its consequences is, however, probably unintentional. The favouring of the national language typical of earlier nationalistic periods was, at the end of the twentieth century, succeeded by a quasi-internationalization which, absurdly enough, has led to a momentary neglect of all languages apart from English. Discussing the consequences of the one-sided Anglification seems to be taboo; not even the consequent impaired competitiveness in relation to the Anglo-Saxon countries has so far yet changed the situation.

## References

Antia, B. (2000). Terminology and language planning. Benjamins: Amsterdam.

Ellinsve, Eli J. (1999). Domenefraskrivelse og domenetap‹det norske tomrummet i IGUs ordbok. In: Ch. Laurén & J. Myking, Treng små språksamfunn fagspråk? Nordiske fagspråkstudiar. Nordica Bergensia 20/1999. S. 103-118.

Fishman, J. A. (1979; reprint of edition of 1972). The relationship between micro- and macrosociolinguistics in the study of who speaks what language to whom and when. In: J. B. Pride & J. Holmes (eds), Sociolinguistics. Penguin: Harmondsworth, Middlesex, England.

Gregersen, Frans (1990). Mr Gregerson goes to Geilo or: Om sprogplanlægning og ideologi. In: H. Sandhøy (ed.), Språkideologi og språkplanlegging i Norge. Nordisk institutt, Universitetet i Bergen: Bergen. S. 35-65.

Jónsson, S. (2001 a). Isländsk kalabalik: en polemik om sjömansspråk. In: O. Järvi (ed.), Fackspråk och översättningsteori. VAKKI-symposium XXI. Vasa universitet: Vasa. S. 118-129.

Jónsson, S. (2001 b). En isländsk språkplanerare och hans profiler: Wüster före Wüster? In: Ch. Laurén & M. Nordman (ed.), Från terminologisk teori till vetenskaplig kommunikation. Forskning i Norden. Vaasan yliopiston julkaisuja. Selvityksiä ja raportteja 78. Vasa 2001. S. 35-60.

Laurén, Ch. (2002). The conflict between national languages and English as the languages of Arts and Sciences. In: G. Cortese & P. Riley (ed.), Domain-specific English. Peter Lang: Bern. S. 87-97.

Laurén, Ch. (1999). Språkbad. Forskning och praktik. Vasa universitet: Vasa. Lund, J. (1990). Statsstyring, markedsmekanismer og brugsbehov. Om låneordsproblemet: Forholdet mellem purisme og liberalisme i de nordiske sprog. In: H. Sandøy (ed.), Språkideologi og språkplanlegging i Noreg. Nordisk institutt, Universitetet i Bergen: Bergen. S. 115-140.

Myking, Johan & Sæbøe, Randi (2000). Språkplanlegging, identitet og marked ‹ Nordsjøen som språkleg-kulturelt laboratorium. In: H.W. Andersen, S. Lie & M. Melhus (ed.), KULT ‹ i kulturforskningens tegn. En antologi. Pax forlag: Oslo. S. 180-196.

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# ABSTRACT

## Language and domains: a proposal for a domain dynamics taxonomy

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'Domäne' ist eine Benennung, die schon früh in die Soziolinguistik Eingang gefunden hat. Jedoch erst in dem letzten Jahrzehnt ist die Benennung und der Begriff 'Domänenverlust' immer häufiger anzutreffen; dies kann vor allem darauf zurückgeführt werden, dass die Vorherrschaft des Englischen in bestimmten Wissenschaftsbereichen als Bedrohung der Funktionstauglichkeit der anderen Sprachen angesehen wird.

Die Sprachplanung benötigt für sowohl die Theorie wie die Praxis einen klaren Begriffsapparat.

Ausgehend von der Fachkommunikation wird in diesem Artikel ein Begriffsapparat vorgelegt, der von der Domänendynamik ausgeht. Wenn man etwas verloren hat, kann man es auch zurückerobern. Daher ist es nur logisch auch von anderem als nur dem Domänenverlust zu sprechen. Obwohl die Beispiele des Artikels vorzugsweise aus dem Bereich der Wissenschaftssprache stammen, ist der Begriffsapparat auch auf weitere Bereiche übertragbar.

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# Relationship and dependency between linguistic and non-linguistic forms of concept representation:

## A study of texts addressed to experts and students

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## 1. Introduction

Concept representation has always been an intriguing subject, and in the last few years it has gained even more importance (Thornton, 1996: 152). As Picht states (1994: 932), since long ago, terminology has been concerned with the description of the concept with special focus on the definition, and, in recent years, terminologists have reevaluated how the concept can be represented.

Despite this interest, little has been written in the field of terminology about the relationships and dependencies between linguistic and non-linguistic forms of concept representation. Picht (2002: forthcoming), Kalverkämper (1993: 218), and Laurén (1998: 186) maintain that large holes remain to be filled in this matter in scientific and technical contexts.

In order to help fill these gaps, we have carried out a study on documents addressed to aircraft mechanics specialized in fighter jets and to students of this discipline. This research is part of a greater work conducted in the field of terminology[1]. With this investigation we aim to contribute to a better understanding of the communication at high and medium levels of specialization, and, in this way, to draw conclusions useful for theoretical and practical users of terminology.
Before beginning with the analysis of the relationships and dependencies between linguistic and non-linguistic forms of concept representation in the area of fighter

[1] The work is a thesis entitled *Interrelaciones e interdependencias entre distintas formas de representación conceptual: Estudio en tres niveles de especialización en textos sobre instalaciones de combustible de aviones,* directed by Dr. Picht and defended at the University of Las Palmas de Gran Canaria (Spain) on January 31, 2002.

jets, we must delimit our corpus to a manageable size. From this abridged sample we will determine which forms of concept representation exist as well as the parameters used to establish relationships between those forms.

## 2. The corpus

Considering that the area of fighter jets is largely inaccessible by the general public, to our knowledge no one has studied its different forms of conceptual representation with the exception of this paper's author who investigated it in her minor thesis (Monterde, 1999). As the area of fighter aircraft is very broad, we chose the sub-area of fuel systems, because we could count on the assistance of a first sergeant fighter mechanic of the Spanish Air Force[2] specialized in this matter and with the restricted documents (Marcel Dassault, 1974a, 1974b: 002, 1-509, 1974c; Maestranza aérea de Albacete, 1989)[3] he uses in maintaining the Mirage F1 fighter.

At the student level, we assert that in order to follow a parallelism with the expert level, we should analyze texts on fuel systems studied by the mechanics of the Spanish Air Force while they were students. For this reason, our sample for this level comes from the books studied by the aforementioned mechanic (De la Malla, 1972: 195-218; Escuela de Mecánicos de Aviones, 1971: 110-119) and by current students (Lombardo, 1994: 97-106; Sáinz, 1998: 139-151).

After analyzing the fuel system documents, we isolated 119 and 100 concepts on the expert and student level, respectively[4].

## 3. Forms of concept representation

The various definitions given for concept representation are vague (Stockinger, 1993: 5). We will apply Greco's (1995: 119) and Montes' definition (1992: 12-13): the representation of a concept is a linguistic or non-linguistic expression, or combination of both, through which a concept is determined; that is, a "unit of knowledge created by a unique combination of characteristics" (ISO 1087-1, 2000: 2).

### 3.1. Non-linguistic forms of concept representation

[2] His help was based on the condition of anonymity.

[3] From now on, we will use abbreviations of these and student documents. Refer to the bibliography to see these abbreviations.

[4] To isolate this sample we designed systems of concepts of the fuel-feeding phases and parts of aircraft fuel systems by following norms ISO 704 (2000: 6-11), ISO 1087-1 (2000: 4-5, 16-23) and DIN 2331 (1980: 810). Due to space limits, we do not include these systems of concepts or the texts and illustrations that we have analyzed with the exception of two examples shown in Appendix 2. Excluding the restricted documents, supplementary information can be provided by request to amonterde@sinf.ulpgc.es.

We consider non-linguistic forms of concept representation to be all those in which the human written or oral language do not participate. In this sense, in our corpus we found only illustrations[5] as non-linguistic forms; that is, pictorial representations of concepts. Despite their interest, we will not give details about the different types of illustrations found, nor about their characteristics, since this is the aim of another part of our research.

### 3.2. Linguistic forms of concept representation

By linguistic forms of concept representation we understand those that represent a concept by means of human written or oral language. In our sample, the linguistic forms we found are terms, definitions, and explanations[6].

A term is a "verbal designation of a general concept in a specific subject field" (*Ibid*: 6). A definition is a "representation of a concept by a descriptive statement which serves to differentiate it from related concepts" (*Ibid*). Finally, an explanation is defined (ÖNORM A 2704, 1990: 3) as "Inhaltsbeschreibung ohne hinreichende Bezugnahme auf ein Begriffssystem" ("A content's description without sufficient reference to a system of concepts").

Moreover, we take into account any linguistic form included in an illustration of our corpus, specifically:

- terms in the legends[7];
- any other term on an illustration;
- captions;
- any other text printed on illustrations.

## 4. Parameters of study

Our objective is to relate every linguistic form with the non-linguistic form (illustration) found in our sample of the two selected levels of knowledge. We propose to accomplish it by answering the following questions.

### 4.1. Questions relating terms to illustrations

Terms inside definitions and explanations:

- Can we find in the texts the names of all the illustrations and of all the elements inside these illustrations[8]?

[5] We will use the names "illustration" and "figure" indistinctively to avoid the repetition of the word "illustration".

[6] To analyze the linguistic and non-linguistic forms of our sample, we created a terminological database with conceptual entries in the computer program *MultiTerm*. Each entry includes all terms, definitions, explanations and illustrations which represent a concept in our corpus. (See the previous footnote).

[7] According to Dr. Rafael Moreno, Senior Professor of Aeronautical Engineering at the Universidad Politécnica de Madrid, a legend is (oral communication) the concise explanation attached to an illustration to complement it. It normally consists of graphic symbols (see footnote 13) followed by the terms which represent them.

Terms inside illustrations:

- Which illustrations are accompanied by terms in the legend and which by terms that indicate the name of the different parts depicted in the illustrations?
- How are these latter terms associated with the illustrations; i.e., are they written next to the part that they name[9] or do they appear in a list next to the number of the corresponding part in the illustration?

### 4.2. Questions relating definitions and explanations to illustrations

- What percentage of illustrations possesses a definition or explanation of the concept that they represent?
- What percentage of concepts depicted in the illustrations has a definition or explanation?
- Are illustrations identified by means of the name of the illustration (figure, diagram, picture, etc.) followed by a number[10]?
- Are figure references strong or weak forms[11]?
- Are the illustrations situated on the same page as the text that refers to them, or on the pages before or after the text?
- Are the elements of illustrations situated on the same page as the text that refers to them, or on the pages before or after the text?
- Are the elements inside illustrations referred to by means of a term, a term followed by a number that corresponds to these elements, or only by such a number?
- Is the preceding reference a strong or a weak form?

### 4.3. Question relating captions to illustrations

- What is the caption's function: to explain the illustration, to add new information to the descriptive text, or to offer redundant information?[12]

## 5. Expert level

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[8] We have to remember that a figure as a whole represents a concept (e.g., an electronic circuit), but in detail it contains many concepts (e.g., parts of an electronic circuit). See, as an example, the illustration in Appendix 2.1. This illustration depicts an electronic fuel-feeding circuit . Inside it, we can see graphic symbols that represent parts of the aforementioned circuit: diodes, relays, switches, circuit breakers, etc. This figure has been slightly altered, without any prejudice to our research, because it is restricted material of the Spanish Air Force.

[9] The term normally points to the part that it names by means of an arrow.

[10] This parameter and the following two have been analyzed by Darian (2001: 10-36) at the University student level in the fields of biology and chemistry.

[11] We define these concepts in 5.2.1.

[12] Darian (*Ibid*) studied this parameter and determined its functions.

At a minimum all concepts are depicted by one figure at the expert level. We find 67 illustrations that represent circuits, systems, etc., inside which we can see 112 illustrations of parts of the studied fuel system. Therefore, there are in total 179 illustrations for the 119 isolated concepts.

We discover no definitions for linguistic forms, but there are 111 explanations, 67 captions, 157 different terms inside explanations, and terms in the legends. Our discussion continues with the analysis of the relationship between these linguistic forms and the illustrations.

### 5.1. Relationship between terms and illustrations

As we have already pointed out in 4.1, we distinguish between terms within explanations and terms contained inside illustrations.

#### 5.1.1. Terms within explanations

At this level, 100% of the illustrations and of the parts represented inside them are named by at least one term in their corresponding explanations. Of these, 100% of the terms represent a concept also depicted by an illustration.

#### 5.1.2. Terms contained inside illustrations

Inside illustrations we discover that only legends contain terms. Specifically, legends accompany only 5 of the 67 illustrations (7.46%). In each legend, we can see all of the graphic symbols[13] shown in the illustration together along with the terms that name them. Part of the legend of an illustration (MARman/ 163) that represents an engine feeding system is shown below.

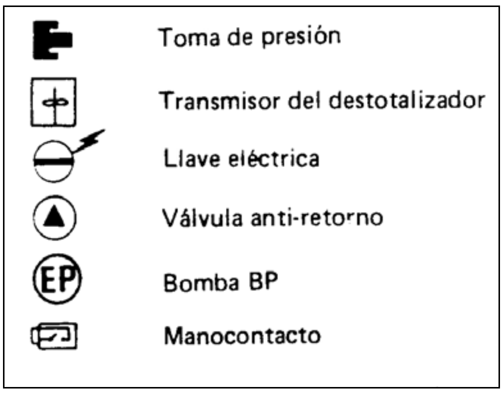


***Figure*** *Fejl! Ukendt argument for parameter.*. **Example of part of a legend**

Graphic symbols used in aeronautics are often not standardized, hence the need for legends. However, our mechanic specialized in fighters ensures that, even without

[13] According to Dr. Rafael Moreno (oral communications), a graphic symbol is a symbolic drawing that depicts a component inside an illustration.

the legend, a mechanic would be able to interpret the illustration due to the location of the different elements within it and the similarity of the graphic symbols used in different publications.

We locate another 12 illustrations (17.91%) that include graphic symbols but do not have legends. Nevertheless, each manual provides at the beginning a list of all graphic symbols used in all of the illustrations followed by their names. Consequently, in case of doubt, the expert could consult this list.

### 5.2. Relationship between explanations and illustrations

Every single one of the explanations represents a concept, which is in turn depicted by an illustration. As for the parts inside the illustrations, all but two (97.06%) are explained.

These explanations do not thoroughly describe the figures, but they delimit the concept represented and explain it by referring to the numbers of the different elements depicted in the illustrations. Due to the detail, it would be very difficult to articulate all the information provided by the illustrations. Furthermore, because of the high specialization of the language utilized in the explanations, only a specialist in the field of aeronautics would likely be able to understand the complex illustrations of this level.

#### 5.2.1. References to illustrations

We have investigated whether an illustration is referred to by a strong or weak form. A figure reference is strong if it is part of a sentence (e.g., “In figure 1.6, a steel rod has been placed next to a ruler.”), and, it is weak if it is subordinated in parentheses (e.g., “Balances measure mass...the quantity of matter in a material (Figure 1.2).”) (Darian, 2001: 27).

In the explanations of our sample, we did not find any strong references. However, all titles of the epigraphs contained weak forms of reference[14].

Regarding location, illustrations are found one or more pages after their explicative text.

#### 5.2.2. References to elements in the illustration

Without regard to their type, all parts of fuel systems inside the illustrations are identified by a number or by a combination of a number and a letter that indicates their position in the mentioned system[15]. All explanations make reference to these parts through the use of their names followed by their corresponding number and letter in the illustration. These figure references are made without a verb or

[14] See an example of this kind of reference in the text of Appendix 2.1.
[15] For example, "bomba de arranque 15Q" ("starting pump 15Q"), "nodriza derecha 2" ("right feed tank 2"), etc.

parenthesis, i.e., with a strong form, and they are situated in any part of the sentence -beginning, middle, or end.

Therefore, we deduce that illustrations are needed in order to completely understand the explanations, since without them we would not know where the parts of the fuel system are located.

The combinations of numbers and letters are very important. Not only do they refer to the parts represented inside the illustrations, but also to lists of terms. In the case of the reparation manuals, there is a so-called "índice de órganos," ("parts cross-reference"), containing the following information: a part number that indicates its location in the fuel system, name of the part followed by a description of its main characteristics and functions, and data to obtain physical access to the part. Consider the following example[16] (MARman/ 113):

| Posición | Designación de características y funciones | Situación – Acceso por el registro Núm. |
|---|---|---|
| 97 | AUTO-OBTURADOR<br>- Cierra la tubería de presurización en caso de ausencia del depósito pendular derecho 14. | Mástil derecho |
| 98 | COMPUERTA ANTI-RETORNO<br>- Evitan las intercomunicaciones entre las nodrizas posteriores izquierda 1 y derecha 2 permitiendo la admisión del aire exterior en caso de avería de presurización. | 27.11/3<br>27.01/3 |

***Table** Fejl! Ukendt argument for parameter**.** Extract of a parts cross-reference of a fighter maintenance manual*

In particular, the text in the second column is the explanation of many of the concepts in our corpus, and in it we can find a part reference by the use of its position number.

In the same way, lists of terms are found in the "catálogos ilustrados de partes," ("illustrated part catalogues"). In this case the lists provide the following data: part number, manufacturer reference, and part name or description followed by other reference numbers. In these manuals, we can even find the smallest parts such as screws and washers. Curiously, the text of these lists is in French[17]. This demonstrates that the illustration is what is actually important for the mechanic since most of them do not speak French and thus do not know the meaning of the

[16] This example and the following are printed with their original typography.
[17] The Mirage F1 is a fighter aircraft that the Spanish government purchased from France together with its manuals.

terms, although they are familiar with the reference numbers. Here we provide an example (MARcar/ 21-03P 1).

| PLANCHE REPERE | REFERENCE FABRICANT | DESCRIPTION |
|---|---|---|
| +001 | FC1E521 – 01F1LAA | RESERVOIR CENTRAL 1 (PARTIE 2)....... (NRU) (EIS 06-21-01F020) |
| 010 | SA32D02 | . ROBINET A FLOTTEUR (ADP)...........F0553 |
| 020 | F521-01-28 OU | . VIS.............................................. |
| 020A | FJ1C521-01-29 | . VIS.............................................. |
| 030 | 23320CA080 | FIL ACIER INOXYDABLE...................F0111 |

***Table*** *Fejl! Ukendt argument for parameter.*. *Example of a parts list in an illustrated parts catalogue*

Finally, the illustrations with graphic symbols and drawings that represent the different parts appear one or more pages after the explicative text.

### 5.3. Relationship between caption and illustration

All illustrations contain a caption in the lower part. Each caption consists of the label *figure* accompanied by order numbering followed by terms that represent the same concept depicted by the illustration. Let us consider, for example, the following two captions (MARman/ 17, 20).

FIGURA 12 –LLENADO DE LA INSTALACIÓN– Circuito de combustible
FIGURA 13 –LLENADO DE LA INSTALACIÓN– Circuito electrónico

This caption reminds the expert, although he already knows, the concept represented by the illustration. However, as we have seen, the information provided in these captions is redundant, since the epigraph titles of the manuals refer to the illustrations and these titles already indicate the concepts depicted by the illustrations.

## 6. Student level

In our student texts, the linguistic forms of concept representation for the 100 concepts isolated at this level are 16 definitions, 98 explanations; 15 captions, 148 terms (contained in definitions, explanations, and illustrations), and any text printed within or below illustrations.

At this level, illustrations, or non-linguistic forms, are less important than at the expert level where 100% of the concepts include at least one illustration. Specifically, in the student texts we find 30 illustrations that represent only 28 of the 100 concepts isolated. Fifteen of these illustrations depict general concepts (circuits, systems, etc.), and, the other 15, parts of these general concepts (valves, relays, access doors, etc.). We note, however, there are 200 parts in the 15 general illustrations, which means that 185 parts have not a corresponding linguistic form in our texts.

### 6.1. Relationship between terms and illustrations

In the following sections we investigate the relationship between illustrations and terms inside definitions, explanations and illustrations.

#### 6.1.1. Terms inside definitions

Of the 16 definitions found in this level, 6 (37.5%) define a concept that is also depicted by an illustration. These definitions include terms that identify illustrations. In total, 8 (53.33%) of the 15 figures and only 4 (2%) of the 200 parts represent inside the illustrations are named by a term inside definitions. Finally, the definitions contain 9 non-repeated terms, 7 (77.77%) of which also represent an illustrated concept.

#### 6.1.2. Terms inside explanations

Only 28% of the terms in our corpus correspond with an illustration that depicts the same concept. With respect to the illustrations, 100% of them are distinguished by a term inside an explanation. Nevertheless, no explanation cites all the parts of a figure through the use of terms. In total, 45 of the 200 (22.5%) parts are named by terms inside explanations.

#### 6.1.3. Terms inside illustrations

At this level, inside illustrations we find terms in the legends and terms next to the parts depicted in the figures or in a numeric list.

As we have already seen, the legend is useful to interpret graphic symbols in the illustrations. At this level, these symbols appear only in one type of illustration (schemes). More precisely, a legend appears in 5 illustrations (LOMcom/ 98, 99, 100; ESCfun/ 117; MALsis/ 207-208), comprising 33.33% of the figures. However, not all the symbols are found in these legends, but only those that represent pipes or tubes.

Nevertheless, it is doubtful that the student would have any problem in identifying which elements are depicted by the graphic symbols since nearly all illustrations include terms written next to the part that they represent. Exceptions consist of 3 illustrations (ESCfun/ 111; MALsis/ 200, 207-208) (20% of the illustrations) that contain a list with the terms preceded by the number assigned to the part in the illustration. This list provides the name of all numbered parts and it is situated inside the illustration, with the exception of one case (MALsis/ 200) whose list trailed the caption and mentioned only 4 out of its 10 numbered parts.

### 6.2. Relationship between definition and illustration

As we have previously acknowledged, 6 (37.5%) out of the 16 definitions found at this level define a concept that is also represented by an illustration.
With respect to the 15 existing illustrations, 7 of them (46.66%) (ESCfun/ 111, 117; LOMcom/ 98, 99, 100; MALsis/ 205, 207-208) are provided with definitions, and, 8 (4%) of the 200 parts depicted inside these figures are also defined.

### 6.3. Relationship between explanation and illustration

All of the illustrations are accompanied by explanations, but of which only 4 (26.66%) describe its corresponding illustration (ESCfun/ 111, MALsis/ 199, MALsis/ 207 and SAIsis/ 145) making reference to its parts, though they do not mention every part. The other explanations seem to be independent of their illustrations and scarcely provide data about them[18].

As for the parts inside the illustrations, 84 out of the 200 (42%) isolated are explained.

Finally, at this level we detect 98 explanations, but only 14 of them[19] (14.28%) represent a concept that had an illustration.

#### 6.3.1. References to illustrations

Unlike the expert level, all explanations at the student level which described an illustration make reference to it by means of sentences such as "véase fig. x" ("see fig. x"), "en la fig. x" ("in fig. x"), or simply "fig. x". Two out of the 14 explanations (14.28%) make strong references to illustrations (ESCfun/ 111; SAIsis/ 145). This type of form is situated at the beginning of a sentence, which as stated above, more strongly binds the text to its illustration. In contrast, nearly all (85.72%) weak forms are localized at the end of sentences. We find one exception (8.33%) (LOMcom/ 99) which is in the middle.

With respect to their references, all but one illustration (92.86%) (SAIsis/ 145) is inserted after the explicative text, either in the same page or in the following one.

#### 6.3.2. References to elements in the illustration

In contrast to the expert level where all parts in illustrations are numbered, only 3 illustrations (ESCfun/ 111; MALsis/ 200, 207-208) at the student level designate their different elements with numbers. The explanations accompanying these 3 illustrations talk only about some of their parts, but they do not mention the numbers. Therefore, explanations and parts of illustrations are not directly related.

### 6.4. Relationship between caption and illustration

[18] See an example in Appendix 2.2.
[19] There exist 15 illustrations, but 2 have the same explanation.

All illustrations are accompanied by a caption. This is logical since it has been proven empirically that the existence of a caption in an illustration helps to improve knowledge acquisition (Bernard, 1990; Schnotz, 1994, Weidenmann, 1994) and this is one of the objectives of documents addressed to students.

In the same way as the expert level, captions appear at the foot of the illustration and it is composed of the word "Figura" or "Fig." followed by order numbering and a term corresponding to the concept depicted by the illustration. We offer an example below (MALsis/ 199):

> *Fig. 99 Localización y capacidades de los tanques del sistema de combustible del avión BOEING-747*

Six (42.85%) out of the 14 captions found in our sample indicate the type of illustration shown[20] which helps the student to understand which kind of illustration he is observing. If we compare these captions with the ones in the previous level, they are more explicative and specific of the concept that they represent.

Moreover, two captions are followed by a short explicative text (LOMcom/ 98; MALsis/ 200):

> **Figura 8.1.** *Sistema de combustible del avión Cessna 152 (standard y largo alcance). Por la alimentación cruzada entre tanques, éstos deben taparse tras repostar para asegurar la máxima cabida*.
> *Fig. 100 Esquema del avión de combate MIRAGE III-E, en el que pueden observarse los depósitos principales de combustible (8), el depósito suplementario (5), los depósitos auxiliares (en góndolas exteriores, lanzables) (9) y el depósito especial para vuelo en invertido (3).*

In short, the function of the captions is to explain the illustrations or to add new information that has not been provided by definitions or explanations.

## 7. Summary of results

At the expert level a close relationship exists between linguistic and non-linguistic forms of concept representation[21]. Explanations contain terms that name all illustrations and the parts inside them. We can find terms that represent all the concepts depicted by illustrations, not only inside illustrations (terms in the caption and the legend), but outside as well (terms in explanations, lists of pieces and numbers of references, headings of epigraphs and parts cross-references). On the other hand, all explanations represent a concept that is also depicted by an

[20] For example, the caption may say: "Esquema de x" ("Scheme of x").

[21] See a table with a summary of the results in Appendix 1. The symbol $\int$ in this table means that *this set does not exist*.

illustration and vice versa. Explanations make reference to the parts in illustrations by means of a strong form. We also find weak forms after epigraph headings, which, in reality, serve the same function as the captions of illustrations. Of the parts depicted in the illustrations, 97.06% are explained in the parts cross-reference. On the contrary, at the student level the relationship between text and illustration is not so close. In general we may say that illustrations do not depict all of the concepts represented by the linguistic forms and vice versa. The student is capable of understanding definitions and explanations without the help of illustrations. Figures are not described in detail and the text could be completely independent of them. In fact, no reference to the parts in the illustrations exists, although the reader is encouraged to observe the illustrations by the use of weak references. Nevertheless, despite the text's assistance, illustrations are easier to interpret than in the expert level, since they include terms that name their parts. Moreover, they have explicative and specific captions.

## 8. Conclusions and justification of results

Reviewing the results (see Appendix 1), we conclude that the more specialized in a field a text is, the greater the relationship between text and illustration. This result is logical if we recognize that illustrations combine with terms to supply information. Hence, the type of illustration depends on the objective of the text whose meaningful purpose is in relation with the communicative function at each level of knowledge.

At the expert level, illustrations have characteristics derived from the fact that the text in which it is inserted has a practical function, i.e., for the mechanic to apply the theory. The illustration is the most important form of concept representation, and therefore, it is logical that the text is at the service of this form.

At the student level, the text has another function, as do the illustrations. At this level the aim is to ensure that a student acquires knowledge. Hence, illustrations are less abstract than in the expert level and they are accompanied by terminology that helps the reader to better understand illustrations. These figures, by their part, lend assistance to the explanations in the text.

Our conclusions can be explained by Sperber and Wilson's theory of relevance (1995). These authors propose a general strategy of discourse interpretation. The form of a text depends on its reader. It then follows that the grade of the reader's familiarity with a topic will influence the way in which the author treats the subject matter. He will have to adapt his text to its reader's knowledge, and as a consequence, all forms of concept representation as well.

As we have proved, this is what happens in our sample: each text, although treating the same subject, adapts to the level of knowledge of the reader to whom it is addressed.

Finally, we would like to stress that our conclusions are broadly applicable to the area of fuel systems in jet aircraft[22]. However, they could be applied, *mutatis mutandi*, to other fields of specialty, although we cannot prove it here.

## 9. Bibliography

### 9.1. Cited works


Bernard, R. M. (1990). "Using extended captions to improve learning from instructional illustrations". *British Journal of Educational Technology*. Blackwell Publishers. vol. 21, nº 3, pp. 215-225.

Darian, S. (2001). "More than Meets the Eye: The Role of Visuals in Science Textbooks". *LSP & Professional Communication*. Copenhagen: Dansk Selskab for Fagsprog og Fagkommunikation. vol. 1, nº 1, pp. 10-36.

DIN 2331 (1980). *Begriffssysteme und ihre Darstellung*. Berlin, Köln: Beuth.

Greco, A. (ed.) (1995)."General Aspects of the Concept of Representation". *Cognitive Systems*. Génova. pp. 119-129

ISO 1087-1 (2000). *Terminology work – Vocabulary – Part 1: Theory and application. Partial revision of ISO 1987: 1990*. Genève: ISO.

-704 (2000). *Terminology work-Principles and methods*. Genève: ISO.

Kalverkämper, H. (1993). "Das fachliche Bild: Zeichenprozessse in der Darstellung wissenschaftlicher Ergebnisse". Schröder, H. (eds.) *Fachtextpragmatik. (FFF 19)*. Tübingen: Gunter Narr Verlag. pp. 215-238.

Laurén, Ch. (1998). "Repräsentionsformen für Begriffe und Phänomene". Laurén, Ch.; Myking, J.; Picht, H. *IITF Series 9: Terminologie unter der Lupe: Vom Grenzgebiet zum Wissenschaftszweig*. Wien: TermNet. pp. 186-209.

Monterde Rey, A. M. (1999). *Las distintas formas de representación conceptual: Estudio en documentos dirigidos a mecánicos de aviones sobre la instalación de combustible de los aviones de combate Marcel Dassault*. Las Palmas de G. C.: Universidad de Las Palmas de G. C. [Unpublished].

Montes Serrano, C. (1992). *Representación y Análisis Formal: Lecciones de Análisis de Formas*. Valladolid: Universidad de Valladolid, Secretariado de Publicaciones.

ÖNORM A 2704 (1990). *Terminologie. Allgemeine Grundsätze für Begriffe und Bezeichnungen*. Wien.

Picht, H. (1994). "Die Anwendung graphisch-figurativer Mittel bei der Begriffsrepräsentation". Brekke, M.; Andersen, θ.; Dahl, T.; Myking, J. (eds.) (1994) *Proceedings of the 9th European Symposium on Language for Special Purposes: Applications and Implications of Current LSP Research*. Bergen: Universitetet i Bergen, Norges Handelshøyskole, 1993. vol. II, pp. 932-941.

- (2002). "La representación de objetos y conceptos". Guerrero Ramos, G.; Pérez Lagos, M. F. (eds.) *Panorama actual de la Terminología*. Granada: Comares. [Forthcoming].

Schnotz, W. (1994). "Wissenserwerb mit logischen Bildern". Weidenmann, B. (ed.) *Wissenserwerb mit Bildern*. Bern: Verlag Hans-Huber. pp.95-148.

Sperber, D.; Wilson, D. (1995). *Relevance: Communication and cognition*. 2nd. ed. Oxford: Basil Blackwell.

Stockinger, P. (1993). "Conceptual analysis, knowledge management, and conceptual graph theory". *Lenguas Modernas*. Chile: Universidad de Chile. nº 20, pp. 5-53.


[22] Due to space constraints the statistical calculations to support this assertion are not presented in this paper.

Thornton, C. (1996). “Re-presenting representation”. Peterson, D. (ed.) *Forms of Representation: An interdisciplinary Theme for Cognitive Science*. Wiltshire: Intellect. pp. 152-162.

Weidenmann, B. (1994). “Informierende Bilder”. *Wissenserwerb mit Bildern*. Bern: Verlag Hans-Huber. pp. 9-55.

### 9.1.1. Documents used to isolate the corpus

#### 9.1.1.1. Expert level

MAEpro[23]:

Maestranza Aérea de Albacete (1989). Prontuario para mecánico de línea del avión Mirage F1CE, BE, y EE. Puesta al día nº 14. Editado por el Negociado de Instrucción-Escuadrón de mantenimiento-Ala 14.

MARcar:

Marcel Dassault-Breget Aviation (1974a). *Cartas de trabajo: Instalación propulsora del avión Mirage F1CE. Válida para las primeras, segundas y terceras tandas.* Puesta al día noviembre 1981. Clasificación EA: 2782/MM. [Restricted].

MARman:

-(1974b). *Manual de mantenimiento: Instalación propulsora del avión Mirage F1CE*. Clasificación EA: 1812/DIA. [Restricted].

MARcat:

-(1974c). *Catálogo ilustrado de partes: Sistema de reabastecimiento en vuelo Mirage FICE*. [Restricted].

#### 9.1.1.2. Student level

ESCfun:

Escuela de Especialistas Mecánicos de Aviones (1971). “Sistema de combustible”. *Fundamentos básicos de aviones y equipos auxiliares*. León: Ejército de Aire. Lección 22, pp. 110-119. [Restricted].

LOMcom:

Lombardo, D. A. (1994). “Cómo tratar los problemas del sistema de combustible”. *Los sistemas de las aeronaves: Conozca a fondo su avión*. Madrid: Paraninfo. cap. 8, pp. 97-106.

MALsis:

De la Malla, F. (1972). “Sistema funcional de combustible”. *Sistemas funcionales de las aeronaves*. Madrid: de la Malla. cap. VII, pp. 195-218.

SAIsis:

Sáinz Díez, V. (1998). “Sistema de combustible”. *El motor de reacción y sus sistemas auxiliares*. 6ª ed. revisada. Madrid: Paraninfo. cap. VIII, pp. 139-151.

[23] Before each bibliographic reference, we have written its abbreviation used in our research.

## Appendix 1. Table of results

| | | | | EXPERT | STUDENT |
|---|---|---|---|---|---|
| TERMS | Inside definitions | Terms with illustration | | ∫ definitions | 77.7% |
| | | Illustration named by a term | | | 53.33% |
| | | Parts of illustrations named by a term | | | 2% |
| | Inside explanations | Terms with illustration | | 100% | 28% |
| | | Illustrations named by a term | | 100% | 100% |
| | | Parts of illustrations named by a term | | 100% | 22.5% |
| | Inside illustrations | Comments | | ∫ comments | ∫ comments |
| | | Illustrations with legend | | 7.46% | 33.33% |
| | | Illustrations with terms | | ∫ illustrations with terms | 100% |
| | | Relationship between term and illustration | Term written next to an element of the illustration | | 80% |
| | | | List with numbers | | 20% |
| DEFINITIONS | | Definitions with illustration | | ∫ definitions | 37.5% |
| | | Illustrations with definition | | | 46.66% |
| | | Parts of illustrations with definition | | | 4% |
| EXPLANATIONS | Explanations with illustration | | | 100% | 14.28% |
| | Illustrations with explanation | | | 100% | 100% |
| | Elements inside illustrations with explanation | | | 97.06% | 42% |
| | Reference to illustrations | Form | Strong | | 14.28% |
| | | | Weak | 100% | 85.72% |
| | | Situation of illustration | Before text | | 7.14% |
| | | | After text | 100% | 92.86% |
| | Reference to elements of illustrations | Form | Strong | 100% | ∫ references |
| | | | Weak | | |
| | | Situation of illustration | Before text | | |
| | | | After text | 100% | |
| CAPTIONS | Function | Explain the illustration | | | 100% |
| | | Add information | | | 100% |
| | | Redundant information | | 100% | |

## Appendix 2. Examples of illustrations and related texts

### Appendix 2.1. Expert level

**ALIMENTACIÓN DEL REACTOR**

[...]

2 - **CASOS PARTICULARES DE FUNCIONAMIENTO** (Ver Figuras 18-21).

A - En el arranque o en el reencendido en vuelo (ver Figura 18).

En ausencia de corriente alterna (N del reactor <2.800 rpm), la alimentación del reactor está asegurada a partir de la nodriza posterior derecha 2 por la bomba de arranque 15Q que hace fluir el combustible a través de una válvula anti-retorno 152 hasta la tubería de descarga de la bomba BP derecha 12Q.

Mandos(ver Figura 21).

El interruptor de la bomba de arranque 14Q colocado en la posición "Marche".
Estando desexcitado el relé de parada 16Q, se excita el relé de la bomba de arranque 96Q y existe alimentación de la bomba de arranque 15Q.
Desde el momento en que se establece la alimentación de corriente alterna:
- Excitación del relé de parada 16Q por un relé de alimentación de la bomba BP 8Q a través de la caja de células 17Q.
- Desexcitación del relé de la bomba de arranque 96Q y corte de la alimentación de la bomba de arranque 15Q.

(Fuente: MARman/ 161-162)

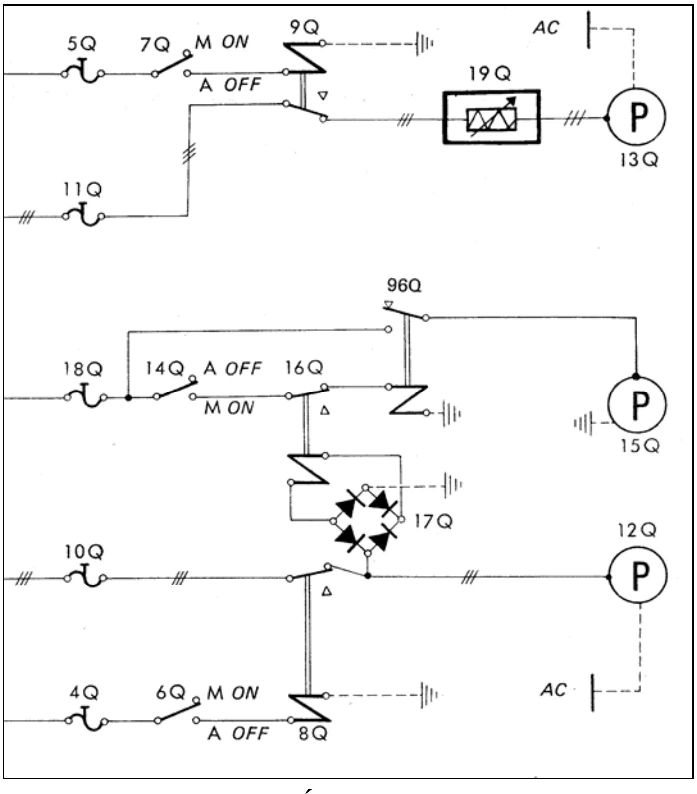


FIGURA 21 -ALIMENTACIÓN DEL REACTOR-Bombas BP - Circuito eléctrico
(Fuente: MARman/ 165)

**Appendix 2.2. Student level**

Cuando un piloto pasa de un avión monomotor a otro bimotor, se da cuenta de que su sistema de combustible es mucho más complicado. Este tipo de avión ha sido diseñado para vuelos de largo alcance con uso extensivo de los instrumentos y operación de emergencia con un solo motor. La Beech B55 Baron, por ejemplo, tiene una disposición de depósito y selector combustible/motor más complicados que virtualmente cualquier monomotor construido (Fig. 8.3.). El inconveniente de la mayor complejidad del sistema de combustible es la mayor posibilidad de errores en el control del combustible. Cada avión tiene sus propias peculiaridades, y la buena práctica operativa dicta un conocimiento cabal de los procedimientos del sistema.

(Fuente: LOMcom/ 99-100)

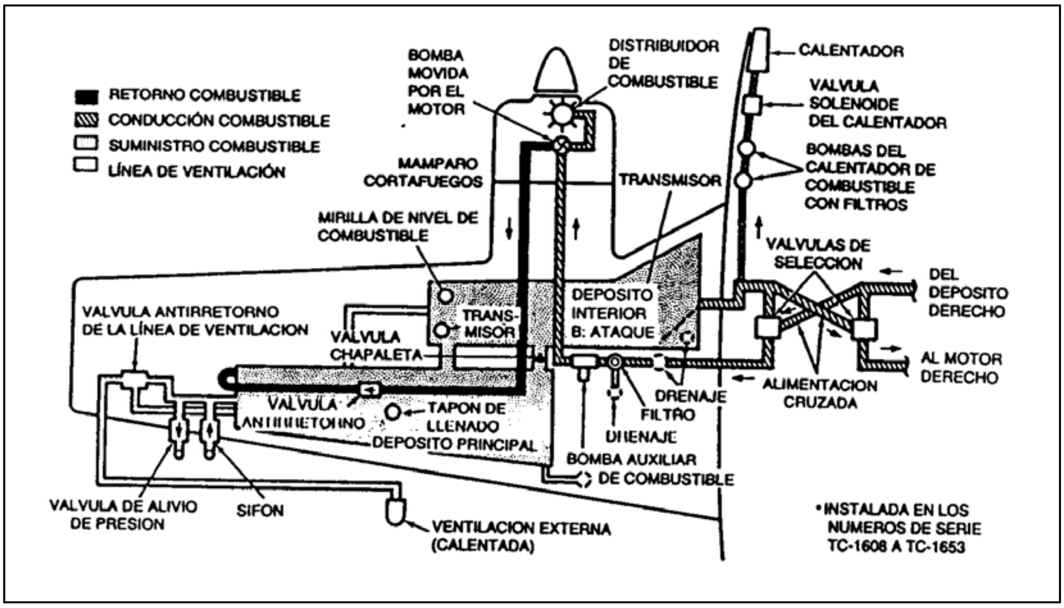


**Figura 8.3.** *Esquema del sistema de combustible de la Beech Baron B55.*

(Fuente: LOMcom/ 100)

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# ABSTRACT

## Relationship and dependency between linguistic and non-linguistic forms of concept representation: A study of texts addressed to experts and students

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In this paper we determine the relationships and dependencies between linguistic and non-linguistic forms of concept representation in two levels of knowledge, expert and student, in the field of aeronautics. More specifically, for the specialized level, we select texts on aircraft fuel systems used by Spanish mechanics to repair the jet Mirage F1. In total, by creating systems of concepts, we delimit 119 concepts related to fuel feeding phases and parts of fuel systems. At the student level, we choose books studied by these mechanics during their training period, which has provided us with 100 concepts on the same subject as the expert level.

After isolating these concepts, we determine which of them are the linguistic and non-linguistic forms that represent the concepts of our sample in the selected documents. The only non-linguistic forms found are illustrations. As linguistic forms we discover terms, definitions, explanations, and texts or terms inside illustrations.

Finally, we study how these forms relate and depend on each other leading us to a better understanding of concept relationships in technical writing at the expert and student levels.

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# Epistemic and Deontic Modality: A Linguistic Indicator of Disciplinary Variation in Academic English

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## 1. Modalization and disciplinary variation in academic English

According to pragmatic linguistic analyses, language has to be analyzed and interpreted in relation to the social context which generates and uses it. Language is not to be considered an isolated system of either symbols or mental rules, but a system used in a specific setting and for specific communicative purposes. It is within this pragmatic paradigm that English for Specific Purposes (ESP) develops in the 60s and continues to the present.

In this context, RAs are among the most widely researched genres, but most of these studies have focused on their structural organization (Crookes, 1986; Swales, 1990; Nwogu, 1990, 1991, 1997; Bhatia, 1993; Berkenkotter & Huckin, 1995; Posteguillo, 1996a-b, 1999; Estévez & Piqué, 1997; Piqué & Andreu-Besó, 2000), or on the structural organizations of individual sections within the RA itself (Swales, 1981; Dudley-Evans & Henderson, 1990; Brett, 1994; Holmes, 1997; Piqué & Andreu-Besó, 1998; Bloor, 1999).

It is true that these macrostructural descriptions represent a major feature of RAs as a genre, but there are other linguistic and communicative phenomena which differentiate the RA from other genres which have not been analyzed in such detail, especially having in mind disciplinary variation. For instance, some other authors have studied alternative discourse functions of RAs, such as the use of citations and references (Jordan, 1990), or the use of argumentation (Hyland, 1990; Thompson, 1993).

Alcaraz (2000: 139-140) considers that RAs are defined by four major features: (a) a specific macrostructure, (b) modalization (i.e., the use of modalized or hedged statements), (c) their main communicative purpose (i.e., scientific claim), and (d) academic politeness (i.e., acknowledging other scientists' research by means of references). The macrostructural component has been widely studied (see references above). However, modalization, or the use of hedges, has also become a major line of investigation in relation to RAs, both from a synchronic (Gosden, 1995; Grabe & Kaplan, 1997; Meyer, 1997; Gledhill, 2000) as well as from a diachronic perspective (Atkinson, 1992; Skelton, 1997; Salager-Meyer, 1998). There is also a recent interest in the disciplinary variations to be detected regarding the use of hedging in RAs, as the works of Hyland (1994, 1996), Crompton (1997), and Lewin (1998) illustrate.

However, most of these studies have not taken into consideration a significant linguistic categorization of modalized or hedged statements which is to be found in linguistic theory since the late 70s, namely the division of modalized statements into epistemic and deontic assertions –with the exception of Simpson's (1990) study, as we indicate below, and more recently, Vihla's (1999) research on medical writing. Mood and modality express the speaker's attitude or opinion regarding "the contents of the sentence" (Palmer, 1986: 14) or "the proposition that the sentence expresses" (Lyons, 1977: 452). Palmer (1986: 21) defines mood as realized by the verbal morphology, whereas modality appears as a linguistic feature generated by a variety of linguistic phenomena among which modal verbs play a special role, as Downing and Locke (1992: 383-384) describe. Quirk et al. (1985: 219), discussing modality, speak of "constraining factors of meaning" namely in terms of intrinsic and extrinsic modality. In other words, the meaning of some kind of intrinsic human control over events would signify "permission", "obligation" and "volition" (deontic, according to Lyons, Palmer, and Downing & Locke). On the other hand, where such intrinsic control is not involved, the meaning would indicate "possibility", "necessity", and "prediction" (epistemic, using Lyons', Palmer's, and Downing & Locke's terminology). The terms epistemic and deontic are the ones consistently used in this paper.

More specifically, deontic modality (DeM) means that the speaker "intervene[s] in the speech event by laying obligations or giving permission" (Downing & Locke, 1992: 382), as in *One must look into this matter in detail ..., Shall we negotiate peace now?* or *This experiment should be repeated.* On the other hand, epistemic modality (EpM) implies that the speaker assesses "the probability that the proposition is true in terms of the modal certainty, probability or possibility" (ibid.), as in *It may be the case that Results might change if certain conditions ...*, or *The concert must be over*. Simpson's (1990) study, which takes into account this epistemic versus deontic distinction, has noted that DeM is a distinguishing feature of, for example, literary criticism.[1]

Our aim here is to analyze the language in three different academic contexts (medicine, biology, and literary criticism) in order to detect possible variations in the use of modality, whether EpM or DeM, and to compare our results with those obtained by Simpson and other researchers. In order to do this, we have focused on testing the following hypotheses:

a) It may be possible that different disciplines would favor a different use of EpM and DeM by means of modal verbs;

b) Due to the different epistemological grounding of medicine and biology texts (analytical and experimental) on the one hand, and literary criticism (more creative and subjective) on the other, we suggest that medicine and biology Ras will EpM, whereas literary criticism RAs might combine the use of both EpM and DeM;

c) some modal verbs may be more epistemically or deontically oriented depending on the discipline.

Taking into consideration these initial hypotheses, we present a categorization of modalized and unmodalized statements in academic writing adapted from Hyland's (1996) categorization of scientific hedges.

## 2. Method of study

To test the applicability of these hypotheses, three distinct corpora have been analyzed. We have selected a corpus of medical RAs (C1), a corpus of RAs in biology (C2, and a third corpus of literary criticism RAs (C3). We have included medicine and biology because –even though both may be considered to fall within the umbrella category of health sciences– in our corpus in medicine, authors usually deal with people, whereas in our biology corpus this is not necessarily the case and, consequently, their results may offer some differences. We were interested in detecting whether this fact generated any differences in the use of modals. Corpus 1 (C1), containing 51,199 words, is made up of different RAs from top medical journals; Corpus 2 (C2), with a total of 50,335 words, contains biology Ras; and corpus 3 (C3), with 51,314 words, is composed of RAs in literary criticism. Table 1 illustrates the organization of the corpus.

**Table 1.** Organization of the three corpora.

| | Corpus 1 | Corpus 2 | Corpus 3 |
|---|---|---|---|
| **Field** | **Medicine** | **Biology** | **Literary Criticism** |
| **Journals** | *British Medical Journal*<br>*Heart Lung*<br>*Hypertension*<br>*Journal of the American Medical Association*<br>*Journal of Clinical Epidemiology* | *Behaviour*<br>*BioEssays*<br>*Biological Review*<br>*FEBS Letters*<br>*Journal of Chemical Technology and Biotechnology*<br>*Journal of Structural Biology*<br>*Systematic Biology* | *Early Modern Literary Studies*<br>*Publications of the Modern Language Association*<br>*Victorian Literature and Culture* |
| **No. of words** | 51,199 | 50,335 | 51,314 |

All journals are relevant academic periodicals in each of the disciplines being studied; in these publications, it is assumed a homogeneous expert audience. In addition, we have only selected research articles and disregarded other contents in the form of other genres, such as editorials, book reviews, short research notes, systematic reviews and the like. The modals selected for this study, following Quirk et al. (1985) and Downing and Locke (1992), are: *can, could, dare, may, might, must, need, ought, shall, should, will,* and *would*.[2]

Using Scott's *WordSmith Tools* (1996), we listed and individually analyzed all the modal and semimodal verbs contained in the three corpora applying the theoretical distinction between EpM and DeM as outlined in section 1. In other words, we looked into each modal verb and considering its function in the sentence we classified it as deontic or epistemic. In all instances, the full context of the modal was taken into account to identify the function of the verb. Sometimes this involved considering a full paragraph or even a complete section in a paper. Each corpus was analyzed by one of the authors of this study. However, complex instances where the modal verb used was difficult to classify were discussed by the three authors together in the regular meetings held in the process of writing this paper.

We also used the $\chi^2$ test through the statistics package *Epi Info 6* to assess the statistical significance of the data obtained, comparing the three sets of data distinguishing EpM and DeM.

## 3. Results

The results obtained are summarized in table 2 below, in which data from our three corpora are shown, along with the totals of EpM and DeM, respectively. We have found a total of 1,063 instances of modal verbs in the corpora, of which 939

(88.33%) were examples of EpM and 124 (11.67%) of DeM. The column frequency (f) indicates the total number of times that each modal appears in each one of the three corpora, while the next two columns indicate the percentage (%) of appearance of each modal verb according to its epistemic or deontic meaning in the three corpora.

**Table 2.** Epistemic (EpM) and Deontic Modality (DeM) Comparison in three Corpora (figures in bold type account for the most significant differences).

| | **C1-Medicine** | | | | | **C2-Biology** | | | | | **C3-Literary Criticism** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Total** | **EpM** | | **DeM** | | **Total** | **EpM** | | **DeM** | | **Total** | **EpM** | | **DeM** | |
| | **modals** | **f** | **%** | **f** | **%** | **modals** | **f** | **%** | **f** | **%** | **modals** | **f** | **%** | **f** | **%** |
| *can* | 48 | 48 | 100 | 0 | 0 | 106 | 106 | 100 | 0 | 0 | 66 | 59 | 89.39 | 7 | 10.61 |
| *could* | 31 | 31 | 100 | 0 | 0 | 29 | 27 | 93.11 | 2 | 6.89 | 43 | 32 | 74.42 | 11 | 25.58 |
| *dare* | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | |
| *may* | 144 | 144 | 100 | 0 | 0 | 124 | 123 | 99.19 | 1 | 0.81 | 50 | 39 | 78 | 11 | 22 |
| *might* | 21 | 21 | 100 | 0 | 0 | 30 | 30 | 100 | 0 | 0 | 34 | 26 | 76.47 | 8 | 23.53 |
| *must* | 2 | 1 | 50 | 1 | 50 | 10 | 5 | 50 | 5 | 50 | 19 | 9 | 47.37 | 10 | **52.63** |
| *need* | 5 | 5 | 100 | 0 | 0 | 4 | 4 | 100 | 0 | 0 | 7 | 3 | 42.86 | 4 | **57.14** |
| *ought* | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 3 | 1 | 33.33 | 2 | **66.67** |
| *shall* | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 7 | 5 | 71.43 | 2 | 28.57 |
| *should* | 18 | 9 | **50** | 9 | **50** | 37 | 17 | 45.95 | 20 | **54.05** | 28 | 13 | 46.43 | 15 | **53.57** |
| *will* | 6 | 6 | 100 | 0 | 0 | 37 | 37 | 100 | 0 | 0 | 44 | 38 | 86.36 | 6 | 13.64 |
| *would* | 30 | 30 | 100 | 0 | 0 | 24 | 22 | 91.67 | 2 | 8.33 | 56 | 48 | 85.71 | 8 | 14.29 |
| Totals | 305 | 295 | 96.72 | 10 | 3.28 | 401 | 371 | 92.52 | 30 | 7.48 | 357 | 273 | 76.47 | 84 | 23.53 |

| | | | | | |
|---|---|---|---|---|---|
| **Totals** | **EpM** | 295 | 371 | 273 | 939 (88,33%) |
| | **DeM** | 10 | 30 | 84 | 124 (11,67%) |
| | | | | | 1063 |

The initial count of the use of deontic modality (DeM) in C1 (medicine RAs) shows a minimum use of this type of modality, that is, only 3.28% in a total of 305 modal and semimodal verbs used. In fact, many of the modals and semimodals show 100% of epistemic usage. Such is the case of *can, could, may, might, will* and *would*, as the following examples from corpus 1 illustrate:

[1] C1-EpM *Tricyclic antidepressants, however, can also have significant adverse effects, such as arrhythmias, postural hypotension, sedation, dry mouth, constipation, confusion, and urinary retention.*

[2] C1-EpM *The quantities of the factors could limit the amount of renin mRNA that can be produced, even under conditions of normal salt loading and in the absence of pharmacological interventions.*

[3] C1-EpM *These observations suggest that a local spiral artery renin-angiotensin system may play a role in pregnancy-induced remodeling of these vessels.*

[4] C1-EpM *Since 80% of the protein-bound serum calcium, which represents half of the total serum calcium, is bound to serum albumin, some authors [5,6] have suggested that the observed effect of serum albumin on blood pressure might be actually due to serum calcium.*

[5] C1-EpM *Approximately 10% to 15% of all people with herpes zoster develop PHN. The age distribution of its victims, however, includes a disproportionate number of the elderly; nearly half of older patients with herpes zoster will have enduring neuropathic pain.*

[6] C1-EpM *Bradykinin is a potent stimulus for tPA secretion in ACE-pretreated bovine aorta endothelial cells, in animal models, and in humans. Thus, ACE inhibitors would be expected to favorably alter fibrinolytic balance by decreasing Ang II and increasing bradykinin.*

In corpus 2 (C2), with texts from biology, epistemic modality (EpM) is again the major type of modality (92.52%). There is here, however, a significant increase in the use of deontic expressions (7.48%). In particular, the case of the modal must may draw readers' attention. This modal is used both as an epistemic and a deontic modalizing device especially in corpora 2 and 3 (see table 2). The following examples illustrate the fact that *must* has two modal meanings:

[7] C2-EpM *Thus, some other factor must be important in determining the behavior of these snails.*

[8] C2-DeM *The lesson that the Equidae pose in socio-ecology is that studies of variation in social and spatial organization must be more judicious in their use of comparative field observations.*

[9] C3-EpM *He therefore bases his reasoning on what appears a fairly sensible notion: that from the records of prosecutions for publishing obscene books one must presume the existence of a trade in obscene literature.*[3]

[10] C3-DeM *But my readers must not therefore suppose that I intended to discourage the collection of really good specimens of art manufacture.*

The data obtained in the analysis of literary criticism texts (corpus 3) show statistically significant differences. Here almost one out of four modals conveys deontic meaning. In this respect, it is also interesting to note that of the seven verbs (*can, could, may, might, need, will* and *would*) which only convey epistemic modalizing meaning in C1 (medicine), and four (*can, might, need, will*) in C2 (biology), none has remained in such a permanent usage in C3 (literary criticism). On the contrary, in literary criticism (C3) several instances of deontic modalization (23.53%) are to be found with several of these verbs, as in the case of *could, may, might, need, will* or *would*, as illustrated in the following examples:

[11] C3-DeM *Any publication judged by British legal authorities after 1727 to be obscene and to display a tendency to corrupt the morals of the general population could be suppressed and prosecuted for obscene libel.*

[12] C3-DeM *If Credit represents the historically progressive power of aesthetic imagination, we might say that the tyrant embodies a kind of pernicious, historically backward anesthesia.*

[13] C3-DeM *Feminists, in particular, have often been at the vanguard of personal criticism, arguing that traditional forms of academic language need to be replaced by a more personal voice.*

[14] C3-DeM *I would like to suggest that a different picture arises when the same generic and historical questions are considered from the point of view of cultural reception and legal history.*[4]

Consequently, there seems to be a progressive increase in the use of deontic modality as we move from C1 (medicine) to C2 (biology), and especially when we move from C2 to C3 (literary criticism). This is particularly shown in the totals for each category of modality used, whose differences are statistically significant ($p < 0.05$). In fact, statistically, C3 seems to function differently from C1 and C2. Tables 3a and 3b show marked statistically significant differences in the overall use of EpM and DeM when, on the one hand, the medicine and literary criticism corpora are compared ($p = 0.000$) or when, on the other, the biology and literary criticism corpora are compared ($p = 0.000$).

**Table 3a.** EpM and DeM totals in C1 and C3.

| **C1-Medicine** | | | **C3-Literary Criticism** | | | | |
|---|---|---|---|---|---|---|---|
| **Total** | **EpM** | **DeM** | **Total** | **EpM** | **DeM** | | |
| **modals** | **f** | **f** | **modals** | **f** | **f** | $\chi^2$ | ***p*** |
| **305** | 295 | 10 | **357** | 273 | 84 | 55.36 | 0.000 |

$\chi^2$ representative if $p < 0.05$

**Table 3b.** EpM and DeM totals in C2 and C3.

| **C2-Biology** | | | **C3-Literary Criticism** | | | | |
|---|---|---|---|---|---|---|---|
| **Total** | **EpM** | **DeM** | **Total** | **EpM** | **DeM** | | |
| **modals** | **f** | **f** | **modals** | **f** | **f** | $\chi^2$ | ***p*** |
| **401** | 371 | 30 | **357** | 273 | 84 | 38.07 | 0.000 |

$\chi^2$ representative if $p < 0.05$

**Table 3c.** EpM and DeM totals in C1 and C2.

| **C1-Medecine** | | | **C2-Biology** | | | | |
|---|---|---|---|---|---|---|---|
| **Total** | **EpM** | **DeM** | **Total** | **EpM** | **DeM** | | |
| **modals** | **f** | **f** | **modals** | **f** | **f** | $\chi^2$ | ***p*** |
| **305** | 295 | 10 | **401** | 371 | 30 | 5.72 | 0.017 |

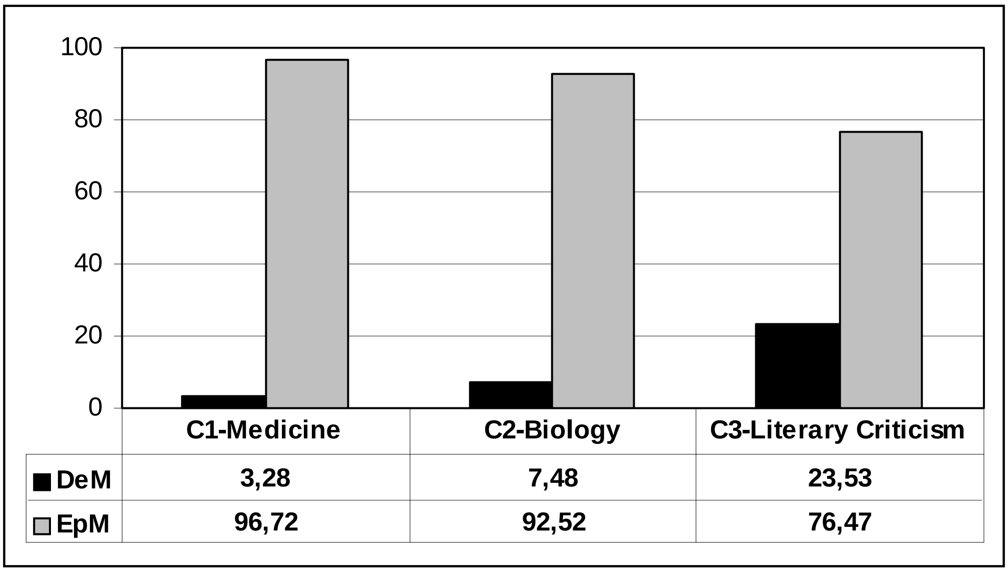
$\chi^2$ representative if $p < 0.05$

However, as can be seen in table 3c, although the comparison between medicine (C1) and biology (C2) also appears statistically significant ($p < 0.05$), the raw figures (table 1) suggest that only a moderate use is made of DeM, thus showing that it may be feasible to consider medicine and biology as highly similar epistemologically speaking, at least in the realization of epistemic/deontic modality

($p$ = 0.017). If so, literary criticism would appear as a distinct discipline in the use of modality, thus reinforcing the possibility that epistemology and communicative purposes of literary RAs may be somehow substantially different from RAs in biology and medicine RAs.

Figure 1 below graphically summarizes the results reported in table 2, illustrating this progressive increase in the use of DeM and corresponding decrease in EpM.

**Figure 1.** Epistemic (EpM) vs Deontic Modality (DeM) in the Three Corpora (in %).




## 4. Discussion

It therefore seems that our initial hypothesis (a) –that different disciplines favor different types of modality– is only partially confirmed. It is fully confirmed in the case of a comparison between medicine (C1) and literary criticism (C3) RAs, but not in relation to comparing medicine (C1) and biology (C2).
Focussing on the opposition between medicine and literary criticism, it should be noted that we are dealing with the same genre and a similar corpus in terms of size (as measured by number of words); but in the case of medicine RAs, EpM is the most frequent choice, whereas in the case of literary criticism RAs both choices are acceptable depending on the context. It seems that literary critics may resort to either epistemic assertions or deontic statements depending on their communicative purpose. This fact opens a whole new area of linguistic and sociolinguistic research: Does the communicative purpose of RAs in literary criticism differ from the communicative purpose of RAs in medicine and/or biology? This may very well be the case due to the different epistemology underlying each discipline.

Dudley-Evans (2000: 8) suggests, quoting Rizomilioti's current research in this area (work in progress), that literary critics use fewer epistemic modals –downtoners, in their terminology– than, for instance, biologists and archeologists.

Our data also confirm this tendency of using fewer epistemic modals and semimodals in literary criticism—not just in relation to the overall usage as shown in percentages (see figure 1), but also if we look into the absolute numbers. Medical researchers used 295 epistemic modals, biologists 371, and literary critics only 273 (see table 2).

As we have mentioned above, Simpson (1990: 88) reported the tendency of literary critics to be highly assertive in their statements. In fact, he described many instances of unmodalized assertions in the text he studied –*The Great Tradition*, by F. R. Leavis. Simpson quotes Leavis' (1950: 1) famous opening statement as a typical example of unmodalized assertion:

> [15] Leavis: *The great English novelists are Jane Austen, George Eliot, Henry James and Joseph Conrad—to stop for the moment at that comparatively safe point in history*.

Leavis might have resorted to a more modalized statement and have said "The great English novelists *may* be..." or "*could* be", or any other similar epistemic statement. Probably, feeling the enormous intensity of his opening assertion, he himself tries to mitigate his own statement by adding the dashed non-finite clause "–to stop for the moment at a comparatively safe point in history". But the addition of this clause limits his unmodalized statement only after Conrad's time, but not before –so it is only a *partial* hedge.

It is true, however, that Leavis, as a well-reputed literary critic, could allow himself to be especially assertive and thus resort to a frequent use of deontic statements. In that respect, Simpson's study –valuable as it is– shows its limitations, since it does not look into other literary critics' work, especially into other literary critics who may not afford to be so bold in their comments. But the issue here is whether such strong deontic statements –as example [15]– would be acceptable in a different academic setting. The answer seems to be that they would *not* be acceptable. Our data have illustrated how modals, in the case of medical RAs and to a certain point also in the case of biology texts, are systematically epistemic, that is, used in order to question the certainty or probability of the statements where they appear or to express possibility.[5] But in literary criticism, modals, when used, are not only applied to question the certainty or probability of a statement or to express possibility (i.e., epistemically). They are also used, in a substantial number of instances (e.g., *must, could, might, need,* and *would*, in examples [10] to [14]), to impose the author's specific point of view. Similarly, Simpson highlights some instances where Leavis (1950: 2, 12) also makes a deontic use of a modal as in the following sentences:

> [16] DeM-Leavis: *(...) Jane Austen (...), <u>needs</u> to be studied at considerable length ...*
>
> [17] DeM-Leavis: *'Portrait of a Lady' is one of the classics of the language and we <u>can't</u> simply regret the conditions that produced something so finely inspired*.

Simpson's study, as we noted above, has the shortcoming of having analyzed only one text and, accordingly, the writing of only one literary critic, and of not providing specific quantitative data. However, he signaled the relevance of considering the deontic usage of modals in literary criticism. Our analysis of the writing of several different literary critics confirms that literary criticism uses fewer epistemic modals than other academic disciplines. It also confirms that, in turn, when literary critics do use modals they may do so in either epistemic or deontic assertions. This allows us to suggest that the combination of DeM and EpM is a representative feature of, at least, research articles in literary criticism.

Our results also suggest that some modal verbs tend to be more systematically used as either epistemic or deontic modalizing devices, such as the case with *can, could, may, might* or *will,* which are mostly epistemic, or the examples of *must, need* or *should* which in some corpora are mostly deontic. This would confirm hypothesis (c), that is, that some modals and semimodals may be more deontic or epistemic oriented depending on the discipline.

In our opinion, the epistemological opposition between biology and medicine on one hand, and literary criticism on the other, is due to the fact that while medicine and biology focus on describing scientific research, literary criticism aims at persuading their readership by means of rhetorical devices. This statement may be an oversimplification because the situation is more complex. To be more precise, let us revise a set of longer examples. These extracts illustrate the way EpM and DeM are put to work in each discipline for different purposes.

Examples [18] to [25] below show how literary critics, as we have just mentioned, aim at persuasion. It could very well be argued that that is precisely the objective (primary or secondary, depending on the discourse community) of any RA in any discipline. The difference is then not so much in the objective itself but in the way each discourse community attempts to persuade their distinct readerships. Scientists in medicine and biology –and most likely in most experimental disciplines– strive to do so by means of accruing a significant amount of data (see examples from medicine and biology below). Literary critics, however, rely on combining both "data"—in the form of biographical writers' data or examples from the texts analysed—with *deontic* persuasion. This combination in turn generates the necessary mixture of epistemic and deontic modality usage. This is what examples [18] to [25] show.

| | **LITERARY CRITICISM** |
|---|---|
| | *Addressing the question "What is pornography?" in a recent essay,* |
| [18] DeM | *Randolph Trumbach begins with the following caveat: "it must be made clear* |
| [19] EpM | *that, in eighteenth-century England, there was not much of what the twentieth-* |
| | *century viewer or reader would recognize as hard-core pornography.* |
| | *(...)* |
| [20] DeM | *I would like to suggest that a different picture arises when the same* |
| | *generic and historical questions are considered from the point of view of* |
| [21] EpM | *cultural reception and legal history. A lack of eighteenth-century texts in* |
| | *English that we today would recognize as pornography does not mean that the* |
| | *notion of pornography, especially in Kendrick's embattled sense, is irrelevant* |
| [22] DeM | *to describing works caught in legal and social conflicts in Britain in the* |
| | *eighteenth century. We only need shift from considering pornography as a set* |
| | *of writerly conventions and practices to viewing it as a specific cultural status* |
| | *producing specific social and legal conflicts. One difficulty here is the problem* |
| [23] EpM | *of historicizing obscenity in its legal discursive sense; another is how to* |
| | *imagine the existence of a generic effect in an age seemingly bereft of clear,* |
| [24] EpM | *recognizable generic causes. Put in another way, while we may lament the* |
| [25] DeM | *dearth of recognizably pornographic productions in the eighteenth century—* |
| | *those texts that Trumbach or any "twentieth-century viewer or reader would* |
| | *recognize"—we should not ignore a contrasting predilection for pornographic* |
| | *receptions, particularly in a century that prosecuted other kinds of books in* |
| | *ways that we usually associate with the prosecution of pornography.* |

Here, the literary critic, while discussing the subject of the historical appearance and evolution of pornography in literary works, does resort to the combined use of EpM and DeM. The extract contains eight modals –underlined in the example. One of these is a quote, but this quote is part of another RA in literary criticism and not from a literary piece, and thus it is also representative of literary criticism discourse. Of all these modals, *would* (three times) and *may*[6] are epistemic, while another instance of *would*, plus *need* and *should* are deontic. The *must* in the quotation is also deontic. All these deontic modals are used to convey the literary critics' strong opinions on the matter under discussion in such clauses as *it must be made clear*, *I would like to suggest*, *we only need shift* or *we should not ignore*. Complementarily, these deontic forms represent a device to discretely address readers in a subtle strategy to make them co-participants of the authors' opinions. Interestingly, the epistemic modals are also embedded in direct appeals to the readership in such clauses as *the reader would recognize, we today would recognize* or *we may lament*; but here the modality is restricted to express possibility on the basis of what has already been explained. The distinctive element, however, of literary criticism is the fact that it is acceptable in this discipline to address the reader both deontically and epistemically, whereas medical researchers or biologists are expected to reduce DeM to a minimum. In other words, it is epistemologically acceptable in literary criticism to combine deontic and epistemic expressions, while the use of DeM is highly questionable in medicine or biology.

Next, examples [26] to [29] and [30] to [34] below are good instances of distinctive different use of modals and semimodals in medicine and biology, respectively, as opposed to the way these forms are used in literary criticism. In examples [26] to [28], *may* (in three instances) and *would* (once), example [29], are used to account for a set of possible implications suggested by the detailed results which have just been described. The authors are trying to convince the readership, as in literary criticism, but here the argument is built on a substantial amount of data from which presuppositions are epistemically drawn. That *may* appears so frequently is consistent with our data where this form is, by far, the most frequently used modal in medicine.

| | **MEDICINE** |
|---|---|
| | *The mechanisms through which activation of the RAS increases or ACE inhibition reduces the risk of ischemic cardiovascular events in selected populations are not known. One possible explanation involves an interaction between the RAS and fibrinolytic system. Accumulating data suggest that angiotensin 11 (Any II) modulates fibrinolysis. For example, Ang II and its hexapeptide metabolise Ang IV stimulate plasminogen activator inhibitor-l (PAI-I) expression in cultured endothelial cells in a dose-dependent manner.* |
| [26] EpM | *Infusion of exogenous Ang II has been shown to increase PAI-I antigen selectively in both normotensive and hypertensive subjects. These findings <u>may</u>* |
| [27] EpM | *be of clinical significance because PAI-I is the major inhibitor of tissue plasminogen activator (tPA) in vivo. Increased PAI- I expression has been observed in atherosclerotic plaques in humans and <u>may</u> contribute to the progression of vascular disease. Elevated PAI-I levels are observed in insulin-* |
| [28] EpM | *resistant states and appear to be a risk factor for recurrent Ml.* |
| | *ACE inhibitors not only block the formation of Ang II but also prevent the degradation of bradykinin. We have previously proposed that the* |
| [29] EpM | *prothrombotic effects of Ang II <u>may</u> be balanced by the antithrombotic effects of bradykinin. Bradykinin is a potent stimulus for tPA secretion in ACE-pretreated bovine aorta endothelial cells, in animal models, and in humans. Thus, ACE inhibitors <u>would</u> be expected to favorably alter fibrinolytic balance by decreasing Ang II and increasing bradykinin.* |

In examples [30] to [34] below, EpM again remains as the only type of modality applied by the authors of the RA. In this case, the biologists are describing an automated system for information extraction in molecular biology and its possible applications and, as in the case of medicine, DeM is not applied. Biologists below systematically resort to the use of an epistemic *can* (five instances) –the second most frequent modal in biology (see table 2). The text results in the description of a set of possible applications of the system.

| | **BIOLOGY** |
|---|---|
| [30] EpM<br>[31] EpM | *Information retrieval (IR) techniques are used to select documents that are relevant according to a user's needs. Information extraction (IE) techniques are used to extract relevant information from text according to pre-specified templates (e.g., for a terrorist action, extract place, date, victim and outcome). They do not need an understanding of the text under analysis, which is approached by natural language processing (NLP), but they can benefit from it.* |
| [32] EpM | *NLP can be applied at the level of words out of context (for lexical matching and morphological analysis or stemming) or at the level of sentences (for syntactic parsing, namely, analyzing a sentence to determine its structure, usually in order to identify noun sentences and their components).* |
| [33] EpM<br>[34] EpM | *Understanding a text can ultimately be possible only if the system can refer to an ontology (or controlled vocabulary), i.e. the association of words to meanings, maybe including hierarchical relations between them. They can be general (e.g., WordNet from the Cognitive Science Laboratory, Princeton University) or specific to a domain of knowledge, e.g., to medicine as the unified medical language system or to eukaryotic genes as in gene ontology.* |

## 5. Conclusion

We believe that the use of modals is highly representative of the type of modality which a certain discourse community may prefer in a specific professional or academic setting. We also think that the selection of one specific type of modality (i.e., EpM or DeM) is a matter of deliberate stylistic choice of scientists and researchers influenced by the pragmatic contexts of their respective specific academic/professional discourse communities.

Our results suggest that literary critics favor a combined use of DeM and EpM, whereas medical researchers or biologists restrict the use of deontic expressions and favor the use of epistemic modalizing devices. The objectives of RAs in the three disciplines may be similar –to describe research and persuade the readership–, but the means to attain such goals seem to be epistemologically different.

Complementarily it may also be relevant to extend this study to account for the use of the epistemic/deontic dichotomy realization in other academic disciples; or to check if the epistemic/deontic usage of modals varies depending on the section of the RA (i.e., across introductions, methods, results or discussions). These remain as open areas of research that demand further linguistic inquiry.

## 6. Acknowledgements

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## 7. References


Alcaraz, E. (2000). *El inglés profesional y académico*. Madrid: Alianza Editorial.

Atkinson, D. (1992). "The evolution of medical research writing from 1735 to 1985: The case of the *Edingurgh Medical Journal*." *Applied Linguistics* 13: 337-374.

Berkenkotter, C. & T. Huckin (1995). *Genre knowledge in disciplinary communication*. Hillsdale, NJ: Erlbaum.

Bhatia, V. K. (1993). *Analysing genre.* London: Longman.

Bloor, M. (1999). "Variation in the methods of research articles across disciplines: the case of fast and slow text." In P. Thompson (ed.), *Issues in EAP writing research and instruction*, pp. 84-105. Reading: University of Reading.

Brett, P. (1994). "A genre analysis of the results section of sociology articles." *English for Specific Purposes* 13: 47-59.

Crompton, P. (1997). "Hedging in academic writing: Some theoretical problems." *English for Specific Purposes* 16: 274-287.

Crookes, G. (1986). "Towards a validated analysis of scientific text structure." *Applied Linguistics* 7: 57-70.

Downing, A. & P. Locke (1992). *A university course in English grammar*. Hemel Hempstead: Phonix ELT.

Dudley-Evans, T. (2000). "Genre analysis: a key to a theory of ESP?" *Ibérica* 2: 3-11.

Dudley-Evans, T. & W. Henderson (eds.) (1990). *The language of economics*. London: ELT Documents, 134.

Dudley-Evans, T., & W. Henderson (1990). "The organisation of article introductions: Evidence of change in economics writing." In Dudley-Evans & Henderson (eds.), pp. 67-78.

Estévez, N. & Piqué, J. (1997). A process and product oriented approach to writing medical essays. In J. Piqué & D. J. Viera (eds.), *Applied languages: Theory and practice in ESP*, pp. 119-135. València: Servei de Publicacions de la Universitat de València.

Fortanet, I., S. Posteguillo, J. C. Palmer, & J. F. Coll (eds.) (1998). *Genre studies in English for academic purposes*. Castelló: Publicacions de la Universitat Jaume I.

Gledhill, C. (2000). "The discourse function of collocation in research article introductions." *English for Specific Purposes* 19: 115-135.

Gosden, H. (1995). "Success in research article writing and revision: A social-constructionist perspective." *English for Specific Purposes* 14: 37-57.

Grabe, W. & R. B. Kaplan (1997). "On the writing of science and the science of writing: Hedging in science text and elsewhere." In Markkanen & Schröder (eds.), pp. 151-167.

Holmes, R. (1997). "Genre analysis, and the social sciences: An investigation of the structure of research article discussion sections in three disciplines." *English for Specific Purposes* 16: 321-337.

Hyland, K. (1990). "A genre description of the argumentative essay." *RELC Journal* 21: 66-78.

Hyland, K. (1994). "Hedging in academic writing and EAP textbooks." *English for Specific Purposes* 13: 239-256.

Hyland, K. (1996). "Writing without conviction? Hedging in science research articles." *Applied Linguistics* 17: 433-455.

Jordan, R. R. (1990). "He said: ‘Quote...Unquote’." In Dudley-Evans & Henderson (eds.), pp. 79-83.

Leavis, F. R. (1950). *The great tradition*. London: Chatto & Windus.

Lewin, B. A. (1998). "Hedging: Form and function in scientific research texts." In Fortanet et al. (eds.), pp. 89-104.

Lyons, J. (1977). *Semantics*. Cambridge: Cambridge University Press.

Markkanen, R. & H. Schröder (eds.) (1997). *Hedging and discourse*. Berlin · New York: Walter de Gruyter.

Meyer, P. G. (1997). "Hedging strategies in written academic discourse: Strengthening the argument by weakening the claim." In Markkanen & Schröder (eds.), pp. 21-40.

Nwogu, K. N. (1990). *Discourse variation in medical texts.* Nottingham: University of Nottingham.

Nwogu, K. N. (1997). "The medical research paper: Structure and functions." *English for Specific Purposes* 16: 119-138.

Palmer, F. R. (1986). *Mood and modality*. Cambridge: Cambridge University Press.

Piqué, J. & J.-V. Andreu-Besó (1998). "Bridging the gap in scientific articles." In Fortanet et al. (eds.), pp. 173-190.

Piqué, J. & J.-V. Andreu-Besó (2000). "A textual perspective of scientific articles: Patterns and moves." In M. Ruane & D. Ó Baoill (eds.), *Languages for specific purposes & academic purposes – Integrating theory and practice*, pp. 57-70. Dublin: University College Dublin, Irish Association of Applied Linguistics.

Posteguillo, S. (1996a). "A genre-based approach to the teaching of reading and writing abstracts in computer science." In J. Piqué, J.-V. Andreu-Besó & D. J. Viera (eds.), *English in specific settings*, pp. 47-57. València: Nau Llibres.

Posteguillo, S. (1996b). *Genre analysis in English for computer science*. València: Universitat de València: Col·lecció microfitxes.

Posteguillo, S. (1999). "The schematic structure of computer science research articles." *English for Specific Purposes* 18: 139-160.

Quirk, R., Greenbaum, S, Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language*. Harlow: Addison Wesley Longman.

Salager-Meyer, F. (1998). "From the gentleman's courtesy to the scientist's caution: a diachronic study of hedges in academic writing (1810-1995)." In Fortanet et al. (eds.), pp. 133-171.

Scott, M. (1996). *WordSmith Tools*. Oxford: Oxford University Press.

Simpson, P. (1990). "Modality in literary-critical discourse." In W. Nash (ed.), *The writing scholar*. *Studies in academic discourse*, pp. 63-94. Newbury Park: Sage Publications.

Skelton, J. (1997). "The representation of truth in academic medical writing." *Applied Linguistics* 18: 121-140.

Swales, J. M. (1981). *Aspects of article introductions*. Birmingham: Aston University.

Swales, J. M. (1990). *Genre analysis.* Cambridge: Cambridge University Press.

Swales, J. M., U. K. Ahmad, Y.-Y. Chang, D. Chavez, D. F. Dressen, & R. Seymour (1998). "Consider this: The role of imperatives in scholarly writing." *Applied Linguistics* 19: 97-121.

Thompson, D. K. (1993). "Arguing for experimental 'facts' in science: A study of research article Results sections in biochemistry." *Written Communication* 10: 106-128.

Vihla, M. (1999). *Medical Writing. Modality in Focus*. Amsterdam: Radopí.

## NOTES

1. It should be noted that modality is a complex linguistic phenomenon and it cannot be reduced to the use –or non-use– of modal and semimodal verbs. Modality may be generated by means of a large variety of linguistic devices. For instance, lexical verbs, lexico-modal auxiliaries, modal disjuncts, modal adjectives used in impersonal sentences and modal nouns, *if-clauses*, or the remote past can also be used to create modality.
2. In this list we have included the semimodals *dare* and *need* since these two verbs in many ways function as proper modals. They are however considered as marginal modals by Quirk et al. (1985) or as semimodals by Downing & Locke (1992) because there are also homomorphic verb forms for *dare* and *need* which operate as lexical verbs.
3. We believe that *must*, in this example, conveys epistemic meaning, since it expresses a possible inference that may be drawn from what is being said. In fact, we understand that *must*, in this case, could be replaced by *may*.
4. The deontic meaning of *would* in this example may be questioned. It is our belief that *would*, in this context, is deontic; however, it may be considerecd that the expression *like to* is the deontic word group, whereas *would* may in fact be functioning as an epistemic hedge. We have, however, resorted to the first interpretation.
5. Engineering texts also seem to limit the number of epistemic modals. For instance, we have found that in a similar corpus of about 50,000 words of engineering RAs 89.45% of all modals and semimodals were epistemic for only 10.55% of deontic instances.
6. It must be noted that the modality of *may* in this specific statement is open to interpretation. We have considered it as epistemic, taking into account that it is expressing possibility, although should we interpret that the author is somehow imposing what may be considered as his personal point of view on the reader the modal could then be thought of as deontic.

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# ABSTRACT

## Epistemic and Deontic Modality: A Linguistic Indicator of Disciplinary Variation in Academic English

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We present a pragmatic analytical framework to explore the reasons underlying the differences in the use of modal verbs in English research articles (RAs) in three different academic disciplines: medicine, biology and literary criticism. Sentences may be either modalized or unmodalized. The use of modalized statements is a key feature of academic writing, and this expression of modalization has been widely researched. However, most of this investigation has not considered the linguistic distinction of types of modalization: epistemic modality (questioning the certainty or probability of a statement) and deontic modality (laying obligations or giving permission to the reader/audience). This linguistic dichotomy may be an important tool to describe disciplinary variations in academic writing. It is hypothesized that different disciplines favor different types of modality. Results in this study indicate that scientific RAs (i.e., in medicine and biology) mostly use epistemic modality, whereas literary criticism RAs combine the use of both epistemic and deontic modality. It is our contention that the selection of one specific type of modality (i.e., epistemic or deontic) is a matter of a deliberate stylistic choice of writers influenced by the pragmatic context of their specific and distinct academic discourse communities.

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# Professional Routines and Rules in News Writing

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## 1. Introduction

> *"In my opinion, the professionalism of a journalist is evaluated by us journalists ourselves. We are the professionals of news writing. It often happens that an outsider tries to tell us how things should be done. That's how conflicts come about."*
>
> (from an interview with a journalist)

Most people know how to read news stories, but it takes a professional to write them. Bell (1991: 147) states that journalists are the professional story-tellers of our age. According to Tuchman (1978: 66), journalistic professionalism is knowing how to write a story that meets organizational standards and formal conventions. These conventions and routines in media practice form a set of rules and are an integral part of media professionalism (Shoemaker & Reese 1996: 106).

This paper explores descriptive features of professionalism in news writing in a provincial Finnish newspaper, *Pohjalainen*. The purpose of this paper is to describe professionalism in journalistic writing as well as some of the professional conventions concerning story writing. The aim is to investigate, on one hand, how the professional journalistic writers feel about existing conventions in news writing, and, on the other hand, what professional, unwritten rules there are concerning news writing and especially designing a headline. Special attention is paid to headlines, since almost half of the comments on rules that appeared in the interviews were concerned with headlines. The other comments were about lead, captions, and speech quotations.

The paper is based on a larger study that investigates rules and conventions of news writing from a journalist's point of view. The study may be of help in clarifying why news stories are written the way they are. Furthermore, as Hvitfelt (1988: 113) emphasizes, in order to understand how journalism works, one should understand how the language of journalism works.

## 2. Material and method

Data for the study were collected by interviewing four journalists of the newspaper *Pohjalainen* in May 2001. The journalists were selected on the ground that they were experienced journalists who worked as news reporters. The subjects averaged 46 years of age, and their average experience of journalistic work was 22 years. Two women and two men were interviewed and they were ensured anonymity.

Before the interviews two news stories extracted from *Pohjalainen* were telefaxed to the subjects and the subjects were asked to have a look at the stories before the interview. During the interview, the news stories were used on one hand as a source for real-life examples, and on the other hand as a target for comments and criticism. The interviews were conducted as focused interviews for which an interview guide was designed beforehand. The duration of an interview was on the average one hour, and all interviews took place on the premises of the newspaper Pohjalainen. The interviews were recorded, transcribed, and analyzed.

The interviews were analyzed according to a phenomenographical method. Phenomenography means describing a phenomenon through a person's individual conceptions of a phenomenon (cf. e.g. Ahonen 1996), and the purpose of my study was to examine journalists' ideas of the professional routines and rules in news writing.

Earlier studies have investigated rules of journalistic work (e.g. Rentola 1983; Reunanen 1991), but the focus has been primarily on the norms and conventions that are found in **textbooks** for journalists, and the perspective has been sociological (Tuchman 1978). The present study differs from earlier approaches in that it has a linguistic perspective and that it investigates conventions concerned with **news writing** from the point of view of journalists.

## 3. Professionalism in news writing

For a journalist, the ability to write news stories is a professional skill that has been learned through years of practice (Tuchman 1978). According to Shoemaker and Reese (1996: 71), people who think they can write often think they would also make good journalists. However, according to Torrance (1996), writing expertise is highly dependent upon knowledge of the genre. Consequently, expert writers should be seen as writers who have the skill to efficiently produce **the same kind of text** many times (Torrance 1996, boldface K.R.). Therefore, journalists are experts in their own genre, news discourse.

### 3.1 Convention in story structure: the inverted pyramid

Shoemaker and Reese (1996: 6–7, 114) state that media content is influenced by media routines, the way in which for example journalists organize their work. Story structure is one of the most enduring media routines. In news writing, one of the key concepts is **the inverted pyramid**, the top-down principle of relevance, which means that the most important information is put first and then the rest is organized in descending order of importance (see also for example van Dijk 1988: 43; Parsigian 1992). Shoemaker and Reese (1996: 110–111) point out that a routine such as the inverted pyramid structure may serve both audience and organization requirements. Firstly, the audience can stop reading the story after the first paragraphs and secondly, the stories are easily edited and cut from the bottom since the least important information is written at the end of the story.

Tuchman (1978: 105) suggests that, for a journalist, professionalism means the ability to rise above the accepted norms such as the inverted pyramid and still write a story that builds drama. "Professionalism may mean breaking those rules that serve as bibles for hacks", Tuchman (1978: 105) states.

This is congruent with the view of Bhatia (1998: 14–15), who argues that the expert members of a discourse community are likely to exploit the conventions and constraints of a genre in order to achieve special effects. Furthermore, Berkenkotter and Huckin (1993: 476) emphasize that special attention should be paid to the ways in which genre users manipulate genres for particular rhetorical purposes.

Routines may be seen as means to an end, but often these means become institutionalized and take on a life of their own (Shoemaker & Reese 1996: 106). Although routines are required in efficient news production, they may have an effect on the **information content** of the stories when the information is forced into a certain form (Mörä 1996: 105, 113). As critical discourse analysists suggest, particular ways of writing tend to turn into conventions and texts into routines (cf. e.g. Fairclough 1992). Therefore, it is important to question and to explore the function and the origin of the routines such as the inverted pyramid structure.

In order to explore the reporters' ideas concerning the structural norms, I will here concentrate on their comments on the inverted pyramid and the structure of a news story. Typical of the comments was a reluctancy to obey any structural norms, as shown in examples 1, 2 and 3. One subject even compared the norms to a straitjacket.

> **Example 1.** Jos mulla pitäs olla joku tietty rakenne, niin mä olisin heti ihan kuin köytettynä.
> [If I was forced to follow a certain structure, I would feel as if I was in a straitjacket.]
>
> **Example 2.** Rakenteet on tehty tuhottavaksi.
> [Structures are made to be destroyed.]
>
> **Example 3.** Mieluummin mä tekisin sen omalla tavallani.
> [I would rather do it my own way.]

Examples 4 and 5 demonstrate the reporters' opinion about the **purpose** of the inverted pyramid. The subjects think that the inverted pyramid is a guide line meant for novices and that experienced journalists are more creative. Breaking the structural rules is even seen as a condition for talented writing.

> **Example 4.** Aloittelija ehkä ajattelee, ettei ole olemassa kuin yksi tyyppi tehdä juttuja. Mutta onko se hyvä tyyppi, mitä noudatetaan? Ja ehkä aloittelijalle on hyvä olla olemassa jonkinlaiset raamit, jota noudatatetaan. Mutta mitä enemmän sä kirjoitat juttuja ja luet muitten juttuja, sä näet, että mitään rakenteita ei ole.
> [A beginner might think that there's only one way to build up a story, but is it the best one? Maybe it's good for the beginners to have a certain frame to start from. But the more stories you write stories and the more you read others' stories, the better you realize that there are no structures.]

> **Example 5.** Ja jos ei sellaiseen anneta mahdollisuutta, että saa lähteä puhtaalta pöydältä, silloin kun ei ole kyse tulipalouutisesta, niin ei koskaan löydetä niitä toimittajahelmiä.
> [Sometimes you should give a beginner a free hand to write a story, let him write the story without any constraints, at least when it's news of immediate urgency. If you don't let him do that, the true journalist talents will never be found.]

One of the interviewees (example 6) states that the purpose of the inverted pyramid structure is to satisfy a reader's interests. Yet, the reporter is not pleased with the idea that the reader might read only the lead of the story.

> **Example 6.** Niinku mä sulle sanoin, niin mieluummin mä tekisin sen omalla tavallani, mutta tää malli palvelee lukijaa, koska se on tässä alkupäässä se asia. Ei tarvi sitten lukea enempää. Niin kurjasti sitä ajatellaan. Kyllä mä sen hyväksyn, mutta se ei oo aina kivaa.
> [I would rather do it my way, but you have to take the reader into consideration. You have to write what is most essential at the beginning of the story, because the reader might not read any further. I accept this but it doesn't feel nice.]

The inverted pyramid is compared to a pillar (example 7) that one can use when there is lack of time or ideas. Moreover, modifying the story structure is seen as a stylistic device, as a special effect. Nevertheless, using such effects requires special skills, as example 8 indicates.

> **Example 7.** Jos ei tunne luovuutensa riittävän, ei jaksa keksiä mitään tai aika vaan ei riitä, niin se on ihan hyvä keino. Jalka jolla seistä, jonkinlainen tukipilari.
> [If you don't feel creative or have enough time, or any ideas, then you can use the pyramid. The pyramid is like a pillar. Still, a good journalist can abandon the pyramid.]

**Example 8.** Mutta sitten tietysti tehokeinoina voi käyttää myös jollain tapaa sellaista rikottua rakennetta, mutta se on silloin hallittua ja hallitusti rikottua. [However, there are some effects you can use, you can break the structure, but you have to do so in a controlled manner.]

One interviewee (example 9) compares structural norms to a box and to frames inside within journalists are supposed to operate. However, the reporter suggests that the best news stories are often written "outside the box". On one hand, journalists are not allowed to break the walls of the box, but on the other hand, successfully broken rules may lead to a good news story.

**Example 9.** Jokasella ammattialalla on olemassa sellanen laatikko, sellaset raamit, sellaiset kehykset, joissa toimitaan. Ja niiden kehysten rikkominen tällaissa tavallisissa, kuivissa uutisjutuissa on vaikeesti hallittavaissa. Jos siitä laatikosta meinaa tulla tällaissa kuivissa jutuissa ulos, niin se on aika vaativaa eikä siinä rutiini ja nopeus auta. Joskus, kun näkee jotain sellaista, että ollaan tultu sieltä laatikosta ulos ja koitetaankin lähestyä jollain toisella tapaa sitä asiaa, niin kyllä ne on lukujuttuja. Jos onnistuu, saa kehuja. Siitä saa kovat moitteet, jos epäonnistuu.
[Every profession has a certain frame, like a box, inside which you have to operate. And crossing that line when writing an ordinary, dull news story is quite difficult and demanding even though you are fast and you know the routine. But sometimes, when you see a story like that, written outside the frame, it is a great story. Story of the day. But if you fail, you will be heavily criticized.]

Only one of the reporters (example 10) does not criticize the principle of the inverted pyramid. According to the journalist, the principle is justified on the ground that the journalists are **taught** to use the structure.

**Example 10.** No onhan sitä meille opetettu, millainen rakenteen pitää olla. Alusta pitää heti käydä ilmi, mistä on kysymys ja sitten asiat tulee sujuvasti tärkeysjärjestyksessä. Ei siitä mallista voi tinkiä.
[Sure we've been taught what the structure should be like. It should be clear at the very outset what the story is all about and then the rest is presented fluently and in order of importance. You can't compromise with this pattern.]

Therefore, the professional idea of the structure of a news story is rather inconsistent with the definitions in different textbooks of journalism that introduce the idea of the inverted pyramid as a rule of thumb. On the other hand, these conclusions seem to be consonant with Tuchman's (1978) idea of professionalism as the ability to break the rules. The inverted pyramid is seen as a pillar for beginners, whereas experienced journalists are more likely to break the rules successfully. Similar results have been found in Koskela's (2000: 31) research on philosophers as professional writers, where talented writing was seen as the ability to free oneself from the conventions of the genre.

### 3.2. Conventions in writing a headline

In the second part of this paper I describe the rules in news writing that came up during the interviews. The reporters list various norms and rules in news writing that they think should be followed, or that the house style requires them to follow, and special attention was drawn to headlines. The other comments are about lead, captions, and speech quotations. Henceforth, these rules are called unwritten personal rules.

There is plenty of guidance for designing a good headline in the textbooks for journalists (see e.g. Okkonen 1986; Larsson 1989; Huovila 1996). The books advise journalists to avoid punctuation, long words, slang, and passive forms in headlines. Okkonen (1986: 248) compares language in headlines to language in posters: it is clear, fresh, active, and unambiguous. There are also graphical demands in designing a headline, since headlines are often made to fill a certain space in the newspaper. According to Larsson (1989: 165), headlines are usually divided into two or three lines.

According to Oestreicher (1991: 56), captions, subheadings and headlines have a special function in capturing the reader's attention. A recent study by Nordman (2000: 210-211) reports that from a journalist's point of view, a good headline is accurate, alluring, and informative. Furthermore, a good headline is in line with the facts of the news story. There are also some requirements of form, for example avoiding hyphenating in headlines.

The comments of the interviewees are mainly concerned with the form and layout of headlines. Firstly, there are personal rules about the **length** of a headline as seen in examples 11 and 12.

> **Example 11.** Mä pyrin siihen, että otsikko on aina kahdella rivillä.
> [I try to divide headlines into two lines.]

> **Example 12.** Mä yritän mahduttaa sen 30 kirjaimeen kuudelle palstalle.
> [I try to put it in 30 letters in six columns.]

When the journalists are asked about the motives for these rules, one of them argues that the rules are needed for the reader, and that it pleases the journalist as well (example 13).

> **Example 13.** Jos se on liian raskas kuudella palstalla, niin se alkaa niinkun vuotaa se otsikko. Sillä lailla niin sä et saa kiinni siitä ajatuksesta, toisin kun sellasesta napakasta kolmen sanan, yhden rivin otsikosta. Se on mulle sellainen periaate.
> [If the headline in six columns is too heavy, it starts to leak in a way, and the reader does not get the point. Three words in six columns, on one line, that's the way I like it.]

The majority of personal rules are concerned with the form of headlines. On the **syntactic level** there are requirements concerning the punctuation and the use of speech quotations in headlines, as example 14 shows.

> **Example 14.** Ja sitten mä en sulata otsikoissa pilkkuja enkä viivoja enkä mitään ylimääräisiä välimerkkejä enkä lainauksia.
> [I don't like it if there is any punctuation in the headline or any speech quotations or any dashes.]

Hvitfelt (1988: 125) states that headlines are often in the form of a speech quotation, when something is expressed in the words of a source, a person that has been interviewed for the news story. In Hvitfelt's (1988) view, a headline put in quotation marks indicates that the statement of the cited source is not regarded as objective or impartial. On the contrary, the information given in quotation marks can even be uncertain or inaccurate. Nevertheless, in my research the interviewees give different reasons for avoiding speech quotations. The common opinion is that putting text in quotation marks is too easy. Subjects state that it is a journalist's duty to edit the material, not to repeat it in quotation marks. Using speech quotations is seen as an indication of laziness, as example 15 demonstrates.

> **Example 15.** On huono juttu, jos on liikaa lainauksia. Mä arvostan sitä, että toimittaja on nähnyt vaivaa ja valinnut lukijan puolesta keskeisimmät asiat, nostanu asioita esille. Eikä luetteloinu niitä suoria lainauksia peräperään sellaiseksi mössöksi.
> [You should not have too many speech quotations. If the story consists of one speech quotation after another, the journalist has not taken the trouble to analyze and to specify what the story is all about.]

Some of the rules deal with **lexical choices**. Examples 16 and 17 indicate that the journalists' ideas are in consonance with those mentioned in textbooks, for example in favouring short words and active verbs.

> **Example 16.** Otsikossa on vaan lyhyitä sanoja. Ei yhdyssanoja.
> [The headline should have only short words, no compound words.]

> **Example 17.** Pitää olla aktiivinen verbi otsikossa.
> [There has to be an active verb in the headline.]

Personal rules also involve opinions about the **layout** of headlines, as examples 18 and 19 demonstrate. This implies that, at least from a professional point of view, headlines have an aesthetic function as well, in other words headlines should look good in a graphical sense.

> **Example 18.** Ja sitten ihannehan olisi, että esirivi olisi yhtä pitkä (kuin otsikko).
> [And the ideal layout is that the subheadline is as long as the main headline.]

> **Example 19.** Mun mielestä näitä (alaotsikoita) ei edes tarvittaisi lehdessä, mutta nää on nyt muotiasia. Ehkä tää auttaa alkukappaleasioissa. Että jos joku ei vaikka jaksa lukea edes alkukappaletta, niin onpa ainakin kaksi otsikkoa.
> [In my opinion, all we need is the main headlines. The subheadlines are just a fashion statement, a trend. Maybe the subheadlines help when you're writing the lead. You just think that if someone doesn't even bother to read the first paragraph, then at least there are two headlines to read.]

Remarkably, only one of the comments is about the **information content** of the headline. This might be attributed to the fact that it is easier to tackle the question of form than that of information content. Example 20 is an illustration of a convention that combines informative and graphical requirements, in other words the joint effect of the headline and the possible photo illustrating the story.

> **Example 20.** Ja ihan jatkuvasti pitäs puuttua otsikointiin ja siihen, miten kuva ja otsikko pelaa keskenään.
> [It is not appropriate if the photo says one thing and the headline something else. They should be in harmony.]

To summarize, the reporters have specific conventions concerning the form of headlines, whereas the information content is not much commented on. The professional personal rules seem to be quite similar to those found in the textbooks when it comes to avoiding compound words and punctuation in headlines. However, there are conventions that are not found in the textbooks, for instance precise ideas about the length and layout of headlines. Personal conventions are mainly justified with a professional view, with statements such as "in my opinion" and "I don't like it", but readers were taken into consideration as well. The conventions are a part of the tacit knowledge of professional journalistic work, and, as Kunelius (1998: 217) points out, these norms are not written in textbooks but learnt in the daily work routine by imitating the older professionals. Yet, it appears that the professional conventions in news writing are personal rather than typical of the journalists of a certain newspaper, since there are individual differences between personal journalistic conventions.

## 4. Conclusion

The findings of this research imply that journalists as professional writers are reluctant to follow existing rules such as the inverted pyramid structure. In spite of this, they seem to have quite definite personal conventions in writing a headline. In conclusion, it would appear that professionalism in news writing includes both observing the rules and deliberately breaking them.

Furthermore, it seems that expertise in news writing is gained through years of practice. This is indicated by the fact that professionals make comparisons in writing skills between beginners and experienced journalists. Existing conventions are considered as tools for beginners whereas experienced journalists know how to break the rules and still write a good story. Hence, professionalism in journalistic writing includes exploiting generic conventions, as Bhatia (1998) suggests. The reporters do not take for example structural conventions for granted. On the contrary, the journalists question the conventions and find their own ways to capture the reader's interest. In addition, it appears that experienced journalistic writers tend to develop individual conventions that are different from the ones that other reporters observe. Thus, generic conventions seem to depend less on a certain newspaper or a house style.

In future research, the professional perspective in news writing could be further investigated by making comparisons between trainees and experienced journalists. That might be of help in exploring how professional skills develop during the career of a journalist.

## 5. References


Ahonen, S. (1996). Fenomenografinen tutkimus. In: *Laadullisen tutkimuksen työtapoja*, 113–160. L. Syrjälä, S. Ahonen, E. Syrjäläinen & S. Saari (eds). Helsinki: Kirjayhtymä.

Bell, A. (1991). *The Language of News Media.* Oxford & Cambridge: Blackwell Publishers.

Berkenkotter, C. & T.N. Huckin (1993). Rethinking Genre From a Sociocognitive Perspective. In: *Written Communication* 4/1993, 457–509.

Bhatia, V.K. (1998). *Analysing Genre: Language Use in Professional Settings*. London & New York: Longman.

Fairclough, N. (1992). *Discourse and Social Change*. Cambridge: Polity Press.

Huovila, T. (1996). *Toimittaja - vastuussa oleellisesta muutoksesta*. Jyväskylä: Yliopistopaino.

Hvitfelt, H. (1988). Om den journalistiska formens betydelse. In: *Forskning om journalistik*. En antologi från Nordicom-Sverige, 107–131. U. Carlsson (ed.). Göteborg: Nordicom.

Koskela, M. (2000). *Svenska som filosofins språk.* Proceedings of the University of Vaasa, research papers 235. Vasa.

Kunelius, R. (1998). Modernin myyntitykit. Journalistisen professionaalisuuden pulmat ja haasteet. In: *Viestinnän jäljillä*. Näkökulmia uuden ajan ilmiöön, 207–229. U. Kivikuru & R. Kunelius (eds.). Juva: WSOY.

Larsson, S. (1989). *Att skriva i tidning*. Om grunderna för reporterns arbete. Stockholm: Legend.

Luostarinen, H. (1996). Citizen Kane ja infokratia. Kriitikot, motiivit ja keinot. In: *Sopulisilppuri*. Mediakritiikin näkökulmia, 11–40. H. Luostarinen, U. Kivikuru & M. Ukkola (eds.). Jyväskylä: Gummerus.

Nordman M. (2000). Rubriker som frågar. In: *Svenskan i Finland 5*. Föredrag vid femte sammankomsten för beskrivningen av svenskan i Finland, 203–214. K. Keski-Raasakka & P. Söderholm (eds.). Joensuu: Joensuun yliopistopaino.

Mörä, T. (1996). Journalistit rutiinien verkossa. In: *Sopulisilppuri*. Mediakritiikin näkökulmia, 105–116. H. Luostarinen, U. Kivikuru & M. Ukkola (eds). Jyväskylä: Gummerus.

Oestreicher, A. (1991). *Texthantering på tidningsredaktioner*. Redigeringens organisatoriska ramar i svensk dagspress. FUMS rapport nr 159. Uppsala: Uppsala universitet.

Okkonen, A. (1986). *Toimittajan työ 1*. Hämeenlinna: Karisto.
Parsigian, E.K. (1992). *Mass Media Writing*. Hillsdale etc.: Lawrence Erlbaum Associates.
Rentola, I. (1983). *Normaalijournalismin säännöt*. Yhdysvaltalaisen journalismin oppikirjallisuuden esittämän ideaalityypin tarkastelua. Tampereen yliopiston tiedotusopin laitoksen julkaisuja, sarja A 47. Tampere: Tampereen yliopisto.
Reunanen, E. (1991). *Merkitysympäristö ja uutisgenren säännöt*. Tampereen yliopiston tiedotusopin laitoksen julkaisuja, sarja A 76. Tampere: Tampereen yliopisto.
Shomaker, P.J. & S.D. Reese (1996). *Mediating the message.* Theories of Influences on Mass Media Content. New York: Longman Publishers.
Torrance, M. (1996). Is writing expertise like other kinds of expertise? In: *Theories, Models and Methodology in Writing Research*, 3–9. G. Rijlaarsdam, H. van der Bergh & M. Couzjin (eds.). Amsterdam: Amsterdam University Press.
Tuchman, G. (1978). *Making News*. A Study in the Construction of Reality. London & New York: Collier Macmillan Publishers.

van Dijk, T.A. (1988). *News as Discourse*. Hillsdale etc.: Lawrence Erlbaum Associates.

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# ABSTRACT

## Professional Routines and Rules in News Writing

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The aim of this paper is to explore the professional conventions in news writing in a Finnish provincial newspaper, *Pohjalainen*. The present study concentrates especially on the existing routines in news writing as well as on the unwritten, personal rules that the journalists apply when designing the story structure and writing a headline. Data for the study were collected by interviewing four experienced news reporters of the newspaper *Pohjalainen* and the interviews were analyzed in a phenomenographical framework. The results of the research indicate that the reporters are reluctant to follow existing rules concerning the story structure, such as the inverted pyramid principle, although the rule is widely recommended in textbooks for journalists. Exploiting the structural conventions was even seen as a condition for successful writing. On the other hand, journalists have a number of personal, professional conventions in writing a headline. Hence, it would appear that professionalism in news writing includes both unconsciously and consciously following the rules and deliberately breaking them.

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# Danish Verbs as Knowledge Probes in Corpus-based Terminology Work

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## 1. Background

The aim of this article is to present the first results of a project on the retrieval of terminological information from machine-readable Danish corpora in connection with practical terminology work. Works by Ahmad (1994), Bowker (1996), and Meyer & Mackintosh (1996) about linguistic signals, and especially verbs, inspired me to study the use of such signals to extract terminological information from a Danish corpus. Ahmad uses the term 'knowledge probe' to refer to lexical phrases and verbs which often occur together with terminological data in authentic texts and may thus be used as search patterns for identifying and extracting terminological information. I find his choice of denotation appropriate for terminology work, especially in connection with concept-related information, which can be defined as knowledge-rich information. In order to provide a focussed and fine-grained approach, a valency theory of verbs called the Pronominal Approach (PA) was implemented in my studies. The objective of my studies has been to examine whether the valency patterns of a number of verbs are suitable as knowledge probes and thus also as search patterns in corpus-based terminology work. This means that my studies have not only a theoretical aim, where I combine theories of terminology and verb valency, but also a most practical aim as I hope to provide the terminologist with an efficient search method when (s)he uses a corpus-analysis tool in practical terminology work.

As Danish is only spoken by a small language community, there is a lack of adequate commercial language technology tools for tagging, lemmatising, and parsing. Consequently, machine-readable corpora in Danish are normally raw texts without any kind of tags. Having no commercial language technology tools such as taggers and lemmatisers to support our search strategies, we have been forced to find other solutions. Thus, my purpose is to outline a linguistic approach suitable for identifying and extracting terminological data without applying the above-mentioned tools.

The corpus consists of Danish texts within the subject area of hydraulics. The choice of one single subject area guarantees subject specific studies. Moreover, this approach is comparable with the terminologist's approach to a new subject area and is useful for evaluating the suitability of the method. Further, by concentrating on one subject area, a basis will be created for subsequently introducing other areas in order to conduct a comparative study.

Together with other similar studies to be carried out, this first study is to form the basis of a list or, as I should prefer to call it, a catalogue of important Danish verbs as knowledge probes. Generally speaking, it will appear from the catalogue which verbs normally occur together with synonyms, which ones occur together with definitions or parts of definitions, etc., and which will therefore be useful search patterns for synonyms, definitions, or parts of definitions. Thus, the catalogue offers the terminologist a search method enabling him or her to extract different terminological information categories. In this article I focus on the retrieval of definitions as well as information that ought to be part of definitions. Therefore, I shall refer to the verbs indicating definitorial information as definitorial verbs.

On the basis of experience, a terminologist will know what verbs indicate the occurrence of definitions. Being a terminologist myself, I will nevertheless register all verbs used in this very corpus. My systematic studies thus make it possible to list all verbs that provide terminological information. As to Danish, there is a great need for a complete list of relevant verbs and other identifiers because, compared with German texts for example, Danish texts include rather few explicitly classifying/categorising information.

The listed verbs, in this case the definitorial verbs, were compared with their entries in a valency dictionary of Danish verbs. This dictionary is called the Odense Valency Dictionary (OVD) and is based on the PA mentioned above. My argument for including the valency dictionary in the studies and not just compiling a simple list of verbs is to complete the list with the verbal valency patterns. According to my hypothesis the verbal valency patterns may be used as search patterns filtering out irrelevant occurrences (noise) and thus improving search results (precision). I shall illustrate the method in section 2, so for now I shall just outline the idea behind the method. In technical texts, the Danish verb *adskille* may have the meaning *take apart* or the meaning *differ from.* The latter, being the terminological reading, indicates the presence of coordinate concepts in text. This reading includes the preposition *fra* (from) in its valency pattern. A search for the verb and the preposition *fra* (from) of the terminological reading will exclude all or at least most occurrences meaning *take apart*. In what follows the term ‘reading’ is used for meaning as well as dictionary entry.

Section 2 includes a description of the general principles behind the PA and the OVD. Section 3 deals with the corpora used. In section 4 I shall give an outline of how I implement the PA in my studies of the verbs. In section 5 I shall sum up the more specific results of the studies; particularly to what extent the PA offers an efficient and suitable search method for practical terminology work based on machine-readable corpora. Also, a few linguistic observations will be presented. Finally, in section 6 I shall consider more general results.

## 2. The Pronominal Approach (PA) and the Odense Valency Dictionary (OVD)

From 1993-98 researchers at my institution, the Southern Denmark Business School – now the University of Southern Denmark, participated in the UDOG project (Udforskning af Dansk Ordforråd og Grammatik), which stands for the exploration of Danish vocabulary and grammar. This project was a research programme under the auspices of the Danish National Research Council for the Humanities (Statens Humanistiske Forskningsråd).

One aim of our sub project was to make a systematic valency description of Danish verbs for human and machine-readable dictionaries. Another aim was to compile a human and machine-readable valency dictionary of Danish verbs. The result is the Odense Valency Dictionary mentioned above. One further aim was to test whether the valency descriptions of the PA could in fact be used for language technology tools (natural language processing (NLP)). We focussed on machine translation, and tests were performed on the Metal system, owned then by the German electronics company Siemens of Munich, as the Danish modules of this system were developed at our institution.

As a basis for the systematic description the PA was chosen because it is based on a closed word class, namely the pronouns (Kirchmeier-Andersen 1997b: 69). Below the practical use of the PA is illustrated by means of the verb *bestå*. A basic assumption of the PA is the constant relation of proportionality between the pronouns and the nominal constituents, e.g. between the *woman* and *she* as well as between the *machine* and *it*. Moreover, the PA offers a sense distinction between the readings based on syntactico-semantic features provided by the pronominal paradigms of the language and a number of other distributional tests (Schøsler & Kirchmeier-Andersen 1997: 36).

In the OVD the first 3 syntactico-semantic features are derived directly from the pronouns established in the different argument slots as constituents, whereas the features 4-7 are derived indirectly by means of other distributional tests (Schøsler & van Durme 1996: 45). For my purpose I focus on the first 3 features:

1. **Syntactic forms:** noun phrase, prepositional phrase, adverbial phrase, sentence (finite, non-finite)

2. **Syntactic functions:** subject, object, prepositional objects, valency-bound adverbials
3. **Semantic features:** human, concrete, abstract, proposition, countability, manner, direction, etc.

4. Number of arguments (including optional arguments)
5. Type of auxiliary verb, type of passive and verbal aspect
6. Use of preliminary subject: *det* (it) and use of "existentials": *der* (there)
7. Linking phenomena, e.g. *jeg knækker grenen* (I break the branch) and *grenen knækker* (the branch breaks) (Kirchmeier-Andersen 1997b: 116)

In the following I illustrate the PA by means of the verb *bestå*, which has four readings in the OVD. During the coding process, the lexicographer has to decide for each argument slot (constituent) which pronouns are valid. The pronouns found will provide the input for a pronominal sentence, which is identical with the valency pattern of the verb studied. In addition to the pronominal example, the OVD includes a 'self-made' example in a declarative clause in the present tense. As will appear from the readings below, according to the PA the argument slots are defined from a surface syntactic point of view. Thus, there is one entry for each syntactic variation of a verb. This fact is very important for my approach. At present the OVD contains 3,300 different entries corresponding to 1,600 bare forms (lemmas).

| *Pronominal example* | *'Self-made' example* |
|---|---|
| 1) han/denne her/det består af ham/denne her/det<br>(he/this one/it verb X him/this one/it) | bordet består af en bordplade og 4 ben<br>(the table consists of a table top and 4 legs) |
| 2) det består (så længe)*<br>(it verb X (so long)) | virksomheden består (i 50 år)<br>(the firm has existed (for 50 years)) |
| 3) han består det<br>(he verb X it) | eksaminanden består eksamenen<br>(the candidate passes the examination) |
| 4) det består i det/at+kompletivsætning/<br>at-infinitiv<br>(it verb X in it/that+completive clause/<br>a Danish to+infinitive) | problemet består i svigtende service<br>(the problem is due to lack of service) |

* Parentheses indicate an optional argument

The first reading is the definitorial reading indicating a partitive definition. This reading takes two obligatory arguments: a subject and a prepositional object with *af* (of) which is the preposition selected by the verb (Jensen 1985: 71-72), cf. item 1 **Syntactic forms** and item 2 **Syntactic functions** above. From the pronominal slot fillers *han/denne her/det* (he/this one/it) for the subject and *ham/denne her/det* (him/this one/it) for the prepositional object it can be derived that the subject as well as the prepositional object may be realised with the semantic features human *(han/ham)* (he/him) or concrete *(denne her)* (this one) or abstract *(det)* (it), cf. item 3 **Semantic features** above. The important thing is, however, that by means of a search pattern combining the verb *bestå* and the preposition *af* occurrences of the definitorial reading can be retrieved, and at the same time occurrences of the three other readings will be excluded.

As I already mentioned, the PA defines the argument slots from a surface syntactic point of view. Therefore I suggest that valency patterns derived by this method are especially suitable as search patterns for a focussed retrieval of terminological information categories from machine-readable corpora consisting of raw texts, which are e.g. not POS (part-of-speech) tagged. In POS-tagged corpora grammatical patterns such as ADJ+NOUN or NOUN+VERB may be used as search patterns (Meyer 2001: 290, Pearson 1998: 125-128).

## 3. Corpora

For my studies a technical corpus within the subject area of hydraulics was compiled. Different genres are included in the corpus, which at present consists of about 110,000 words.

In my opinion this size is adequate to illustrate the suitability of the PA as a search method for terminological data, but I am fully aware of the shortcomings in connection with a practical terminology project. During the collection of the corpus texts, I very soon had to realise that many texts of the chosen subject area are characterised by many graphics and formulae, which, as a result of the lack of appropriate software tools, reduces the range of texts suitable for the corpus.

As definitions are often found in textbooks, it is no mere coincidence that more than half of the corpus comes from this text genre. The textbooks implemented in the corpus are made up so that they represent different professional levels. However, during the collection it appeared that in addition to didactic and informative sections several of the textbooks also contain directive sections.

Almost 20,000 words derive from other types of informative text genres, i.e. encyclopaedias. Finally, documentation from the Danish enterprise Danfoss produced by the enterprise’s hydraulics sales department is included. This documentation exceeds 20,000 words and contains text genres such as brochures, articles from periodicals, etc.

The OVD had some shortcomings in the valency descriptions of the verbs studied. Some of the verbs, i.e. verbs already studied as well as verbs to be studied in future, are not registered in the dictionary. As to other verbs, not all readings are entered, and in connection with a last group of verbs some of the readings are not completely described.

Owing to the shortcomings of the OVD and the limited size of the hydraulics corpus, it was necessary to consult another corpus. I had the possibility to access a corpus consisting of popular science texts from a project working on the coming dictionary Den Danske Ordbog (DDO), which stands for the Danish Dictionary, a six-volume dictionary, which will be published in 2002/3. The DDO corpus consists of 6 million words. The DDO corpus has become more important for my studies than I had expected. Thus, in some cases I had to consult it systematically for a full description of the relevant, terminological verbs.

## 4. Studies of the chosen verbs

I studied 16 verbs. In my opinion this number is sufficient to test the suitability of the PA for my purpose. About half of the verbs are generally known as knowledge probes for terminological information, e.g. *definere* (define), *omfatte* (include), whereas the other half are not quite as obvious for the purpose, e.g *gælde for* (apply to), *skelne* (distinguish). These verbs were expected to indicate intensional definitions with the closest superordinate concept and distinguishing characteristics, or extensional definitions consisting of a superordinate concept and its subordinate concepts, or partitive definitions providing a superordinate concept and partitive concepts, i.e. concepts entering into a partitive relationship. The occurrences of the verbs in the hydraulics corpus were compared with their readings in the OVD.

In connection with each verb and its readings the following information was registered:

- the valency pattern of the readings defined by a pronominal example
- a corpus example or a ‘self-made’ example
- the valency-bound arguments
- readings realised in the hydraulics corpus
- the number of occurrences of each reading in the hydraulics corpus
- the terminologically relevant readings
- terminological information categories derivable by the relevant readings
- the suitability and quality of the retrieved data as input for terminological information
- proposals for search patterns though such patterns may depend on the query tool used
- concluding remarks related to each verb

The concluding remarks include observations about the ability of the search patterns to eliminate irrelevant occurrences; this indicates whether they are strong search patterns or not.

What follows is a summing-up of the main results of the studies of each of the 16 verbs. The verbs studied and the terminological information categories derived by the relevant readings are listed in Table 1, section 5. More details can be found in Weilgaard Christensen (2000a, section 4, p. 247).

The verb *adskille* has five readings, two of them suitable as knowledge probes, i.e. reading 2 R2 and reading 3 R3, which are related readings. The second reading R2 *adskille sig fra* (differ from) takes three obligatory arguments: a subject, a reflexive object *sig* (oneself), and a prepositional object with *fra* (from), the preposition selected by the verb. In this reading, the subject and the object indicate coordinate concepts.

The reading R3 *adskille sig (fra) ved* (differ (from) by) takes three obligatory arguments and one optional argument indicated by parentheses: a subject, a reflexive object *sig* (oneself), (a prepositional object with the selected preposition *fra* (from)), and an adverb with the selected preposition *ved* (by). Provided that the optional argument is realised, this reading is partly identical with R2 above and thus provides information about coordinate concepts. Moreover, the adverb with the preposition *ved* (by) gives information about how the subject and the prepositional object differ from each other, i.e. it indicates a distinguishing characteristic.

The verb *bestå* has one terminologically relevant reading R1 (consist of), cf. above section 2.

The verb *definere* has only one reading. This reading takes two obligatory arguments and one optional: a subject, an object, and (an object complement with the selected prepositions *som* (by) or *ved* (by)). Occurrences with the preposition *som* indicate operational or intensional definitions, whereas the preposition *ved* is followd by an operational definition. The verb *definere* is terminologically interesting only in cases where the optional argument is realised, since it is irrelevant simply to be informed that something has been defined.

The verb *dele* has six readings. Two of them are useful for the extracting of terminological information. The reading *dele med* (divide by) R5 consists of two obligatory arguments and one optional argument: a subject, (an object), and a prepositional object with the selected preposition *med* (by). As was the case with *definere ved*, this reading, too, is suitable for the retrieval of operational definitions expressed by the prepositional phrase.

The reading *dele i* (divide into) R6 takes three obligatory arguments: a subject, an object, and a prepositional object with the selected preposition *i* (into) and indicates an extensional definition. The object refers to a superordinate concept, and the prepositional phrase refers to the corresponding subordinate concepts.

The verb *forstå* has six readings. Only *forstå* (understand) R6 is useful as a knowledge probe. This reading takes three obligatory arguments: a subject, an object, and a prepositional object with the selected preposition *ved* (by) and indicates an intensional definition. The prepositional phrase is identical with the concept to be defined, whereas the definition is expressed by the object.

The verb *gælde* has six readings. Only the reading *gælde for* R2 (apply to) is terminologically relevant. This reading takes two obligatory arguments: a subject and an adverb with the preposition *for* (to). The subject, often realised by means of a completive clause, expresses a common characteristic of a concept expressed in the prepositional phrase, cf. the example in section 5, *Authentic corpora examples versus recommendations for good definitions*.

The verb *inddele* has two readings, which are both useful as knowledge probes. The reading *inddele i* (divide into) R1 takes three obligatory arguments: a subject, an object, and a prepositional object with the selected preposition *i* (into), and like the verb *dele i* R6, *inddele i* indicates an extensional definition.

The reading *inddele (i) efter* (divide (into) by) R2 takes three obligatory arguments and one optional argument: a subject, an object, and an adverb with the selected preposition *efter* (by), (a prepositional object with the selected preposition *i* (into)). In contradistinction to the reading R1 above, the prepositional object may not, since it is an optional argument, be realised in R2. The adverb with the preposition *efter* (by) indicates a type of characteristic.

The verb *indeholde* (contain) has two readings. Both readings take two arguments: R1 takes a subject and a quantifier phrase, and R2 takes a subject and an object. The readings are suitable for the extracting of partitive definitions or at least some of the coordinate, partitive concepts of a partitive definition. Without going into detail I shall just briefly mention that the quantifier phrase may in some cases serve as a distinguishing characteristic.

The verb *indgå* has two readings. Only reading R1 *indgå i* (form part of) is relevant as a knowledge probe. The reading takes two arguments: a subject and a prepositional object with the selected preposition *i*. The hits found were to some extent irrelevant. The useful corpus examples, however, indicate partitive definitions, the subject denoting the partitive concepts and the prepositional phrase the superordinate concept.

The verb *mene* (mean) has five readings. Reading R3 is the only terminologically relevant reading. It takes three obligatory arguments: a subject, an object, and a prepositional object with the selected preposition *med* (by). The reading indicates part of an intensional definition. Reading R4 is also realised with a prepositional object with the preposition *med* (with). However, only R3 can be used in the passive. The hits found were less significant than I had expected.

The verb *omfatte* (include) has two readings. They both take two arguments: a subject and an object. R1 is suitable for the extracting of primarily extensional and secondarily partitive definitions. According to my studies, only R2 can appear in the passive. Moreover, the subject of R2 is realised with constituents such as laws and regulations which have, in addition to the semantic feature concrete, the semantic feature abstract, cf. section 5, *LSP readings*.

The verb *opdele* has three readings. The readings R2 *opdele i* (divide into) and R3 *opdele (i) efter* (divide (into) by) correspond to R1 *inddele i* and R2 *inddele (i) efter*. They have identical valency patterns and are suitable for the retrieval of the same terminological information categories.

The verb *sammensætte* has four readings. R3 *sammensætte* (compose) is the terminological reading which takes three obligatory arguments: a subject, an object, and a prepositional object with the selected preposition *af* (of). The noun of the prepositional phrase mainly occurs in plural. In the passive form, combined with the auxilary verb *være* (be), *er sammensat af* (be composed of) is useful as a knowledge probe for partitive definitions, of which the partitive concepts are indicated by the prepositional phrase.

The verb *skelne* has five readings. Three of the readings are suitable for the retrieval of terminological information. R1 *skelne (i)mellem* (distinguish between) takes two obligatory arguments: a subject and a prepositional object with the selected preposition *(i)mellem* (between). The noun phrase in the prepositional phrase appears in plural (cf. section 5, *Other linguistic signals*, 'generic expressions'*)* or is realised by two coordinate nouns indicating coordinate concepts.

R3 *skelne fra* (distinguish from) takes three obligatory arguments: a subject, an object, and a prepositional object with the selected preposition *fra* (from). In R3, the object and the prepositional object may express coordinate concepts.

R5 *skelne på* (distinguish by) takes three obligatory arguments: a subject, an object, and an adverb with the selected preposition *på* (by). The adverb denotes a type of characteristic.

The verb *tælle* has four readings. R2 *tælle blandt/til* (belong to) is useful as a knowledge probe and takes three obligatory arguments: a subject, an object, and a prepositional object with the prepositions *blandt* (among) or *til* (to). The object refers to one or more subordinate concept(s), and the prepositional object refers to the corresponding superordinate concept and thus to part of an intensional definition. However, this observation still has to be tested on the basis on more examples.

The verb *udgøre* (constitute) has two readings. There are very significant similarities between the readings of the verbs *udgøre* and *indeholde*, cf. above.

## 5. Results of the studies

In the following section I shall discuss the suitability of the PA as the basis of a search method for the retrieval of terminological information. In Table 1 below I have listed the definitorial verbs studied and described as well as the terminological information categories that were extracted during the working process from the corpora applied. The X marks in the table indicate which of the verbs can be used for the retrieval of specific terminological information categories. Moreover, I shall point out some aspects related to verb diathesis, semantics, LSP readings, and other linguistic signals than valency patterns. Besides, I will briefly look at aspects related to authentic corpora examples versus recommendations for good defining practice.

### *Suitability of the PA*

On the basis of the study of the 16 verbs that form the input for Table 1, I believe that the PA is very suitable as a search method for readings with a valency pattern consisting of prepositional objects or adverbs. These adverbs have to be realised as prepositional phrases in which the preposition can be used as part of the search pattern. The fact is that many of the definitorial verbs studied appeared with prepositions as part of their valency pattern. Only three of the verbs studied, namely *indeholde* (contain), *omfatte* (include), and *udgøre* (constitute), do not have a valency pattern consisting of a preposition. In connection with a comparable study of another group of verbs (Weilgaard Christensen: 2000b), this tendency was not quite as significant as in this case. Therefore, I did not expect many patterns including a preposition; I had expected more patterns including a direct object.

Thus, optional arguments that occur with prepositions, i.e. *han definerer det (som/ved det)* (he defines this (by/by this)), proved to be essential for the search results as the prepositions can help to eliminate terminologically uninteresting patterns and ensure a more focussed search. The same holds for free adverbs with a rather consistent structure and frequency. However, the present study does not give such examples. In this way optional arguments and free consistent adverbs become obligatory in my study and consequently from a terminological point of view. As a result, I wish to argue that as a matter of fact the surface of the syntactic structure defined by the PA offers a suitable search method for terminological concept information.

### *Comments on Table 1*

As mentioned above, Table 1 contains the terminological information categories found during my study (horizontal row) and their knowledge probes, i.e. the terminologically relevant readings of the verbs derived by the PA (vertical column). During my study more information categories than originally supposed could be added. As an example, I had not expected the predominance of the operational definition when searching for the verb *definere* (define) in combination with *som* (by) and especially *ved* (by). The same goes for the verb *dele* (divide) together with *med* (by). An operational definition means a kind of ostensive definition that defines a concept by referring to a method or an operation (Balzer 1979: 15, Quist et al. 1983: 35). It even turned out that some of the verbs could be used as knowledge probes to identify each of the categories 'type of characteristic' and 'characteristics'. As to the verbs indicating characteristics, it seems possible to subdivide them into knowledge probes for either common or distinguishing characteristics. However, this observation still has to be tested thoroughly on the basis of more verbs.

The verbs *adskille sig fra* (differ from) and *skelne mellem/fra* (distinguish between/from) are categorised as knowledge probes for search results leading to co-ordinate concepts. In the readings of these two verbs subordinate concepts as part of extensional definitions were retrieved. However, their valency patterns did not guarantee the appearance of a superordinate concept. This is the reason why a separate column for co-ordinate concepts figures in the table. Moreover, it is worth noticing that some readings do not guarantee that all subordinate or partitive concepts occur in the sentences containing the knowlegde probes. This was for instance the case in connection with the verb *indeholde* (contain). Similar observations apply to the verb *tælle blandt/til* (belong to) where one or more subordinate concepts are expressed by the object whereas the superordinate concept is expressed by the prepositional phrase, cf. the column ‘subordinate ∏ superordinate concept’.

To a certain extent, the order in which the information categories in Table 1 are listed reflects which types and frequencies of the terminological information categories I had expected to be able to extract by means of the verbs studied. And in fact most of the marks are found in the first columns of Table 1. I think that the table provides interesting information about my working process. The process can be compared with a ‘top-down’ approach in which I started out with different types of definitions and was able, during the working process, to add more specific terminological information categories, e.g. that of type of characteristic. However, this is, of course, attributable to the choice of the verbs studied.

The Danish readings in English, cf. Table 1: *adskille sig fra* (differ from), *adskille sig (fra) ved* (differ (from) by), *bestå af* (consist of), *definere (som)* (define (by)), *definere (ved)* (define (by)), *dele med* (divide by), *dele i* (divide into), *forstå ved* (understand by), *gælde for* (apply to), *inddele i* (divide into), *inddele (i) efter* (divide (into) by), *indeholde* (contain), *indgå i* (form part of), *mene med* (mean by), *omfatte* (include), *opdele i* (divide into), *opdele (i) efter* (divide (into) by), *er sammensat af* (be composed of), *skelne (i)mellem* (distinguish between), *skelne fra* (distinguish from), *skelne på* (distinguish by), *tælle blandt/til* (belong to), *udgøre* (constitute).

| Information categories / Readings of the verbs | Intensional definition | Extensional definition | Coordinate concepts | Partitive definition | Operational definition | Type of characteristic | Subordinate → superordinate concept | Common characteristic | Distinguishing characteristic |
|---|---|---|---|---|---|---|---|---|---|
| R2 adskille sig fra | | | X | | | | | | |
| R3 adskille sig (fra) ved | | | X | | | | | | X |
| R1 bestå af | | | | X | | | | | |
| R1 definere (som) | X | | | | X | | | | |
| R1 definere (ved) | | | | | X | | | | |
| R5 dele med | | | | | X | | | | |
| R6 dele i | | X | | | | | | | |
| R6 forstå ved | X | | | | | | | | |
| R2 gælde for | | | | | | | | X | |
| R1 inddele i | | X | | | | | | | |
| R2 inddele (i) efter | | X | | | | X | | | |
| (R1) R2 indeholde | | | | X | | | | | |
| R1 indgå i | | | | X | | | | | |
| R3 mene med | X | | | | | | | | |
| R1 omfatte | | X | | X | | | | | |
| R2 opdele i | | X | | | | | | | |
| R3 opdele (i) efter | | X | | | | X | | | |
| R3 er sammensat af | | | | X | | | | | |
| R1 skelne (i)mellem | | | X | | | | | | |
| R3 skelne fra | | | X | | | | | | |
| R5 skelne på | | | | | | X | | | |
| R2 tælle blandt/til | | | | | | | X | | |
| (R1) R2 udgøre | | | | X | | | | | |

**Table 1.** Definitorial verbs as knowledge probes for terminological information categories

### *Verb diathesis*

My studies yielded interesting results as to verb diathesis. The terminologically relevant readings of the verbs *adskille sig fra* (differ from), *bestå af* (consist of), *indgå i* (form part of) and especially *omfatte* (include) only occur in active constructions as these readings cannot appear in the passive, whereas other verbs, such as *forstå* (understand), are mainly realised in the passive form. As to the verb *sammensætte* (be composed of), my observations showed that the passive form combined with the auxilary verb *være* (be) constitutes a strong search pattern. In connection with the verb *mene* (mean), it still has to be confirmed by more tests whether the inflectional passive, adding –s, may be a good search pattern to eliminate irrelevant data seen from a terminological perspective. (Danish verbs may form the passive in three ways: 1. Inflectional, adding –s, 2. Analytical, combining with the auxiliary *blive* (become) and 3. Analytical, combining with the auxiliary *være* (be). The first two types correspond roughly to the German Vorgangspassiv whereas the last corresponds to the German Zustandspassiv (Kirchmeier-Andersen 1997a: 12 and 1997b: 71)).

### *Semantics*

It was rather surprising that according to the description in the valency dictionary OVD the valency pattern of the verb *definere* (define) takes an object and an object complement with abstract constituents, cf. section 2, item 3 Semantic features. But actually both corpora confirmed the described semantic restrictions. Only in the DDO a couple of occurrences were realised with concrete constituents, which are atypical according to my studies. The interesting thing is that the PA offers the semantic information that the verb *definere* (define) appears with syntactical objects and object complements representing immaterial objects in a terminological sense.

### *LSP readings*

With regard to my findings related to the verb *omfatte* (include), there is reason to assume that some definitorial verbs tend to occur in texts on specific subject areas. Thus, one reading of the verb *omfatte* (R1) will only appear in technical documentation, whereas the other reading of the verb (R2) is likely to be used in legal documentation only. So there is evidence that it will be possible to list a group of definitorial verbs appearing in all or at least most subject areas, while a number of readings will mainly or only occur in certain subject areas. To illustrate this, verbs used as knowledge probes for partitive definitions will logically be found in technical documentation in particular.

### *Other linguistic signals*

In the cases in which the readings derived by the PA did not provide a suitable search pattern, it was quite often possible to find other linguistic signals. Some of the verbs studied are combined with generic expressions denoting a hyponymous relation (generic-specific, e.g. X is a kind of) such as *arter* (kinds), *typer* (types), *serier* (series), *grupper* (groups) or with a colon; all of them may indicate information about subordinate concepts. In the hydraulics corpus the identifiers mentioned often occurred close to the verb *omfatte* (include) – a verb without a strong valency pattern for our terminological aim. Unlike *omfatte,* for instance the verbs *dele med/i* (divide by/into), *inddele i/efter* (divide into/by), *opdele i/efter* (divide into/by), and *skelne mellem/fra/på* (distinguish between/from/by) have a strong valency pattern, providing a strong search pattern, as they need not be combined with further identifiers except the prepositions belonging to their valency pattern. In combination with the verb *definere* (define), colon turned out to be a usable identifier, whereas the adjectives *samme* (same) and *tilsvarende* (corresponding) seem to be good identifiers when appearing in sentences together with the verb *gælde for* (apply to).

### *Authentic corpora examples versus recommendations for good definitions*

On the symposium *Analysing LSP genres* arranged by the Aarhus School of Business (Denmark) in 1997, Margaret Rogers stated in her paper *Genre and Terminology:*

> ”Even a strict evaluation and selection of documentation cannot change the fact that a terminology – descriptive or prescriptive – is an attempt to represent the system of the specialist lexicon **whereas text – evaluated or not evaluated – is language in use**.” (Rogers 2000: 4) (my bold)

Margaret Roger’s statement corresponds to my observations. As an example, verbs used as knowledge probes for intensional definitions may lead to sentences with incomplete definitions only consisting of the closest superordinate concept, but not the distinguishing characteristics. Similar observations go for sentences found by knowledge probes where you expect extensional or partitive definitions. In some cases only a few subordinate or partitive concepts occur so that you will have to find the missing concepts in other sentences of the corpus to complete the definition. In other cases the subordinate concepts found are unexpectedly not only mentioned but also examplarily defined by an intensional definition. A comparable study of another group of verbs (Weilgaard Christensen 2000b: 69) and this study documented that many of the corpus examples retrieved begin with demonstrative pronouns. That implies that the terms and the definitions or explanations very often appear in different sentences. The same observation is made by Pearson (1998: 151), who uses the term “complex formal defining expositives” about such appearances. I therefore conclude that it would be illusory to expect corpus-based terminological work to offer exemplary definitions and terminological information which can be entered directly into a terminological data base. So to take up the comparison with the ‘top-down’ approach again, it becomes evident that in connection with ‘language in use’ a ‘bottom-up’ approach cannot be ignored. In fact, you often have to combine information gleaned from different sentences and passages of texts in order to end up with an adequate definition. In such cases, the knowledge probes may provide invaluable assistance to the terminologist. To put it in Bowker’s words (1996: 35): “They [these knowledge probes] help the terminographers to piece together the conceptual structure of a subject field and to clarify the meaning of a term and its characteristics". Consequently, there is still a lot of terminological work to be done.

The following examples illustrate how searches for the verb *gælde for* (apply to) and *adskille* (differ from) supplement each other and provide the assistance described by Bowker:

> For komponentfittings gælder, [at dette er nipler for indskruning i komponenterne (ventiler, filtre, pumper m.m.)] (common characteristic)(Component fittings are nipples to be fitted onto components by screwing (valves, filters, pumps, etc.))
>
> *Fittings for komponenter adskiller sig først og fremmest fra hinanden [ved den måde, de tætner mod komponenten.] (distinguishing characteristic )*
> (The major difference in component fittings is the sealing method
> against the component.)

## 6. Concluding remarks

***PA***

Having demonstrated the usability of the PA, I would like to add some further aspects.

In very detailed, comparative studies from our participation in the UDOG project it was confirmed that out of all readings of a verb only a number of them will be realised in LSP texts (Weilgaard Christensen & Christoffersen 1999). Consequently, some of the readings dealt with in my studies are not very likely to appear in LSP texts, e.g. colloquial readings. That means that my studies may leave the impression that we should expect more noise from irrelevant data than is the case. Therefore it is quite obvious that only LSP corpora should be consulted when a list of relevant, verbal knowledge probes is compiled. In this way only readings occurring in LSP documents will be included in the studies. By employing this method, it is possible to achieve exact results about which readings lead to noise and consequently have to be eliminated. This would then again improve search strategies.

In my studies I concentrated on verbs without including term candidates in the search strings. Of course, the search pattern derived by the PA combined with the term candidate guarantees far better search results. Anyhow, my approach involved term candidates in another way because the information retrieved only presented data about term candidates that occurred with more detailed information in the corpus and were not just mentioned. Moreover, my method guarantees the retrieval of terminological information in sentences in which the term candidate is not mentioned but represented by a pronoun or the term of the superordinate concept or even a combination of these. On the basis of the 16 verbs examined, the PA turned out to offer strong search patterns. Therefore, I believe that the PA is an obvious point of departure for compiling a catalogue of specific, terminological knowledge probes. Further, a catalogue as the one described will indicate whether the corpus applied is knowledge-rich in a terminological sense, and whether it is suitable for knowledge extraction in practical terminology work. If many knowledge probes figure in a word list generated from a corpus, the corpus will probably form a good basis for terminology work and not just for term extraction.

In her book *Terms in Context* (1998) Jennifer Pearson criticises some researchers for not using authentic data in their descriptions of definitions in LSP texts. I should therefore draw attention to the implementation of corpora and thus authentic data in my work. Moreover, the PA has made it possible to examine the data systematically and make observations about definitorial information 'in language use' that can, of course, only be retrieved by systematic studies of authentic data. Therefore, the PA and the authentic corpus data have formed and in future will form an important symbiosis in my studies.

## 7. References


Ahmad, K. & M. Rogers (1994*). The analysis of text corpora for the creation of advanced terminology databases*, Talk 2 on the 10th anniversary of the Southern Denmark Business School, Kolding

Balzer, W. & A. Kamlah (1979*). Aspekte der physikalischen Begriffsbildung: theoretische Begriffe und operationale Definitionen*. Braunschweig: Friedr. Vieweg. ISBN 3-528-08440-5

Bowker, Lynne (1996). Towards a corpus-based approach to terminography. In: *TERMINOLOGY* VOL. 3(1). Amsterdam/Philadelphia: John Benjamins Publishing Co. ISSN 0929-9971

Daugaard, Jan (1995). Valency – The Pronominal Approach applied to Danish, Russian, and Chinese. In: *Odense Working Papers in Language and Communication*, No. 8, March 1995. Ed. Daugaard, Jan, Institute of Language and Communication, Odense University, Odense. ISSN 0906-7612

Jensen, Per Anker (1985). *Principper for grammatisk analyse*. Copenhagen: Nyt Nordisk Forlag Arnold Busck. ISBN 87-17-03451-5

Kirchmeier-Andersen, Sabine (1997a). Linguistic Reflections on the Part-of Relation. In: *Nr. 22 OMNIS Workshop, November 1996*. Ed.: Hansen, S. L., Copenhagen Business School, Copenhagen. ISSN: 0902-0039

Kirchmeier-Andersen, Sabine (1997b). *Lexicon, Valency and the Pronominal Approach, An Application of the Pronominal Approach to Danish Verbs and Nouns*, Ph.D. Dissertation submitted at the University of Odense, April 1997

Meyer, Ingrid & K. Mackintosh (1996). Refining the terminographer's concept-analysis methods: How can phraseology help? In: *TERMINOLOGY* VOL. 3(1). Amsterdam /Philadelphia: John Benjamins Publishing Co. ISSN 0929-9971

Meyer, Ingrid (2001): Extracting knowledge-rich contexts for terminography: A conceptual and methodological framework. In: *Recent Advances in Computational Terminology*. Ed. Bourigault, Didier & Christian Jacquemin & Marie-Claude L'Homme, Amsterdam/Philadelphia : John Benjamins Publishing Company. ISBN 90 272 4984 9

Pearson, Jennifer (1998). *Terms in Context*. Studies in Corpus Linguistics. Amsterdam /Philadelphia: John Benjamins Publishing Company. ISBN 90 272 2269

Quist, A. H. M. & Agnes Horsager & Lotte Weilgaard Christensen (1983). En teoretisk redegørelse for eksplikationsbegrebet med udgangspunkt i definitionsbegrebet for at påvise tendenser til at anvende eksplikationer inden for et driftøkonomisk delområde. Unpublished MA-thesis. Aarhus School of Business, Aarhus

Rogers, Margaret (2000). Genre and Terminology. *Analysing Professional Genres*. Ed. Trosborg, Anna, Amsterdam /Philadelphia: John Benjamins Publishing Company. ISBN90 272 5089 8

Schøsler, Lene & Karen van Durme (1996). The Odense Valency Dictionary: An introduction. UDOG SHF 15-9018, Report No. 4. In: *Odense Working Papers in Language and Communication*, No. 13, September 1996. Ed. Karl-Heinz Pogner, Institute of Language and Communication, Odense University, Odense. ISSN 0906-7612

Schøsler, Lene & Sabine Kirchmeier-Andersen (1997). Studies in Valency II. The Pronominal Approach Applied to Danish. *RASK Supplement Vol. 5*. Odense University Press 1997, Odense. ISSN 1395-7236

Weilgaard Christensen, Lotte & Ellen Christoffersen (1999). Verbal Valency in Technical Texts - Some Characteristics. In: *UDOG Prefinal Report*. Ed. Sandford Pedersen, Bolette, Centre for Language Technology, Copenhagen

Weilgaard Christensen, Lotte (2000a). Danske verber som knowledge probes i terminologisk korpusarbejde. In: *I terminologins tjänst, Festskrift för Heribert Picht på 60-årsdagen*. Eds.: Nuopponen, Anita & Bertha Toft & Johan Myking, Proceedings of the University of Vaasa, reports 59, Vaasa. ISBN 951-683-857-X

Weilgaard Christensen, Lotte (2000b): Ekstraktion af terminologiske data vha. Den Pronominelle Metode. In: *Nordterm ’99, Schæffergården 13.-15. juni 1999, Nordterm 10*. Ed. Larsen, Lianne, DANTERMcentret, Copenhagen

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# ABSTRACT

## Danish Verbs as Knowledge Probes in Corpus-based Terminology Work

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The aim of this article is to study the suitability of a number of Danish verbs as linguistic signals or rather knowledge probes for the retrieval of definitions in a Danish corpus on hydraulics. Moreover, this study will form the basis of a catalogue of knowledge probes for the retrieval of terminological information from machine-readable corpora in practical terminology work. The choice of one single subject area makes my study comparable with a terminologist's work, which, I believe, is very important for the evaluation of the method. A valency theory called the Pronominal Approach will be implemented to provide a more focussed approach than would be possible with a simple list of verbs. The basis of my method is to examine whether the valency patterns of a number of verbs are suitable as knowledge probes and thus also as search patterns in corpus-based terminology work. Further, I shall discuss how and to what extent the Pronominal Approach offers an efficient and suitable search method for practical terminology work based on machine-readable corpora consisting of raw texts that are neither lemmatised nor tagged. Finally, I look briefly at some aspects related to verb diathesis, semantics, LSP readings, and other linguistic signals than valency patterns as well as the importance of applying authentic corpora examples.

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**REPORTS:**

# La Terminología en Español en el Marco de las Normas Técnicas Internacionales

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## 1. Introducción

Nadie duda de la gran expansión de la lengua española, hablada por 852 millones de personas en el mundo. Sin embargo, su incidencia en el campo técnico-científico es insignificante. De esta realidad somos responsables todos los que de algún modo nos comportamos con extrema tibieza a la hora de utilizarla.

Como latinoamericanos observamos que tanto gobernantes y dirigentes, como educadores y comunicadores sociales prestan poca o ninguna atención al modo de expresión lingüística, tan preocupados se hallan en disminuir la tasa de desempleo, el índice de inflación y en conseguir nuevos mercados. Este sentido economicista de nuestra sociedad actual relega a segundo plano un tema esencial para la defensa de nuestra identidad, cual es la protección de la lengua. Según la definición del Diccionario de la Real Academia Española, el principal objetivo del lenguaje es el permitir al hombre trasmitir lo que piensa y siente. En nuestra calidad de hispano parlantes, ¿nos resignaremos a dejar de expresar nuestro pensamiento lo cual significa dejar de ser lo que somos?

En este artículo nos referiremos a un reciente cambio de actitud por parte de las instituciones normalizadoras nacionales de habla castellana y la consecuente formación de grupos de traducción en el marco de los temas Sistemas de Gestión de la Calidad y Sistemas de Gestión Ambiental. Es de esperar que las versiones en castellano de algunas normas técnicas aprobadas oficialmente por la ISO, constituyan el primer paso hacia una real toma de conciencia sobre la importancia de la lengua en el desarrollo de las actividades productivas, de servicios, comerciales y de investigación de los pueblos hispanohablantes.

## 2. La lengua en el mundo actual

Un conocido experto en educación argentino y actual rector de la Universidad Nacional de Buenos Aires, el Dr.Guillermo Jaim Etcheverry, ha dicho que “uno de los aspectos de la vida actual en el que mejor se pone de manifiesto el desinterés en custodiar nuestra identidad, es la corrupción alarmante a la que sometemos el lenguaje que utilizamos”. Este hecho no solamente afecta nuestra lengua, sino que al ser ésta el pilar que sustenta nuestra identidad, va minando nuestras posibilidades de comunicación profunda entre nosotros mismos.

Esta aseveración nos debe hacer reflexionar sobre la responsabilidad que nos cabe a cada uno de los ciudadanos que habitamos los países de habla española, ya que en este sentido debemos asumir nuestra falta de compromiso para trasmitir una herencia cultural en la que la lengua ocupa una posición decisiva. Todos somos responsables, en mayor o menor medida debido a nuestra indiferencia o a nuestra complacencia  al expresarnos de un modo que no hace sino poner al descubierto la pobreza y las carencias de nuestros interiores.

¿Qué es sino nuestra pasiva aceptación de una sintaxis mal estructurada y una terminología plagada de extranjerismos y préstamos, sin prestar atención al rico vocabulario de nuestra lengua castellana? El acostumbrado lenguaje vulgar de comunicadores sociales y estrellas de turno no hace sino reflejar ignorancia, primariedad y desaprensión. Al decir del Dr.Jaim Etcheverry, “sólo un conocimiento profundo de la lengua que es, en esencia, creadora de sentidos y de lazos, fuente de comunidad y de urbanidad, permite escapar al primitivismo y a la tentación a la violencia”.

Atendiendo a lo expresado, y porque somos hablantes de una lengua no dominante, debemos tomar conciencia de nuestra misión ineludible en defensa de la herramienta imprescindible de expresión de los pueblos, huella visible de su espíritu, clave de comprensión, dadora de identidad, nuestra lengua castellana. Para ello es necesario que comprendamos el profundo concepto expresado por Ludwig Wittgenstein: “Los límites de mi lengua constituyen los límites de mi mundo”.

## 3. Lenguas dominantes y lenguas minoritarias

Actualmente la lingüística ha arribado a la conclusión de que la lengua no existe más que en el cerebro de los que la hablan y de que son las leyes del espíritu humano y de la sociedad las que explican los hechos lingüísticos. En la tarea de hallar una teoría de los estados idiomáticos, la lingüística es ayudada por otras dos ciencias: la **sicología**, que muestra cómo nada se dice que no haya sido pensado antes y la **sociología**, que ha mostrado que el lenguaje es un producto de la vida social.

De este modo se puede decir que el lenguaje natural que hablamos todos, no está al servicio ni de la razón pura ni del arte; no apunta ni a un ideal lógico ni a uno literario, sino que está al servicio de la vida **de todos**, y en todas sus manifestaciones: su función es biológica y social. El lenguaje trata de expresar las dos caras de la vida real y para cumplir esta función es que llega a ser expresivo. Así las ideas en apariencia objetivas, se impregnan de afectividad. El habla individual intenta sin cesar traducir la subjetividad del pensamiento y luego, el uso comunal consagra esos giros expresivos.

Ahora bien, el estancamiento del castellano, y más aún, la invasión de terminología foránea la ha ubicado dentro del grupo de lenguas no dominantes, a pesar de su riqueza expresiva y su precisión terminológica. Pero esto es así, lo vemos a cada instante en diferentes aspectos de nuestra realidad. Los patrones culturales, incluida la lengua, que prevalecen en las sociedades más poderosas se convierten en paradigmáticos, en modelos que el resto debe seguir y alrededor de los cuales ocurren ciertas formas de homogeneización.

Sin embargo, como latinoamericanos, debemos rescatar una ventaja que tenemos que capitalizar para aunar esfuerzos en defensa del castellano. Por un lado, una historia compartida durante siglos y pautas culturales comunes, tales como la lengua y la religión, y por otro lado, la identidad regional que nos ha sido imputada desde fuera, ya que América Latina se ha considerado como un todo más o menos diferenciado.

El tema de la lengua en los países latinoamericanos debe analizarse en un contexto más amplio. Al decir de Jorge Larrain Ibáñez, “el magnífico edificio barroco ha empezado a deteriorarse y desmoronarse por la acción misma y la penetración imparable de los artefactos culturales provenientes del mundo inglés”. Este derrumbe también tiene sus consecuencias en la lengua castellana. En el ámbito de los productos de consumo, como los “blue jeans” y los electrodomésticos, el desmoronamiento se produce no porque haya sido superado por doctrinas rivales o por desviaciones ideológicas, sino que es el resultado del avance sin control de objetos baratos, accesibles y rápidamente perecederos. Estos hechos llevan a la aculturación de nuestros países, tema abordado por muchos pensadores, pero no por ello menos importante cuando se trata de la desvalorización de la lengua castellana.
En nuestro esfuerzo por mantener nuestra lengua, a pesar de los obstáculos que se nos presenten parece oportuno mantener nuestro ánimo inspirados en las palabras de Menéndez Pidal, quien dijo que “una lengua puede vivir indefinidamente, como la porción de humanidad que habla dicha lengua, y puede morir sustituida por otra, si le falta la entrañable adhesión de la sociedad que la habla”. A no dudarlo, como especialistas de la lengua debemos bregar por mantener esta “adhesión” de la sociedad a la cual pertenecemos.

## 4. Normalización vs. creatividad

En el contexto de cada lengua, considerada como sistema de signos lingüísticos, hallamos la lengua general, hablada por la mayoría a fin de comunicarse en la vida cotidiana y las lenguas de especialidad usadas en ámbitos específicos. Es precisamente con referencia a estas lenguas que la actividad normalizadora cobra importancia como medio para desembiguar los conceptos y acotar los vocabularios de las distintas disciplinas.

Según la Guía ISO/IEC 2-1991, capítulos 1,2 y 3 y su versión en castellano Norma IRAM 50-1 de Noviembre de 1992, la ***normalización*** se define como *"actividad que tiene por objeto establecer disposiciones aplicables a problemas reales o potenciales, destinadas a un uso común y repetido, a fin de obtener un ordenamiento óptimo en un contexto dado"*. De acuerdo a la misma Guía y Norma, los ***objetivos de la normalización*** son: 1) **aptitud para el uso**, 2) **compatibilidad**, 3) **intercambiabilidad**, 4) **simplificación de variedades**, 5) **seguridad**, 6) **protección del medio ambiente** y 7) **protección del producto**.

Una ***norma*** es definida como *" documento establecido por consenso y aprobado por un organismo reconocido que establece, para usos comunes y repetidos, reglas, criterios o características para las actividades o sus resultados, que procura la obtención de un nivel óptimo de ordenamiento en un contexto determinado"*. En la nota IRAM de dicha norma se agrega lo siguiente:" ***norma:*** *documento cuya elaboración se basa en resultados consolidados de la ciencia, la tecnología y la experiencia, considerando los antecedentes existentes y teniendo en cuenta, en particular, los documentos de los organismos internacionales de normalización; es preparado con la colaboración de los sectores interesados en el tema, contando con el consenso de los participantes y cumpliendo* **con** *reglamentaciones establecidas",* Norma IRAM 50-1:1992.

Parece oportuno aclarar el concepto de ***consenso***, cuya definición se encuentra en la antes mencionada norma. *"Acuerdo general, al que se llega mediante un proceso en el que se han tenido en cuenta las opiniones de todos los sectores interesados, sin que haya habido una oposición firme y fundada de una parte de ellos y en el que hayan salvado posiciones eventualmente divergentes"*. Nota: *"El consenso no implica necesariamente unanimidad"*.

Creemos que la actividad terminológica en las instituciones normalizadoras nacionales es muy importante, en especial cuando se trata de lenguas con escasa difusión en el ámbito científico-técnico, dado que los expertos que forman los comités técnicos pertenecen a institutos de investigación y también a organizaciones o empresas estatales o privadas, lo cual significa por un lado, contar con el asesoramiento técnico y científico de quienes no sólo investigan sino que también están en contacto con clientes, proveedores y público en general a través de su actividad cotidiana. Es decir, que conocen las necesidades terminológicas de los potenciales usuarios. Por otro lado, la terminología consensuada en dichos comités técnicos puede difundirse con rapidez dentro de cada uno de los sectores involucrados, puesto que las mencionadas empresas e instituciones constituyen los ámbitos naturales de uso. Una ventaja adicional que ofrece la labor realizada en dichos comités técnicos es el hecho de que las ideas más creativas siempre surgen como resultado del intercambio entre personas que pertenecen a distintos sectores.

## 5. Función de la normalización en el mercado actual

Cuando se comprende que la lengua constituye un factor económico en la empresa, también aumenta el interés por la misma. Otro objetivo empresarial que tiene que ver con la terminología es el creciente convencimiento de la importancia de comunicar en la lengua del cliente, como modo de hacer frente a una competencia cada vez más agresiva y generalizada.

## 6. Normalización internacional

*"**Normalización internacional:** aquélla en la que pueden participar los organismos reconocidos en todos los países"* Guía ISO/IEC 2-1991, capítulos 1,2 y 3, Norma IRAM 50-1. En este marco nos referiremos ahora a la actividad normalizadora internacional correspondiente a la ISO difundida en todo el mundo en el campo de la técnica en sus versiones oficiales en inglés, francés y la correspondiente actividad en español desarrollada recientemente.

### 6.1. Terminología y traducción al castellano

Ya mencionamos el cambio de actitud en el sector de la normalización con referencia a la importancia otorgada a la lengua, en este sentido, nos referiremos a los grupos internacionales de traducción al castellano organizados en el marco de las familias de normas **ISO 9000 Sistemas de Gestión de la Calidad** e **ISO 14000 Sistemas de Gestión Ambiental** .

Durante la Asamblea General del CT 176 de ISO, celebrada en 1999 en San Francisco, Estados Unidos de Norteamérica, por Resolución 14 se creó el **Grupo de Trabajo de Traducción al Español** [**Spanish Translation Task Group**]. Su objetivo fue ocuparse de la traducción al castellano de la familia de normas ISO 9000. Así presentada su finalidad parecía de fácil concreción, pero no hay que olvidar que la tarea implicaba la armonización de la terminología en España y en muchos países hispanoamericanos.

Sus participantes pertenecen a los siguientes países: Argentina, España, Venezuela, México, Colombia, Ecuador, Chile, Costa Rica, Perú, Uruguay, dos representantes de EEUU y uno proveniente de Alemania que representa a la Asociación Alemana de la Calidad. Hay dos instituciones asociadas: la COPANT, Comisión Panamericana de Normas Técnicas e INLAC, Instituto Latinoamericano de la Calidad, México. Cada delegación está constituida por un Jefe de Delegación y otros miembros cuyo número varía según la importancia de la institución en el campo de la normalización. Los países antes mencionados son miembros "P", participantes activos, con excepción de Ecuador y Perú, que tienen carácter de miembros "O", observadores. La presidencia recayó en el representante del IRAM de Argentina y la secretaría quedó en manos de AENOR, España. Ya desde la formación del grupo se propuso la incorporación de Brasil como miembro "P", posibilidad que ya fue aceptada.

El **Grupo de Trabajo de Traducción al Español** ha celebrado cinco reuniones: en Julio de 2000 en Kyoto, Japón, en ocasión de la Asamblea General del CT 176 de ISO, en Noviembre de 2000 en Costa Rica, en Julio de 2001 en México, en Octubre de 2001 en Birmingham, Reino Unido, durante la Asamblea General del CT 176 de ISO y en Abril de 2002 en Madrid, España.

Durante la reunión de Kyoto se presentó el Programa de Trabajo y se establecieron los criterios de funcionamiento. Las prioridades fueron:**1)** la revisión de las versiones DIS de la normas ISO 9000, 9001 y 9004, **2)** la puesta a consideración de los comentarios a todos los miembros de los subcomités del CT 176 de los países latinoamericanos y de España y **3)** las gestiones ante el Project Management Group del CT 176 de ISO a fin de lograr el reconocimiento por parte de la ISO de las versiones de las mencionadas normas en lengua castellana.

En dicha reunión también se enfatizó la importancia del **Grupo de Trabajo de Traducción al Español**, ya que en la Asamblea General del CT 207 de ISO celebrada en Junio de 2000 en Estocolmo se había solicitado el enlace de este grupo con la **Fuerza de Trabajo de Traducción al Español** [**Spanish Translation Task Force**], encargada de la traducción al castellano de la familia de normas ISO 14000, Sistemas de Gestión Ambiental. Durante la clausura de la reunión de Kyoto, por Resolución 15 E de 2000 se recomendó "la adopción y publicación de los documentos de la familia 9000:2000 traducida por el **GTTE** como la versión ISO reconocida".

Como ya mencionamos, uno de los peores obstáculos era conseguir el consenso terminológico, para lo cual se trabajó en base a un glosario elaborado por la COPANT. Dicho trabajo fue ampliado con el aporte de los institutos normalizadores nacionales, lo cual dio origen al Documento ISO/TC 176/STTG N19, en el cual se consideraba haber registrado la mayoría de los términos conflictivos. Sin embargo, se convino en que éste era un documento "vivo", es decir susceptible de ser modificado. En este punto se resaltó la importancia de la relación con la **COPANT**, como modo de hacer accesibles los documentos emanados del **GTTE** a otros organismos de habla castellana sin presencia en la ISO.

La tarea desarrollada hasta ese momento se vió coronada por el éxito, cuando el 15 de Diciembre de 2000 las versiones en castellano reconocidas por ISO de las normas ISO 9000, 9001 y 9004, fueron publicadas al mismo tiempo que las de las lenguas oficiales: inglés y francés. Para lograr este objetivo, la ISO puso como condición que por lo menos cinco países dieran formalmente su conformidad a las traducciones. Requisito que cumplieron Argentina, Venezuela, Colombia, España y Uruguay.

El trabajo de los integrantes del grupo siguió vía correo electrónico. Otro objetivo fué la aprobación de los documentos incluídos en el Plan de Trabajo y la aprobación de la incorporación de Brasil como miembro "P", propuesta que fue aceptada por unanimidad. El fundamento de esta decisión fue por un lado la pertenencia de Brasil al MERCOSUR y por otro, la publicación de normas MERCOSUR en su versión bilingüe, castellano-portugués. También se planteó el futuro del **Grupo de Trabajo de Traducción al Español**, ya que por haberse formado específicamente para la traducción de la familia ISO 9000, una vez cumplido ese cometido, habría que evaluar su permanencia o disolución.

En Octubre de 2001 se reunieron en Birmingham 19 expertos que constituyen el **Grupo de Trabajo de Traducción al Español** de 8 países y dos instituciones de enlace, INLAC (México) y DGN (Dirección General de Normas). Por primera vez participó el representante de Brasil. Entre los temas tratados se propuso solicitar que otras normas fueran consideradas como traducciones en castellano "certificadas por la ISO", como por ejemplo las que se refieren a la documentación de requisitos de auditorías y certificaciones.

Hasta este momento, las versiones traducidas por los dos grupos son las siguientes:
**Flía. ISO 9000: ISO 9000, ISO 9001, ISO 9004, ISO 10012, ISO 10013, ISO 10015 e ISO 10017**;
**Flía ISO 14000: ISO 14001, 14004, 14031, 14040, 14042, 14043, 14048, 14050:2002.** Mientras que las únicas que tienen el carácter de **versiones certificadas por la ISO** son las **ISO 9000, 9001 y 9004:2000** y la **ISO 14001:2002.**

También se propuso que el **Grupo de Trabajo de Traducción al Español** elaborara un documento sobre las experiencias obtenidas durante la traducción de las mencionadas normas, a fin de que sirvan como antecedente para otros emprendimientos similares. A propósito de ello, cabe mencionar la formación de un grupo de traducción de normas ISO al árabe (ATTG) presidido por un egipcio, cuyos integrantes solicitaron a los representantes del grupo de lengua castellana que les trasmitieran sus experiencias. La idea generalizada durante este evento fue la de propender a que las normas ISO sean traducidas a todas las lenguas.

Otro de los logros de la comunidad normalizadora de lengua española, es haber conseguido compatibilizar las tareas de modo de evitar las duplicaciones de trabajos y esfuerzos tanto en recursos humanos como económicos. Una prueba de ello es el Plan de Trabajo que está desarrollando el **Subcomité IRAM de Terminología** en Argentina. Desde hace dos años, el cronograma anual contempla tareas tendientes a lograr consenso terminológico en las diferentes instituciones regionales productoras de normas, la Asociación Mercosur de Normalización (AMN), la COPANT y las instituciones normalizadoras de los demás países latinoamericanos.

En este momento, los integrantes del SC IRAM de Terminología se hallan finalizando el trabajo terminológico en castellano de la norma *ISO 1087-2:2000 "Trabajo terminológico – Vocabulario - Parte 2: Aplicaciones informáticas"*. Mientras que el vocabulario de la *"Parte 1: Teoría y aplicación"* está siendo objeto de la última corrección. Una vez finalizada esta tarea, se procederá a la carga de los datos terminológicos en un programa informático especialmente diseñado para servir de soporte de los mismos, denominado **Termarace ®** . Como siguiente etapa, se contempla el envío de dicha base a las instituciones normalizadoras de todos los países a fin de proceder a su armonización. De este modo, toda la comunidad normalizadora hispano parlante dispondrá de un vocabulario consensuado para el manejo de todos los temas relacionados con vocabularios y glosarios dentro de los diferentes campos temáticos.

El próximo trabajo terminológico consistirá en la redacción de un proyecto de norma, sobre la base de la ISO 10241:1992 *"Normas terminológicas internacionales – Elaboración y presentación"*, con el objeto de fijar pautas para la redacción de normas terminológicas en lengua castellana. La diversidad de métodos para su elaboración y por lo tanto, la falta de coherencia de los vocabularios terminológicos correspondientes a las diversas áreas temáticas, ofrecen una clara justificación para esta iniciativa.

### 6.2. Armonización terminológica

Las normas de la familia 9000 en español reconocidas por la ISO significan un gran avance para la lengua puesto que favorecen al sector exportador de los países hispano parlantes, ya que le aseguran al importador que los productos y servicios originados en ellos cumplen con los requisitos de calidad internacional, debido a que los conceptos han sido correctamente interpretados y designados durante las reuniones de los respectivos comités técnicos de las instituciones normalizadoras internacionales tanto por expertos temáticos como lingüísticos. Este hecho elimina la posibilidad de ambigüedad o malos entendidos que terminan por deteriorar la calidad de productos y servicios.

En materia de calidad de un producto, por ejemplo, es preciso comenzar por la calidad de la terminología empleada para su diseño y más aún, por el vocabulario usado para realizar el estudio de mercado. Todas y cada una de las etapas de la investigación y desarrollo de una empresa, deben estar estructuradas de manera clara y ello sólo se logra cuando los diversos actores emplean una terminología armonizada en las diferentes situaciones comunicacionales.

En este punto cobra enorme importancia el hecho de que el vocabulario en castellano de las diferentes normas de Sistemas de Gestión de la Calidad sea uno solo para los países latinoamericanos y España, por supuesto, respetando las particularidades regionales, las que, en caso de existir, deben hallarse claramente especificadas en notas o ejemplos agregados en la versión española.

### 6.3. Consenso lingüístico y utilización de las normas técnicas

No hay que olvidar que en toda organización o empresa se maneja información técnica o científica, es decir en lengua especializada, lo cual dará más o menos confiabilidad a lo ofrecido, según la calidad de la literatura que lo acompañe. Muchos autores han tratado el tema de la calidad de la redacción técnico-científica y en lo que todos coinciden es en que debe mostrar **cohesión** y **coherencia**, pero...¿cómo lograr ésto si no se utiliza un vocabulario preciso y no se explicitan conceptos acordes con el tema en cuestión? ¿Qué hacer con los calcos del inglés, tan frecuentes en diversas áreas temáticas como la informática?

Otra característica es la **consistencia**, en especial cuando se trata de manuales de uso, guías de instalación y especificaciones de mantenimiento. ¿Cómo lograr consistencia si en su redacción no se utiliza un vocabulario en castellano que sea comprensible para el cliente, el usuario o el operario?

## 7. Conclusión

Para concluir diremos que las bases de datos terminológicos donde se almacenarán los vocabularios bilingües, castellano-inglés, de las normas ISO correspondientes a las familias 9000 y 14000, constituirán de aquí en más, el modo más eficaz de **asegurar la consistencia** de las versiones en español, y de esta manera **garantizar su calidad** a la hora de solicitar su aprobación a la Secretaría General de la ISO.

El consenso que implica la elaboración de dichos vocabularios por parte de las instituciones normalizadoras de los países hispano parlantes tiene las siguientes consecuencias positivas: **a)** acelera los tiempos de traducción, **b)** evita malos entendidos por parte de los usuarios de las normas que pueden originar problemas graves, **c)** permite la **interacción** de profesionales de la ciencia y la técnica con los expertos de la lengua y **d)** promueve el respeto por la **diversidad** lingüística tanto en América como en España. Lo anterior ratifica el hecho de que la terminología promueve la **interacción de especialistas** que pertenecen a distintos ámbitos y sensibiliza a los mismos en cuanto al **respeto por la diversidad lingüística** que enriquece el espíritu y amplía el horizonte de la inteligencia y la imaginación.

Es de desear que esta nueva concepción de apertura en el marco de la normalización signifique el punto de partida de un reposicionamiento de nuestra lengua que permita la promoción del desarrollo científico tecnológico de nuestros pueblos a fin de mejorar las condiciones de vida de sus habitantes.

## 8. Bibliografía

ARDAO, Arturo, “Filosofía de lengua española”, Editorial Alfa, Montevideo, 1963.
BALLY, Charles, “El lenguaje y la vida”, Editorial Losada, Buenos Aires, 1957.
CAMPBELL, K.S., “Coherence, continuity and cohesion”, Hillsdale, Lawrence Erlbaum Associates Publishers,New Jersey, USA, 1995.
GARVIN, D.A., “Managing quality: the strategic and competitive edge”, The Free Press, New York, 1988.

ISO/TC 176/STTG N20 (13-07-2000), Resoluciones, Primera reunión, Kyoto, Japón, Julio, 2000.
ISO/TC 176/STTG N29 (23-11-2000), Resoluciones, Segunda reunión, Costa Rica, Noviembre, 2000.

ISO/TC 176/STTG N30 (27-12-2000), Informe, Segunda reunión, Costa Rica, Noviembre, 2000.

ISO/TC 176/STTG N40 (19-07-2001), Resoluciones, Tercera reunión, México, Julio, 2001.

ISO/TC 176/STTG N50 (03-10-2001), Resoluciones, Cuarta reunión, Birmingham, Octubre, 2001.

ISO/TC 176/STTG N57 (11-04-2002), Resoluciones, Quinta reunión, Madrid, España, Abril, 2002.

LARRAIN IBÁÑEZ, Jorge, “Modernidad, razón e identidad en América Latina”, Editorial Andrés Bello, Santiago de Chile, 1996.

MARIN, Francisco Marcos, “Lingüística y lengua española”, Editorial Cincel, Madrid, 1975.

MORENO de ALBA, José G., “El español en América”, Lenguas y Estudios Literarios, Fondo de Cultura Económica, México, 1988.

PERROT, Jean, “La linguistique. Que-sais-je?”, Presses Universitaires de France, Paris, 1980.

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# DSFF Symposium 2002: 'Business and Industry, Language Policy and Competitiveness'

## Preliminary report

On October 2nd 2002, DSFF held in Copenhagen a Danish symposium entitled "**Business and Industry, Language Policy and Competitiveness**". The symposium resulted in a resolution, which we reproduce bellow:

**DSFF Symposium, 2 October 2002**

**"Business and Industry, Language Policy and Competitiveness"**

**Resolution**

Today, it is a fact that:

- the information and knowledge society is developing in step with the internationalisation of companies and the globalisation of trade and other financial activity;
- both trends place new and increasing demands on business communication based on state-of-the-art information technology, i.e. over the internet, websites, online databases, intranet, extranet and email;
- companies have to produce, communicate, market and sell across national, cultural and linguistic barriers, which is why multilingual homepages, product catalogues and sales campaigns are no longer the exception, but the rule;
- business communication, including the languages used today, is a key competitive parameter.

To secure and further consolidate these general conditions for the international presence and ongoing development of the Danish business sector, it is necessary to ensure that

1. a policy on the language of the knowledge society and a language policy are put on the political agenda to improve the international competitiveness of Danish

industry in parallel with the development of the Danish language for use in information and communication technology;

2. the Government, represented by government departments, is encouraged to raise industry's awareness and stimulate corporate initiatives in the language area;
3. business and industry organisations, trade associations and chambers of commerce inform and support their members through language-policy initiatives;
4. individual companies formulate language policies and language strategies in parallel with communication policies and policies on other high-priority issues; such high-priority issues will include, among others:

- integration of language resources in intellectual capital accounts
- maintenance of the status and use of the Danish language in the EU
- compilation of terminological resources in terminology and knowledge banks, providing an opportunity for knowledge sharing
- compilation of common, industry-specific terminologies, also within the public sector
- publication of case collections on companies' language policies and experience in this field
- work for a dialogue between companies and linguists on a language policy

*DSFF, October 2002*

The original version of the resolution in Danish may be found on our homepage at www.dsff-lsp.dk

A detailed report on the above-mentioned Symposium will be published in our forthcoming issue of "LSP & Professional Communication" (April 2003).

*The Editorial Board*

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# BOOK REVIEW:

**Le groupe nominal dans le texte spécialisé**

*Textes réunis par David Banks*

L'Harmattan, Paris, 2001, 175 pages
ISBN 2-7475-1584-2

**Recension par :**
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Les travaux en LS ont beaucoup progressé au cours des dix dernières années, et l'âge d'or de la linguistique de corpus, où régnaient fréquence et distribution, semble désormais révolu. On explore aujourd'hui l'articulation des discours et des mots des discours professionnels. Ce recueil est le bienvenu dans cette perspective moderne. Issu du premier colloque des Nouvelles Journées de l'ERLA (Equipe de Recherche en Linguistique Appliquée) qui s'est tenu à l'Université de Bretagne Occidentale à Brest le 17 novembre 2000, le livre investigue le statut du groupe nominal au sein des textes non-littéraires. Il rassemble onze contributions rédigées en français, portant sur les langues française et anglaise, et fait intervenir des textes aussi variés que l'article de recherche scientifique, le texte muséal, et les cartes de restaurant.

Dans l'article intitulé *Construction discursive de noms composés dans des textes scientifiques anglais* (9-23) Janet Ormrod étudie la construction des composés nominaux, et leur rôle dans le développement discursif de l'article de recherche. Après avoir présenté le taux de densité lexicale dans son corpus, elle distingue *la construction prospective*, où sont introduits les composés sans préparation dans le discours, et *la construction rétrospective*, qui reprend des termes déjà utilisés, et dont elle relève une forme simple, qui se crée à partir d'un élément de base, et une forme complexe, où un concept donné est modifié au fil du déroulement textuel. La première construction se retrouve surtout dans le titre de l'article, les sous-titres, le sommaire, l'introduction, et sert à susciter l'intérêt du lecteur et à le guider, tandis que la deuxième, souvent en position rhématique, sert à simplifier ou condenser le sens. L’auteur examine enfin comment les deux constructions se combinent dans l’article de recherche afin d’assurer la cohésion.

Lamria Chetouani, *Les avatars lexico-sémantiques de “l’Effet de serre” et du “Réchauffement”* (25-51) examine l’usage que font les scientifiques et les politiques de deux termes non seulement concurrents mais porteurs de tensions. L’analyse révèle des fluctuations de sens et de référenciation, de même que l’étude des champs lexico-sémantiques (équivalence, opposition, association, qualification, “actions de” et “actions sur/contre”) fait ressortir l’ambiguïté des termes et des écarts dans l’usage qu’en font les locuteurs. Les variations de sens et d’usage des deux termes, univoques et synonymes dans les dictionnaires, s’expliquent au niveau discursif : celles-ci sont dues à des manipulations stratégiques dans la rhétorique des discours. Le choix de l’un ou l’autre terme (*effet de serre* étant privilégié des politiques, tandis que les scientifiques préfèrent *réchauffement*) traduit une volonté d’exhiber ou de dissimuler certains aspects du phénomène.

Dans son étude diachronique *Vers une taxonomie de la nominalisation en anglais scientifique* (53-64) David Banks examine l’évolution du recours à la nominalisation des procès dans la construction du discours scientifique en physique et en biologie. Sur la base de six textes datant du début et de la fin du siècle dernier, l’auteur étudie d’abord la fréquence des nominalisations dans l’article de recherche scientifique de langue anglaise, et fait ressortir une tendance à la nominalisation accrue. L’étude par type de procès, selon la méthodologie systémique, ne permet pas vraiment d’établir une taxonomie. En revanche, l’encodage grammatical se montre plus fructueux. En opérant un regroupement par catégories (suffixations, procès nominalisés sans verbe lexical correspondant, etc.), la taxonomie s’établit et confirme l’hypothèse de départ: la distribution des moyens exploités est restée relativement stable pour les sciences physiques, alors que pour les sciences biologiques la situation paraît plus instable.

Dans le domaine du traitement des déchets, légion sont les termes forgés autour de syntagmes hautement complexes, qui posent problème à la description terminologique. Dans son article *Syntagme nominal fleuve dans le droit de l’environnement : la désignation des déchets* (65-72) Karine Le Masle applique une méthode originale. Pour les problèmes morphologiques, elle utilise d’abord la translation (changement de catégorie grammaticale). Les éléments en position d’épithète sont alors regroupés en catégories morphologiques. Un recoupage permet ensuite une distribution en classes sémantiques. Pour les problèmes sémantiques et cognitifs, l’auteur applique enfin les “graphes conceptuels”, qui établissent des réseaux sémantiques permettant le rapprochement des désignations, et facilitent de fait les applications documentaires et traductionnelles. Ajoutons qu’il devrait en être de même pour les applications en lexicographie spécialisée.

Dans *La fonction métalinguistique des groupes nominaux descriptifs dans les résumés/abstracts* (73-83), Mohamed Saki étudie le rôle cohésif des descriptifs prospectifs (p. ex. *This article*) et rétrospectifs (p. ex. *On the basis of such findings*) dans les résumés scientifiques de langue anglaise. Il s’agit de savoir s'il existe une articulation entre ce rôle cohésif et la structure générique des résumés (la “move-structure” chez Swales et Bhatia). L'auteur examine la fréquence et la distribution des descriptifs dans un corpus bâti sur deux revues linguistiques. L'analyse fait état d’une grande irrégularité : plusieurs textes n’exploitent que des descriptifs de l'une ou de l'autre catégorie, alors qu’un autre n’en contient aucun. Force est alors de conclure que les descriptifs ne remplissent pas une fonction cohésive importante, et qu'il n'y a pas de relation systématique entre leur distribution et la structure des résumés. L’analyse des descriptifs n'est pourtant pas sans intêret puisqu'elle éclaire le statut du résumé en tant qu’élément constitutif de l’article.

La contribution de Anne-Marie Loffler-Laurian *Le groupe nominal dans le texte muséal* (85-100) décrit le texte muséal dans son contexte singulier. Tantôt supporté par des étiquettes désignant les objets exposés, tantôt par des panneaux explicatifs les commentant, le texte entretient un double rapport avec les objets qu’il dénomme et catégorise, et avec les visiteurs qu’il informe. L’étude est circonscrite à l’analyse de trois groupes de textes bilingues, français et anglais, provenant de deux musées canadiens, et orchestre un vaste éventail d’approches : syntaxique, sémantique et pragmatique, mais aussi discursive, interlinguistique et interculturelle, voire sémiotique. Il en ressort que le groupe nominal concourt au *figement* de la communication, et établit un *genre définitionnel* et *atemporel*, désenclavant le musée de son époque. Quoiqu’originale, cette étude est un peu décevante. La profusion des niveaux d’analyse et des axes argumentatifs finit par affecter le traitement des données empiriques. On regrettera en outre l’absence d’ancrage théorique, puisque l’article ne contient aucune référence bibliographique et passe sous silence les travaux qui auraient pu étayer l’analyse.

Dans *La phrase nominale et les titres de presse sans verbe* (101-115), Florence Lefeuvre investigue la syntaxe des titres du quotidien *Le Monde*, et la compare à celle des phrases nominales dans le texte littéraire. Les titres de presse sont doublement intéressants car ils présentent “un condensé de l’évènement” tout en se pliant aux contraintes de neutralité et d’objectivité de l’information. La première catégorie est celle des titres à deux termes, du type *Gérard Schröder, l’homme d’état inattendu*, qui établissent une relation d’attribution, d’appartenance ou d’identification. Contrairement à la phrase nominale littéraire, l’ordre canonique y est sujet-prédicat, qui préserve une apparence objective en dépit de l’expressivité propre à la phrase nominale. La deuxième catégorie est celle des titres à un terme. L’absence de déterminant en confirme le statut prédicatif, et l’absence de marqueurs discursifs (négations, adverbes) préserve la neutralité. Par contre, la présence d’un déterminant confère au titre un statut ambigu, qui se ferme sur lui-même ou s’ouvre sur l’article. L’analyse décrit bien le statut discursif du titre de presse, même si l’éclairage fourni par le texte littéraire n’était pas strictement nécessaire, le titre de presse formant un “discours particulier pouvant être analysé pour lui-même”.

Chez François Maniez, *La prémodification nominale en anglais médical : quelques problèmes de traduction* (117-136), l’étude traductologique est concentrée sur la transposition des adjectifs et des modificateurs argumentaux en français et en anglais médical formant collocation. L'étude interlinguistique des coocurrences sur corpus (deux corpus unilingues, un corpus traductionnel) se revèle très intéressante, car elle se double de prescriptions utiles à la lexicographie spécialisée bilingue. Les adjectifs en effet posent de graves problèmes au traducteur puisque leur mise en équivalence n'est jamais donnée, en raison de structures interlinguistiques divergentes et de contraintes de figement syntaxique. Le lexicographe devra développer des solutions adaptées à la fonction dictionnairique envisagée; certaines unités devront être lemmatisées, tandis que d'autres seront traitées comme collocations adressées au lemme. Dans tous les cas, le traitement lexicographique devra se fonder sur des corpus alignés, et la base empirique du dictionnaire devra être considérablement élargie.

Dans *Contribution des associations syntagmatiques adjectivales à la complexification du groupe nominal dans le texte spécialisé* (137-150) Mourad Boughedaoui traite les difficultés que posent les adjectifs composés complexes aux apprenants de la LSP en anglais. Du type *Complete NetBios-based peer-to-peer network operating system*, ces prémodifiants sont difficilement interprétables et requièrent une description affinée de la forme et du sens. L'auteur décrit la formation de ces unités, et distingue entre collocations (p. ex. *file-area capabilities*), et transformations (p. ex. *collision-avoidance scheme*) à prémodifiant issu d'une structure post-modifiante. Sont ensuite traitées les difficultés d'interprétation, avec d'un côté les adjectifs composés indépendants du contexte, et de l'autre ceux qui en sont dépendants. Pour les premiers, qui sont lexicalisés ou semi-lexicalisés, l'apprenant se servira du dictionnaire, tandis que pour les seconds, il faudra interpréter au moyen de repères textuels. Si la perspective didactique est intéressante, la démarche manque un peu de clarté. On aurait aussi souhaité que l'auteur précise ce qu'il entend par collocation.

John Osborne étudie dans son article *Relatives déterminatives et descriptives dans les journaux britanniques* (151-163) le degré d'indépendance des relatives vis-à-vis du groupe nominal leur servant d'antécédent. L'auteur examine, dans un corpus de textes journalistiques, les relatives dotées des traits caractéristiques de non-restrictives (antécédent sémantiquement lourd ou à référent unique), mais qui se présentent typographiquement comme des restrictives (sans virgule). Leur statut dépend plutôt de la combinatoire des informations véhiculées par l'antécédent, la relative, et ce à quoi se rattache l'antécédent. De fait, ces relatives à statut problématique sont très imbriquées dans la phrase, car elles introduisent souvent leur antécédent ou justifient sa pertinence.

Dans une étude originale intitulée *Us et abus du déterminant possessif dans les cartes des restaurants* français (165-175), la curiosité linguistique de Michèle Noailly est éveillée par un phénomème langagier dont elle réprime la pratique : l'usage du possessif dans les descriptifs des cartes de restaurants se réclamant de la nouvelle cuisine, du type *Tarte fondante au chocolat de Sao-Tome et* ***sa*** *crème anisée*. L'auteur constate que le déterminant possessif ne répond pas à une nécessité syntaxique puisqu'aucune contrainte relationnelle n'en justifie la présence. Il s'agirait plutôt d'une "complication abusive". Plus délicate est l'explication fonctionnelle à fournir. Il n'existe pas de rapport apparent entre les éléments, qu'il s'agisse d'une relation conceptuelle de type partie-tout, ou d'une relation liée à la connaissance du monde. Le rapport est aléatoire, et l'acceptabilité du possessif ne se justifie que par le degré de proximité entre l'antécédent et le possessif qui l'anaphorise. Il s'agirait peut-être d'anaphores associatives qui, par le jeu de leurs reprises incongrues, se font miroir de la création gastronomique.

Le recueil suscite, à notre avis, quelques remarques critiques : les aspects textologiques sont un peu délaissés, et on restera sur sa faim en ce qui concerne les genres textuels, dont le cadre théorique aurait pu enrichir et fédérer la description fonctionnelle des discours professionnels. En outre, certaines analyses manquent parfois de précision sur les notions linguistiques mises en oeuvre, la méthodologie, ou la base empirique. Ceci dit, on appréciera la multiplicité des démarches et des niveaux d'analyses, l'utilisation d'exemples actualisés, et l'orientation vers des applications. Somme toute assez bien équilibrée, la palette des travaux présentés ici contribuera à faire avancer la réflexion formelle et fonctionnelle sur le statut du groupe nominal. Le recueil pourra être lu avec profit par les linguistes aussi bien que par les apprenants de la LS.

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**INFORMATION:**

# Rat für Deutschsprachige Terminologie (RaDT)

Auf der Generalversammlung der UNESCO im November 1991 in Paris wurde die Resolution 11.34 mit dem Titel „Co-operation on terminological matters" verabschiedet; hierin werden die Mitgliedsländer und die nationalen UNESCO-Kommissionen aufgefordert, terminologische Aktivitäten auf regionaler und nationaler Ebene zu fördern und zu unterstützen. Während des internationalen Kongresses „Terminology and Knowledge Engineering – TKE'93" der Gesellschaft für Terminologie und Wissenstransfer e.V. (GTW) in Köln fand ein erstes Treffen von Vertretern aller wichtigen terminologiebezogenen Institutionen und Organisationen im deutschsprachigen Raum unter dem Motto „Deutschsprachige Terminologie-Initiative" statt. Auf diesem Treffen wurde vereinbart, ein Expertengremium für Terminologiebelange im deutschsprachigen Raum zu etablieren. Im November 1994 fand dann schließlich in den Räumen der Deutschen UNESCO-Kommission in Bonn die konstituierende Sitzung des Rates für Deutschsprachige Terminologie (RaDT) statt.

Der Rat für Deutschsprachige Terminologie (RaDT) versteht sich als ein Expertengremium, in dem Organisationen, Verbände, Behörden, die Wirtschaft sowie die Aus- und Weiterbildung im deutschsprachigen Raum vertreten sind, die sich mit terminologischen Fragestellungen, Anwendungen und Ausbildungsinhalten beschäftigen.

Der RaDT besteht aus etwa 25 Mitgliedern, die auf Vorschlag des RaDT benannt und gewählt werden. Eine gleichmäßige Vertretung aller mit Terminologie befassten Gruppen sowie aller deutschsprachigen Regionen wird bei der Zusammensetzung des RaDT angestrebt. Die drei nationalen UNESCO-Kommissionen Deutschlands, Österreichs und der Schweiz entsenden Vertreter als ständige Gäste.

Der RaDT hat sich eine eigene Geschäftsordnung gegeben, die die Zusammensetzung, die Aufgaben und die Arbeitsweise des Rates regelt. Hierin ist unter anderem festgelegt, dass der Rat durch einen Vorsitzenden, einen Stellvertreter und einen Schriftführer geleitet wird und dass Sitzungen halbjährlich in der Regel an den Orten der nationalen UNESCO-Kommissionen stattfinden.
Zu den Aufgaben des RaDT gehört es unter anderem:

- die Bedeutung der Terminologie im deutschsprachigen Raum bewusst zu machen
- die Zusammenarbeit im Bereich der Terminologie zu fördern

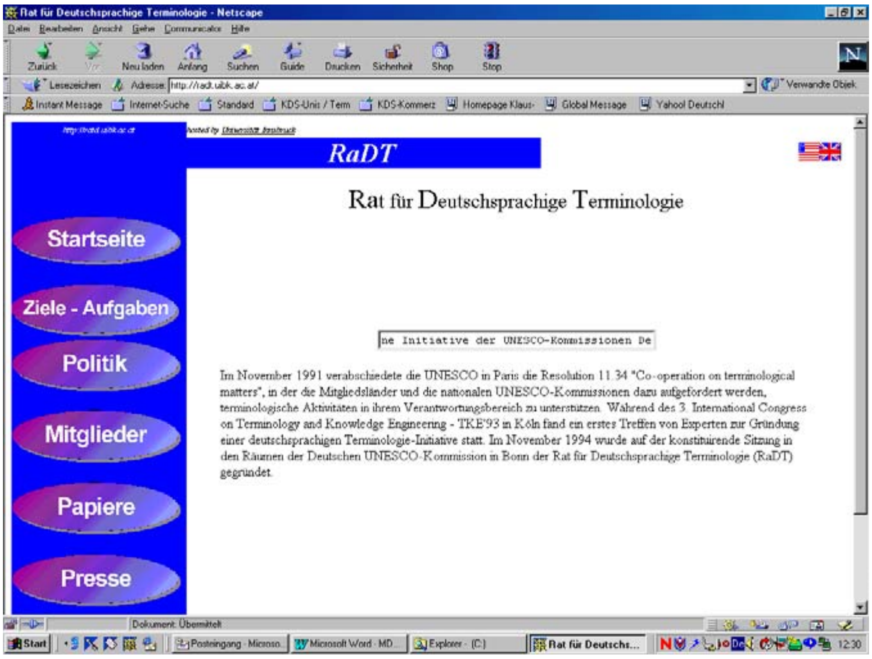
- terminologische Aktivitäten zu koordinieren und zu unterstützen
- terminologiepolitische und -strategische Leitlinien zu erarbeiten, zu verbreiten und an deren Umsetzung mitzuwirken

Hierzu wurden und werden Pressemitteilungen, Empfehlungen und Arbeitspapiere erstellt, die an die entsprechenden Stellen weitergeleitet und in der Fachöffentlichkeit verbreitet werden.

Seit März 2002 liegt eine 18-seitige Broschüre mit dem Titel „Terminologie – Grundlage für Fachkommunikation, Fachinformation und Fachwissen in der mehrsprachigen Informationsgesellschaft“ vor, die von den Mitgliedern des RaDT erarbeitet und von der Sektion Terminologie der Schweizerischen Bundeskanzlei produziert wurde. Diese Broschüre behandelt das Thema Terminologie unter verschiedenen Aspekten und führt alle Ausbildungsgänge mit terminologischen Inhalten sowie terminologieorientierte Organisationen und Netzwerke im deutschsprachigen, europäischen und internationalen Raum auf. Die Broschüre kann beim Vorsitzenden des RaDT (siehe unten) angefordert werden.

Die 17. Sitzung des RaDT findet Mitte November 2002 in Luxemburg statt; dort wird unter anderem eine Beschreibung der Berufsprofile von Terminologen erarbeitet und über den Einfluss des Englischen auf die deutsche (Fach-)Sprache und Terminologie diskutiert werden.

Informationen zum RaDT finden sich unter http://radt.uibk.ac.at/; Ansprechpartner ist der derzeitige Vorsitzende des RaDT, Prof. Dr. Klaus-Dirk Schmitz (klaus.schmitz@fh-koeln.de).

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# European Terminology Documentation Centre Network (TDCnet)

Initiiert und mitfinanziert durch die EU-Kommission im Rahmen des MLIS-Aktionsplans (Multilingual Information Society) wurde von August 1998 bis November 2000 das TDCnet-Projekt (European Terminology Documentation Network) durchgeführt. Das Projekt hatte zum Ziel, ein „virtual terminology directory“ in Form eines logischen und physikalischen Netzwerkes von existierenden oder im Aufbau befindlichen Informations- und Dokumentationszentren für Terminologie in Europa zu definieren und zu realisieren.

Im Rahmen des Projektes wurden auf der Basis von Analysen und Nutzer-Befragungen Empfehlungen und technische Spezifikationen erarbeitet, die die innerhalb eines nationalen oder regionalen Dokumentationszentrums für Terminologie zu verwaltenden Bestände und durchzuführenden Service-Aufgaben genau festlegen. Ebenso wurde ein Austauschverfahren für terminologiebezogene bibliographische und faktische Daten (TeDIF = Terminology Documentation Interchange Format) entwickelt, um die Daten der einzelnen Zentren in einem festgelegten Format in einer gemeinsamen Datenbank zusammenzuführen. In einer zweiten Projektphase wurden ein Prototyp des Netzes entwickelt und die Spezifikationen für den Datenaustausch und die Zusammenarbeit getestet, evaluiert und verbessert.

An dem Projekt haben folgende nationalen bzw. regionalen Dokumentationszentren teilgenommen:

- Infoterm (Wien) *als Projekt-Koordinator*
- ASS.I.TERM Associazione Italiana per la Terminologia (Rom)
- TERMCAT Centre de Terminologia (Barcelona)
- CTB Centre de Terminologie de Bruxelles (Brüssel)
- CTN Centre de la Terminologie et de la Néologie (Paris)
- DTG Danish Terminology Group (Kopenhagen)
- DEUTERM Deutsches Informations- und Dokumentationszentrum für Terminologie (Köln)
- ELOT Hellenic Organization for Standardization (Athen)
- RTT Rådet for teknisk terminologi (Oslo)
- Union Latine (Paris)

Während des Projektes wurde eng mit der European Association for Terminology (EAfT) zusammengearbeitet, die sich zur Aufgabe gesetzt hat, den im Abschlußbericht des Pointer-Projektes (Proposals for an Operational Infrastructure for Terminology in Europe) empfohlenen European Terminology Information Server (ETIS) aufzubauen. ETIS wurde im Rahmen des TDCnet-Projektes als Internet-Schnittstelle zu den Nutzern der terminologischen Informationen betrachtet, wobei vor allem exemplarisch kostenfreie bibliographische und faktische Informationen zur Terminologie angeboten wurden.

Das TDCnet-Projekt wurde nach etwas mehr als zwei Jahren Ende November 2000 erfolgreich abgeschlossen. Neben den Hauptpartnern haben weitere Zentren in allen Teilen der EU mitgearbeitet, um den Prototyp des Netzes zu realisieren.

Nach Ende des TDCnet-Projektes und der Mitfinanzierung durch die EU-Kommission wurde durch eine Kooperationsvereinbarung die Zusammenarbeit der regionalen und nationalen Zentren in Form des TDCnet-Konsortiums sichergestellt. Auch ETIS wird nach Überarbeitung und Neugestaltung weiterhin von der Union Latine im Auftrag der EAfT gewartet und betrieben.

Im TDCnet-Konsortium sind derzeit folgende Zentren zusammengeschlossen:

- ASS.I.TERM - Associazione Italiana per la Terminologia, E-mail: cirt@linux.isrds.rm.cnr.it
- CINDOC - Centro de Información y Documentación Científica, http://www.cindoc.csic.es
- CTB - Centre de Terminologie de Bruxelles de l'Institut Libre Marie Haps, http://www.ilmh.be/terminologie
- DANTERM - DANTERMcentret, http://www.danterm.dk
- DEUTERM - Deutsches Informations- und Dokumentationszentrum für Terminologie, http://www.fbi.fh-koeln.de/deuterm
- ELOT - Griechische Normungsorganisation, http://www.elot.gr
- ÍM - Íslensk málstöd (Isländisches Sprachen-Institut), http://www.ismal.hi.is
- INFOTERM - Internationales Informationszentrum für Terminologie, http://linux.infoterm.org
- N.T.U. - Nederlandse Taalunie, http://www.taalunie.org
- RTT - Rådet for teknisk terminologi, http://www.rtt.org
- TERMCAT - Centre de Terminologia TERMCAT, http://www.termcat.es
- TNC - Schwedisches Zentrum für technische Terminologie, http://www.tnc.se
- TSK - Tekniikan Sanastokeskus ry, http://www.tsk.fi
- UL / DTIL - Union Latine, http://www.unilat.org
- UZEI – Baskisches Zentrum für Terminologie and Lexikographie, http://www.uzei.com

Neue Projekte und Kooperationsabkommen sollen eine Erweiterung des Netzes auf andere Länder und Regionen, besonders in Mittel- und Ost-Europa ermöglichen.

Informationen zum TDCnet-Projekt und zum TDCnet-Konsortium finden sich unter http://www.tdcnet.net, der Zugang zum ETIS-System ist unter http://www.etis.info möglich.

*Klaus Dirk-Schmitz, Fachbereich Sprachen*
*Fachhochschule Koeln, Deutschland*

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# Communiqué de presse : Répertoire biographique des pays latins – Traduction et Terminologie

L'Union latine a publié la deuxième version du *Répertoire biographique international - Traduction et Terminologie*, outil de référence renseignant sur les spécialistes du langage du monde latin. Ce répertoire a été élaboré afin d'améliorer le statut de la profession et de compléter le travail fait par certaines organisations professionnelles, notamment sur le plan national ou régional.

Cette deuxième version, uniquement disponible sur la toile, regroupe les références d'environ 600 spécialistes localisés dans une trentaine de pays. L'Union latine a contacté les personnes qui se sont distinguées dans leur domaine d'activité par leurs publications ou par la place qu'elles occupent dans l'univers professionnel: responsables de services de traduction ou de terminologie, éditeurs, présidents d'associations, etc.

Par ailleurs, en dehors de la traduction et de la terminologie, ont été sélectionnés des spécialistes qui se sont distingués dans d'autres disciplines telles que l'aménagement linguistique, l'ingénierie linguistique, la lexicologie, les langages spécialisés, la localisation, la phraséologie, la terminographie, la sociolinguistique, etc.

Le répertoire est consultable en cinq langues aux adresses suivantes :

http://www.unilat.org/dtil/repbio/index_es.asp (espagnol)
http://www.unilat.org/dtil/repbio/index_fr.asp (français)
http://www.unilat.org/dtil/repbio/index_it.asp (italien)
http://www.unilat.org/dtil/repbio/index_pt.asp (portugais)
http://www.unilat.org/dtil/repbio/index_ro.asp (roumain).

Une première version avait été publiée sur papier en 1995 en collaboration avec Praetorius Limited (Nottingham), International Where + How (Bonn) et Infoterm (Vienne).

*DTIL – Direction Terminologie et Industrie de la Langue,*
*Union Latine, Paris, France*

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# Réseau « Lexicologie, Terminologie, Traduction » LTT

**Objectifs** :

Le Réseau LTT a pour objectifs de :

- Soutenir, encourager, promouvoir les travaux de recherche, la diffusion des connaissances et la formation dans les domaines de compétence du réseau en assurant une modernité justifiée et un appui technologique pour faire face aux développements humains, sociaux, politiques et économiques de la réalité francophone au sein de la Francophonie mais aussi hors de la Francophonie. Le réseau s'appuie sur un partenariat large, c'est-à-dire sur les acteurs qui travaillent en français et sur le français tout en favorisant une entente privilégiée avec les pays du Sud.
- Ce développement doit être assuré pour la production d'outils de référence en langue générale et en langues de spécialité tant théoriques que pratiques et tant d'encodage que de décodage : lexiques, dictionnaires, bases de données, outils d'interprétation de données, traduction, traductologie, traductique...

Et de manière plus générale de :

- Répondre à l'attente des pays du Sud en matière de développement ;
- Assurer la solidarité entre les chercheurs du monde francophone ;
- Aider au désenclavement des chercheurs, des laboratoires et des équipes de recherches des pays du Sud ;
- Favoriser la coopération entre les laboratoires universitaires et les grands centres de recherche, qu'ils soient nationaux, internationaux, publics ou privés ;
- Permettre aux chercheurs s 'exprimant en français mais n'appartenant pas à des pays francophones de collaborer avec leurs homologues francophones ;
- Renforcer la coopération entre tous les chercheurs utilisant le français comme langue de travail quelle que soit leur zone géographique.

**Le Comité :**

Le comité du réseau "Lexicologie, terminologie, traduction" a été renouvelé le 22 mars 2002. Il est constitué de :

- Daniel Blampain, ISTI, Bruxelles (Belgique)
- Alzouma Oumarou Issoufi, Université Abdou Moumouni, Niamey (Niger)
- Benoît Leblanc, Université du Québec à Trois-Rivières, Québec (Canada-Québec)
- Salah Mejri, Université de la Manouba, Tunis (Tunisie)
- Maria Teresa Rijo Da Fonseca Lino, Universidade Nova de Lisboa, Lisbonne (Portugal)
- Philippe Thoiron, Université de Lyon 2, (France)
- Membre honoraire associé : André Clas, Université de Montréal, Québec (Canada-Québec)

Le réseau est coordonné par Philippe Thoiron.

Site Internet: http://www.auf.org/programmes/programme1/ltt/

Pour écrire au comité : ltt@refer.org

*Susanne Lervad, Faculté des Langues*
*Université Lumière Lyon2, France*

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# La Société française de terminologie (SFT)

La Société française de terminologie a été créée par publication au *Journal Officiel* du 29 mai 1999. Elle a pour vocation de promouvoir et de soutenir toute action en matière de terminologie et disciplines associées.

Il s'agit de faire connaître, de préserver et de diffuser les vocabulaires du français d'hier et d'aujourd'hui. Il faut aussi créer les conditions de leur évolution dans le troisième millénaire, et cela en relation avec les autres langues.

La Société française de terminologie se veut un lieu d'échanges et de débats. Elle collabore déjà avec de nombreux organismes, en France et à l'étranger.

Société de savants, de scientifiques d'ingénieurs, de techniciens, de chercheurs, d'enseignants, de langagiers, elle a pour but de réunir et d'informer. Elle est aussi ouverte à tous ceux que les questions de vocabulaires spécialisés intéressent ou qui souhaitent participer aux grands enjeux linguistiques du moment.

Outre ses actions de soutien, la Société française de terminologie s'attache à rassembler les informations en matière de terminologie. Elle les diffuse notamment par :

- la Lettre de la Société française de terminologie (4 numéros parus) ;
- des sites Internet, dont :
  - http:/lcp.damesme.cnrs.fr/terminalf, créé avec le CNRS et les Universités de Paris Sorbonne (Paris III) et Denis Diderot (Paris VII) : (2840 connections sur le site en avril 2001/25474 connections en juillet 2001)
  - http://lilla2.unice.fr/demos/termino/index.htm (Université de Nice Sophia Antipolis).

Quelques adhérents à la Société française de terminologie :

- Groupe AFNOR (Association française de normalisation) http://www.afnor.fr ;
- Comité des constructeurs français d'automobiles http://www.ccfa.fr ;
- Institut national de la recherche agronomique…

La Société française de terminologie est membre de :

- l'Association européenne de terminologie (http://www.eaft-aet.net)

et

- du Réseau panlatin de terminologie (REALITER http://www.realiter.net/)

- **UN ENJEU *CULTUREL* MAJEUR :** les langues ne peuvent survivre que si elles nomment les sciences et les techniques.
- **UN ENJEU *ÉCONOMIQUE* MAJEUR :** les terminologies sont centrales dans la traduction, la documentation et les industries de la langue.
- **UN ENJEU *POLITIQUE* MAJEUR :** favoriser le plurilinguisme.

**Contact :**

Société française de terminologie
5, avenue Armand Rousseau
F-75012 Paris
Tél/Tlc : 01 49 28 94 38
Courriel : terminologie@wanadoo.fr
Site Internet : http://www.laterminologie.net

*Susanne Lervad, Faculté des langues*
*Université Lumière Lyon2, France*

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# Centre for Medical LSP

## at the Aarhus School of Business, Denmark

### Background

March 2001 saw a report from the Danish Ministry of Trade and Industry proclaiming Denmark to enjoy the potential of becoming one of world's top five centres of biomedical excellence and calling for a concerted effort at all levels of government to nurture and strengthen collaboration between the medico-pharmaceutical industry, university hospitals and medical research centres to realise this potential. The strategic challenges faced by medico-science comprise an increased focus on knowledge and innovation, industrial consolidation and emergence of new networks, technology fusion and development of E-health, new private health services, and the emergence of a new generation of knowledgeable, critical health consumers. Central to most of these challenges is communication.

Medical language and health communication is an established field of linguistic research on a global level and most international fora like the American Translators Association and the European LSP Conference reserve special sessions for issues pertaining to these issues. Even so, scholarly interest in medical LSP remains remarkably scant among Danish linguists although Danish medical societies, university hospitals and the Danish medico-pharmaceutical industry are professing a keen and rapidly growing interest in ongoing medical LSP research in general and its didactical applications in particular.

Responding to this call and seizing the opportunity to positioning itself centrally vis-à-vis the Danish medico-pharmaceutical industry, the Aarhus School of Business established the Centre for Medical LSP (www.medsprog.dk) on 21 October 2001.

### Purpose

The main purposes of the Centre are 1) to nurture the professional growth of its network members by providing opportunities for the sharing and exchanging of ideas, concerns and interest with other professionals by providing, in a diversity of ways, opportunities for both formal and informal continuing education; by providing an involvement-based approach to the development and implementation of Centre activities that encourages active participation; 2) to serve as a professional focal point for those interested in or actively engaged in bio-, health-and medico-technical communication irrespective of educational and professional background; and 3) to develop and run research and development projects in medical LSP and health communication recruiting project partners across disciplines, institutions and private and public employment.

## Members

International in scope and diverse in background, Centre network members are broadly engaged in medical communication. Specifically, members include linguists, librarians, learning resource centre specialists, educators, writers, health care practitioners, doctors and specialists in academic, hospital-based environments. Structured groups sharing professional interests form for the exchange of information and ideas via the Centre homepage and new groups form as interests and needs arise.

## Activities

The Centre has a comprehensive portfolio of activities that mainly fall within three fields: learning, health communication and terminology. **Learning** activities began with an effort to identify and define analytical and communication competences and skills needed by linguists working professionally with English for medical science and biotechnology. These competences were incorporated into a distance learning course in *English for medical science* for LSP graduates designed in collaboration with the Library at the Aarhus School of Business and drawing on state-of-the art principles for distance teaching developed at the Henley School of Management, UK. Sharing ideas, skills, resources and techniques across disciplines is central to the Centre's activities, and the distance course in English for medical science for LSP graduates in need of further education was therefore extended and further developed into a PhD course in *Academic English* for PhD and doctoral students within medicine and natural sciences in need of writing skills critical to research publication. The PhD course has been taught to more than 100 PhD students at the universities of Aarhus and Copenhagen within the Centre's first year of existence and has now become a permanent part of the PhD programme of the Aarhus University. Efforts to gear the core contents of these courses to industry-specific needs are ongoing and are expected to breed a new experimental learning environment that cuts across traditional corporate and public university demarcation lines.

Engineered in dialogue with local and county government, municipal language centres, hospital managers, medical professional societies and organisations and a private company, the Centre's main **health communication** project entitled *Speak sound Danish* is one that truly reflects the Centre's interdisciplinary ambition. The project aims to give non-indigenous immigrant and refugee doctors the requisite communication skills in Danish to allow them to function in Danish hospitals which have a shortage of doctors. Skills encompass three domains: communicating with the patient, communicating about the patient and communicating about medicine and science.

Centre activities pursued within the area of **terminology** include, among others, the compilation and editing of specialised dictionaries (Danish-English-Danish of Medicine and Orthodontics) and assistance to organisations (e.g. WONCA) and knowledge and research centres (e.g. VIFAB) building their own specialised dictionaries.

## Contact

For further information about the Centre, please see the Centre's home page at www.medsprog.dk or contact Morten Pilegaard, phone +45 8948 6278, e-mail mpi@asb.dk or Bente Wissing Brøndum e-mail bwb@asb.dk.

*Morten Pilegaard, Centre for Medical LSP*
*Aarhus School of Business, Denmark*

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# PUBLICATIONS RECEIVED:

## AILA NEWS

Association Internationale de Linguistique Appliquée, Vol.4(1) No.8 May 2002. The twice yearly newsletter of the International Association of Applied Linguistics (AILA). Editors: Richard Baldauf and Stuart Campbell. Richard Baldauf, Language, Centre A18, University of Sydney, NSW 2006, Australia. E-mail: Richard.Baldauf@language.usyd.edu.au . ISSN 1446-8832 (Print) / ISSN 1446-8840 (OnLine)

The electronic version of the Newsletter is accessible online and free of charge at the following web-address: http://www.aila.ac/.

## DANSK SPROGNÆVNS SKRIFTER

No.32 (2001): “Det danske sprogs status i 1990’erne med særligt henblik på domænetab” af Pia Lervad. Published by Dansk Sprognævn, Njalsgade 136, DK-2300 København S, Denmark. Web: http://www.dsn.dk
ISSN 0415-0155. ISBN 87-89410-11-4.

## ESP FRANCE NEWSLETTER

Vol.17, No.2, June 2002 and Vol.17, No.3, Oct. 2002. Editorial Address: David Bank, Faculté des Lettres et Sciences Sociales Victor Segalen, Université de Bretagne Occidentale, 20, rue Duquesne, BP 814, F-29285 Brest Cedex, France. E-mail: David.Banks@univ-brest.fr. ISSN 0998-3058.

## FACHSPRACHE

23. Jahrgang / Volume Heft 1-2/2002. Internationale Zeitschrift für Fachsprachenforschnung, -didaktik und Terminologie / International Journal of LSP,research, didactics, terminology. Manuskripte können in Deutch, Englisch oder Französich abgefasst sein. Herausgeber: Univ.-Prof. Dr. Rudolf Beier, RWTH Aachen, Eilfschornsteinstraße 15, D-52062 Aachen / Univ.-Prof. Dr. Peter Bierbaumer, Universität Graz, Institut für Anglistik, Heinrichstraße 36, A-8010 Graz / Univ.-Prof. Dr. Dieter Möhn, Universität Hamburg, Institut für Germanistik, von-Melle-Park 6, D-20146 Hamburg. ISSN 0256-2510.

**HIGHER EDUCATION IN EUROPE**

Vol. XXVII, No. 3, 2002 “Quality Transnational Education: A Shared Commitment for Sustainable Development”. UNESCO-CEPES quarterly review. The review is published in three language versions – English, French, and Russian. ISSN 0379-7732.
💻 The electronic version of the Review is accessible online and free of charge at the following web-address: http://www.cepes.ro/publications.

**MED ANDRE ORD…**

Grundfos’ sprogpolitik. “Med andre ord…” er et værktøj til alle på Grundfos, der hver dag skriver mails, breve, tilbud, rapporter, dokumentation mv. Med udgivelsen af “Med andre ord…” ønsker Grundfos at styrke det tværfaglige samarbejde mellem sprogkyndige og andre faggrupper. Det handler “med andre ord” om en øget bevidsthed og en holdning til sprog som et vigtigt konkurrenceparameter på linje med firmaets øvrige konkurrenceparametre. Produceret af Grundfos Management A/S, Poul Due Jensens Vej 7, DK-8850 Bjerringbro. Tel.: (+45) 87 50 14 00 Web: www.grundfos.com

**MÅL I MUN**

*Mål i mun: förslag till handlingsprogram för svenska språket*. Betänkande av Kommittéen för svenska språket. Stockholm 2002. Statens Offentliga Utredningar, SOU 2002:27. Beställningsadress: Fritzes kundtjänst, SE-106 47 Stockholm, Sverige. Orderfax: +46 08-690 91 91 Ordertel: +46 08-690 91 90 E-mail: fritzes.order@liber.se Web: www.fritzes.se ISBN 91-38-21645-0. ISSN 0375-250X.

**ODENSE WORKING PAPERS IN LANGUAGE & COMMUNICATION**

No.23, August 2002 (Vol. I and II): “The Way we Think”. Edited by Anders Hougaard & Steffen Nordahl Lund.
No.24, September 2002: “Datalingvistik 2000”. Edited by Poul Søren Kjærsgaard .
General editor: Stefen Nordahl Lund (snl@language.ou.dk).
Published by Institute of Language and Communication, University of Southern Denmark, Main Campus: Odense University, Campusvej 55, DK-5230 Odense M. E-mail: lfn@language.sdu.dk

**STUDIEN ZU SPRACHE UND TECHNIK**

Band 2, 2002. Reiner Arntz, Heribert Picht, Felix Mayer: “Einführung in die Terminologiearbeit”. 331 Seiten. ISBN 3-487-11553-0
Herausgeber: Reiner Arntz und Norbert Wegner. Georg Olms Verlag, Hildesheim, Zürich, New York. (http://www.olms.de)

## SYNAPS – FAGSPRÅK, KOMMUNIKASJON, KULTUKUNNSKAP

Nr 10 (2002). Synaps: Fagspråk – Kommunikasjon –Kulturkunnskap.
- Svend Haakon Kristensen: "Samhandling med japanere. Sentrale kulturelle begreper" (Interaction with the Japanese. Key cultural concepts)
- Willy Rasmussen: "Annerledeslandet" (The Different Country)

Published by the Department of languages, Norwegian School of Economics and Business Administration (NHH), Helleveien 30, N-5045 Bergen. Editorial board: Trine Dahl, Willy Rasmussen, Jan Roald, Ingrid Simonnæs.

## TERMNET NEWS (TNN)

No. 70/71 and 72/73 – 2001 (hard copy).
No. 74, 75 and 76 – 2002 (on Terminology Newsletter Portal – TNP).
NB: as from 2002 all TermNet periodicals are published on the TNP only. Issue editors: Christian Galinski, Koaunghi Un, Marta Alonso. Publishers: International Network for Terminology (TermNet), Aichholzgasse 6/12, A - 1120 Vienna, Austria. Tel: + 43 1 817 44 99 Fax: + 43 1 817 44 99 44 E-mail: termnet@termnet.at Web: http://www.termnet.at
(or TNP: http://www.termnews.net) ISSN 0251-5253

## ZEITSCHRIFT FÜR SEMIOTIK

Band 22, Heft 3-4 (2000). Dieter Münch (hrsg): "Zeichenphilosophie" (Die aristotelischen Wurzeln; Die europäische und die amerikanische Tradition; Das Kategorienproblem; Idealismus, Pragmatismus, Phänomenologie; Semiotische Fachsprache; Deutsche Hermeneutik; Interpretationsphilosophie).
Band 23, Heft 1 (2001): Dieter Münch (hrsg): "Zeichenphilosophie im 19. Jahrhundert" (Zeichen in Sprache und Denken; Zeichephilosophie und Sprachkritik; Phänomenologie und Sprachpragmatik; Eine Semiotik des Fiktiven; Zeichen, Sprache, Kommunikation).
Organ der Deutschen Gesellschaft für Semiotik (DGS) in Kooperation mit der Österreichischen Gesellschaft für Semiotik (ÖGS) und der Schweizerischen Gesellschaft für Semiotik (SGS/ASS). Anzeigen/Verlagsanschrift: Stauffenburg Verlag, Postfach 2525, D-72015 Tübingen. ISBN 3-86057-947-9. ISSN 0170-6241.

## ZEITSCHRIFT FÜR ANGEWANDTE LINGUISTIK (ZfaL)

Heft 36, März 2002. Herausgegeben: im Auftrag der Gesellschaft für Angewandte Linguistik (GAL) von Karlfried Knapp, Gerd Antos, Walter F. Sendlmeier. Redaktion: Dr. Hajo Diekmannshenke, Institut für Germanistik, Universität Koblenz-Landau, Campus Koblenz, Postfach 201 602, D-56016 Koblenz. Tel.: 0261-287-2060 Fax: 0261-287-2051
E-mail: diekmann@uni-koblenz.de . ISSN 1433-9889.

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# CONFERENCE CALENDAR:

## - *2003* -

**January 15-17 (2003) – Tilburg (The Netherlands)**

**5th International Workshop on Computational Semantics (IWCS-5)**. The aim of the workshop is to bring together researchers interested in any aspect of the computation of meaning in natural language.
**Information:** Anne Adriaensen, Department of Linguistics, Tilburg University, PO Box 90153, NL-5000 LE Tilburg, The Netherlands.
Tel.: +31-13-4663060 Fax: +31-13-4663110 E-mail: Computational.Semantics@kub.nl
Web: http://let.kub.nl/research/TI/sigsem/iwcs/iwcs5/

**January 30 – February 1 (2003) – Barcelona (Spain)**

**6th International Conference on Language for Specific Purposes.** The aim of this conference is to gather lecturers and researchers interested in the role of information technology in LSP teaching and research. We hope that this meeting may open up new areas of research and discussion.
**Information:** Antonia Soler Cervera (Coordinator), Facultat d'Informàtica de Barcelona, Campus Nord - Edifici B6, C/Jordi Girona Salgado,1-3, E-08034 Barcelona, Spain. Fax: +34 93-401 7040 E-mail: soler@fib.upc.es
Web: http://www.upc.es/eupvg/cilfe6/index.htm

**February 7-9 (2003) – Bielefeld (Germany)**

**ESP and Testing, Evaluation and Assessment.** A workshop conference jointly organised by the IATEFL ESP and TEA Special Interest Groups. Topic: "English for Specific Purposes and Testing, Evaluation and Assessment".
Information: Event Coordinator`s Office, c/o Volkshochschule Bielefeld, Ravensberger Park 1, D-33607 Beilefeld, Germany.
Tel.: +49(0)521/51-2331 Fax: +49(0)521/51-3431
E-mail: wolfgang.ridder@bielefeld.de Web: http://www.iatefl.org

**February 8-9 (2003) – Vaasa (Finland)**

**XXIII VAKKI-SYMPOSIUM on LSP, translation and multilingualism: "Diachrony in Synchrony".** The VAKKI-symposium is an occasion for researchers in LSP, translation, multilingualism and related fields to meet in an international and multilingual environment.
**Information:** Johanna Ketola, Faculty of Humanities, Univeristy of Vaasa, PL 700, FIN-65101 Vaasa, Finland.
Tel +358 (0)6 3248 812 Fax +358 (0)6 3248 806 E-mail: joke@uwasa.fi
Web: http://www.uwasa.fi/hut/vakki/symposium2003/

**February 16-22 (2003) – Mexico City (Mexico)**

**4th International Conference on Intelligent Text Processing and Computational Linguistics (CICLing-2003).** The conference covers nearly all topics related to computational linguistics. This makes it attractive for people from different areas and leads to vivid and interesting discussions and exchange of opinions.
**Information:** CICLing-2003, Prof. Alexander Gelbukh, Laboratorio de Lenguaje Natural, CIC: Centro de Investigacion en Computacion, IPN: Instituto Politecnico Nacional, Av. Juan Dios Batiz s/n esq. Av. M. Othon Mendizabal, Unidad Profesional "Adolfo Lopez Mateos", Col. Zacatenco, C.P. 07738, Mexico D.F., MEXICO.
Fax: +1 (928) 441-1817 E-mail: gelbukh@cicling.org
Web: http://www.CICLing.org/2003/

**March 13-15 (2003) – Aarhus (Denmark)**

**EU High Level Scientific Conference Series: "Knowledge Systems in Text and Translation".** The conference series is open to scholars interested in promoting the dialog between experts and young scientists in the field of text and translation from linguistic, cognitive, historical and cultural perspectives. The series is organized by the Aarhus Business School in collaboration with CIUTI Academy and CIUTI (Conférence Internationale d'instituts Universitaires de Traducteurs et Interprètes).
**Information:** Jan Engberg, Aarhus School of Business, Fuglesangs Allé 4, DK-8210 Aarhus V, Denmark. Tel.: +45 89 48 66 88 / +45 89 48 66 19 Fax: +45 86 15 77 27
E-mail: info@euroconferences.info Web: http://www.euroconferences.info/aarhus.htm

**March 20-22 (2003) – Le Havre (France)**
**XXIVe Colloque du GERAS (Groupe d'Etude et de Recherche en Anglais de Spécialité). Thème: "Transfert(s)".** L'Anglais de Spécialité - encore appelé " secteur LANSAD " (LANgue pour Spécialistes d'Autres Disciplines) - constitue une activité essentielle pour le monde des anglicistes, puisqu'elle touche une large majorité des enseignements universitaires… Il est désormais acquis que le secteur LANSAD se décline selon les quatre axes définis pour le DEA d'anglais de spécialité : langue, culture, didactique, nouvelles technologies. Chacune de ces perspectives, apparemment distinctes, peut toutefois se définir par rapport à la notion commune de transfert..
**Information:** Brigitte Hebert, Faculté des Affaires Internationales, Département des Filières Professionnelles, 25 rue Lebon, F-76600 - Le Havre, France.
E-mail: filpro@univ-lehavre.fr
Web: http://www.univ-lehavre.fr/enseign/ai/geras/
(or http://www.langues-vivantes.u-bordeaux2.fr/GERAS/geras.html )

**March 22-25 (2003) – Arlington, Virginia (USA)**

**AAAL 2003 Annual Conference: "The Diversity of Applied Linguistics".** The purpose of the conference is to generate ideas, cross disciplinary boundaries, and disseminate research about issues and concerns in language policy, language acquisition, language pedagogy, translation and interpretation, and other areas of applied linguistics.
**Information:** American Association for Applied Linguistics (AAAL), P. O. Box 361806, Birmingham, AL 35236, USA. Tel: +1 205 824 7700 Fax: +1 205 823 2760
E-mail: aaaloffice@aaal.org Web: http://www.aaal.org/aaal2003/

**March 26-28 (2003) –Köthen (Germany)**

**GLDV-Frühjahrstagung 2003: ”Sprachtechnologie für die multilinguale Kommunikation: Textproduktion, Recherche, Übersetzung, Lokalisierung ”**. Unter dem Thema "Sprachtechnologie für die multilinguale Kommunikation" soll die Tagung sowohl ein Forum zur Präsentation von Anwendungen und Werkzeugen als auch für theoretische
**Information:** Hiltrud Biemann, GLDV2003, Hochschule Anhalt (FH), Fachbereich 9, Informatik und Fachkommunikation, Ratke-Gebäude, Lohmannstraße 23, D-06366 Köthen. Tel. (+49 3496) 67 3100 Fax (+49 3496) 67 3199
E-mail: informatik@inf.hs-anhalt.de Web: http://www.inf.hs-anhalt.de/gldv2003/

**March 31 – April 1 (2003) – Strasbourg (France)**

**TIA 2003 - 5ème rencontre Terminologie et Intelligence Artificielle** (Conference on Terminology and Knowledge Acquisition from Texts). Sous l'effet de l'informatique en réseau, institutions, entreprises et laboratoires se trouvent aujourd'hui confrontés aux problèmes considérables posés par la taille et la diversité des documents spécialisés. Accéder à de vastes collections de documents, identifier les documents pertinents, les diffuser de manière ciblée, les traiter pour en extraire de l'information structurée, telles sont entre autres, les tâches auxquelles la terminologie peut contribuer à apporter des réponses. Devant de tels enjeux, la terminologie, en tant que discipline, doit établir des relations coopératives avec un ensemble de disciplines allant de la linguistique à l'ingénierie des connaissances, en passant par le traitement automatique des langues et les sciences de l'information…
**Information:** Web: http://u2.u-strasbg.fr/spiral/TIA2003/

**April 24-27 (2003) - Buenos Aires (Argentina)**

**IV Congreso Latinoamericano de Traducción e Interpretación.** Temario: Traducción especializada (jurídica, técnico-científica y literaria); Traducción de carácter público; Terminología; Interpretación; La lengua (factor de communicación y desarrollo); Medios e Internet; Herramientas para el traductor; Aspectos extralingüísticos de la traducción; Teoría y metodologia de la traducción; Formacíon y capacitación del traductor profesional; La importancia y evolutión del español en el mundo…
**Information:** Colegio de Traductores Públicos de la Ciudad de Buenos Aires - Av. Callao 289, piso 4º C1022AAC Buenos Aires – Argentina.
Tel.: (54–11) 4371-8616 or 4373-4644. E-mail: congreso2003@traductores.org.ar
Web: http://www.traductores.org.ar/des.html

**May 11-15 (2003) St. Augustine, Forida (USA)**

**Special tracks at the 16th International FLAIRS Conference.** (Florida Artificial Intelligence Research Society). Among special tracks subjects: AI in Aerospace/ AI and Aviation Systems/ AI in Education/ AI in Medicine/ Case-Based Reasoning/ Constraint Solving and Programming Evaluation of Intelligent Systems/ Integrating Emotion and Cognition in Formal Models/ Machine Learning….
**Information:** Special-tracks coordinator: Rosina Weber, Drexel University, E-mail: Rosina.Weber@drexel.edu.General conference chair: Douglas Dankel II, E301 CSE, C.I.S.E., University of Florida, Box 116120 Gainesville, FL 32611-6120, USA.
Tel.:+1 (352) 392-1387 E-mail: ddd@cise.ufl.edu Web: http://www.flairs.com/flairs2003/

**May 15-16. (2003) – Barcelona (Spain)**

**III Coloquio Internacional Sobre la Historia de los Lengujes Iberoormánicos de Especialidad:** ”El papel de la traducciòn en la estnadarixaciòn de los lenguajes especializad” (The Role of Translation in the Stardardization of Specialized Languages).
**Information:** Facultat de Traducció i Interpretació, Universitat Pompeu Fabra, Rambla Santa Mònica, 30-32, E-08002 Barcelona, Spain.
Web: http://www.upf.es/dtf/colloqui/index.htm

**May 19-31 (2003) - Düsseldorf (Germany)**

**2nd International Conference on Language Proficiency in International Business: ”Languages and Professions”.** The conference will illuminate the multi-faceted relationship between languages and the world of professions. An exchange of expertise and experience will empower participants to make informed choices regarding traditional issues as well as the latest developments and opportunities
**Information:** ICWE GmbH, Leibnizstrasse 32, D-10625 Berlin, Germany.
Tel: +49-30-327 6140 Fax: +49-30-324 98 33 E-mail: info@sprachen-beruf.com
Web: http://www.sprachen-beruf.com/

**May 21-24 (2003) - Volda/Ørsta (Norway)**

**7. nordiske konferanse i leksikografi**. Disse konferansene, som avholdes annethvert år, har vist seg å være et viktig forum for faglig samarbeid og utveksling av erfaringer og ideer på det leksikografiske feltet.
**Information:** Rikke Hauge, Nordisk språkråd, Postboks 8107 Dep, NO-0032 OSLO
Tel.: +47-24 14 03 73 Fax: +47-24 14 03 51 E-mail: HAUGE@sprakrad.no
Web: http://svenska.gu.se/nfl/vold-i.html

**May 29-31 (2003) - Halifax (Canada)**

**16th Annual Conference of the Canadian Association for Translation Studies (CATS): ”Translation and Globalization”.** Themes: Globalization, translation and the publishing industry / Globalization and localization / Globalization, translation, hegemony and ethics / Globalization, translation, hegemony and cultural hybridity.
**Information:** Louise Brunette, Université Concordia, Département d'études françaises, 1400, boul. de Maisonneuve Ouest, Montréal (Québec), Canada. Tel.:(514) 848-7506
E-mail: louiseb@alcor.concordia.ca Web.: http://www.uottawa.ca/associations/act-cats

**June 6-7 (2003) – Kiruna (Sweden)**

**IX International Conference on Minority Languages.** The main theme of the conference will be revitalization of use of languages, especially languages spoken by small groups of people.
**Information:** IX ICML (Birger Winsa), Department of Finnish, University of Stockholm, S-106 91 Stockholm, Sweden. Tel: +46-8-162359 Fax: +46-8-158871
E-mail: birger.winsa@finska.su.se Web: http://www.finska.su.se/konf03.html

**June 11-14 (2003) - Batz-sur-Mer (France)**

**TALN’03**. Le colloque TALN est un grand congrès francophone d'audience internationale sur le traitement automatique des langues.
**Information:** E-mail: taln2003@irin.univ-nantes.fr
Web: http://www.sciences.univ-nantes.fr/irin/taln2003

**June 12-14 (2003) - Uppsala (Sweden)**

**2nd International Conference on Language Variation in Europe** (ICLaVE 2).
**Information:** ICLaVE 2, Uppsala University, Department of Scandinavian Languages, Box 527, SE-751 20 Uppsala, Sweden. Att.: Lena Bergström, (tel.:+46 18 471 6872) or Gerd Eklund (tel.:+46 18 652 160). Fax: +46 18 471 1272
E-mail: ICLaVE2@nordiska.uu.se Web: http://www.nordiska.uu.se/ICLaVE2/

**June15-18 (2003) - Jyväskylä (Finland)**

**UNESCO Conference on Teaching and Learning Intercultural Understanding.**
**Information:** UNESCO 2003 Conference Secretariat, Jyväskylä Congresses, P.O. Box 212, FIN-40101 Jyväskylä, Finland. E-mail: pirjo-leena.pitkanen@jyvaskylaan.com
Web: http://www.jyu.fi/ktl/unesco2003

**June 16-17 (2003) - Lisbon (Portugal)**

**3rd International Conference on Maritime Technology: ”Communication and Globalization”.** Within a global world, communication tends increasingly monolingual, putting in jeopardy other languages' survival as languages of scientific and technical communication. This is the case even for languages that once played a strong role in international communication in scientific and technical domains, as it was the case of Portuguese in what concerns sea sciences and technologies. What is nowadays the situation of specialized communication in the domains of maritime sciences and/or technologies? Is this situation similar in all maritime subjects (such as navigation, shipbuilding, maritime security, law, oceanography…)? How did we arrive to the present situation? Must countries silently submit to linguistic globalization? … Work Languages: Portuguese and English.
**Information:** Maria Amélia Doria, ILTEC, Rua Conde de Redondo, 74, 5.º , P-1150-109 Lisboa, Portugal. Tel.: +351 21 356 30 82 Fax: + 351 21 352 81 12
E-mail: mad@iltec.pt Web: http://www.iltec.pt/eng/eventos/maritime.htm

**July 3-5 (2003) - Lorient (France)**

**International Symposium on Translation: ”From Theory to Practice and from Practice to Theory”** (La traduction : « De la théorie à la pratique et de la pratique à la théorie »). This symposium aims to bring together translation theorists and practitioners, whatever their speciality, to discuss the relationships between theory and practice. There are many different translation practices as well as many different translation theories and this symposium would like to shed light on the links between them.
**Information:** Mme Valérie Sauvaire, UFR Lettres et Sciences Humaines,Université de Bretagne Sud, 4 rue Jean Zay, F-56100 Lorient, France.
Tel : (00 + 33) (0)2-97-87-29-67 Fax : (00 + 33) (0)2-97-87-29-70
E-mail: Valerie.Sauvaire@univ-ubs.fr Web: http://www.univ-ubs.fr/crellic

**July 7-11 (2003) - Stellenbosch (South Africa)**

**12th International Conference of The African Languages Association of Southern Africa.** Theme: African Languages and the Development of Africa: the Partnership Between Research and Practice.
**Information:** Ms K. Vergeer, ALASA Conference Secretariat, Department of African Languages, University of Stellenbosch, Private Bag X1, Stellenbosch 7602, South Africa.
Tel: +27 021-808 2210 Fax: +27 021-808 2171 E-mail: ccav@sun.ac.za
Web: http://www.sun.ac.za/african_languages/alasa.html

**July 9-11 (2003) - Sydney (Australia)**

**The 6th Conference of the International Association of Forensic Linguistics (IAFL): ”Language and Law”.** Topics: Forensic linguistics (linguistic evidence/expertise) // Linguistic interaction in the courtroom // Analysis/interpretation of legal texts // Court interpreting // Multilingualism/ language policy // Ethics of testifying/consulting on linguistic matters // Corpus-based approaches to legal issues.
**Information:** Dr. Michael Walsh, E-mail: michael.walsh@linguistics.usyd.edu.au
Web: http://classes.lls.edu/iafl/iafl.html

**July 14 – August 22 (2003) - Baltimore, MD (USA)**

**Summer Workshop on Language Engineering.** The organizers attempt to identify specific research topics on which progress is needed to advance the state of the art in various fields of Language Engineering such as: Speech recognition/ Trans-lingual information detection and extraction/ Machine translation / Speech synthesis / Information retrieval / Topic detection and tracking / Text summarization / Question answering .
**Information:** The Center for Language and Speech Processing (CLSP), The Johns Hopkins University, 3400 North Charles Street, Barton Hall, Baltimore, MD 21218, USA.
Tel.: +1 (410) 516-4237 Fax: +1 (410) 516-5050
E-mail: sec@clsp.jhu.edu Web: http://www.clsp.jhu.edu/ws03/proposal.shtml

**July 23-25 (2003) - Pretoria (South Africa)**

**Corpus-Based Translation Studies: ”Research and Application”.** Topics: conceptual tools and theoretical frameworks/categories and methods of analysis/corpus design, compilation and maintenance/corpora and stylistic analyses of translations/corpora and translation into a foreign language/corpora and sub-disciplines of translation studies/translation corpora and adjacent disciplines: lexicography, terminology, contrastive linguistics, comparative literature.
**Information:** Alet Kruger or Kim Wallmach, Department of Linguistics (Translation Studies),University of South Africa, P.O. Box 392, UNISA 0003, South Africa. Fax: +27 12-429-3400 E-mail: krugea@unisa.ac.za or wallmak@unisa.ac.az
Web: http://www.umist.ac.uk/ctis/events/unisa.htm

**August 18-22 (2003) - Guildford (UK)**

**14th European Symposium on Language for Specific Purposes: ”Communication, Culture, Knowledge”**. Organized by the University of Surrey in co-operation with the AILA Scientific Commission on Language for Special Purposes. The conference will aim to stress the communicative role of special languages in the multilingual, multicultural knowledge-based economy. Themes: Translation and LSP / Multiculturalism and its languages / LSP and multimedia communication / Technical writing and LSP / Pedagogical Aspects of LSP / Terminology and Terminography / LSPs of specific domains: communicative aspects / LSP Studies: Quo Vadis?
**Information:** LSP 2003, Business & Research Support Unit, School of Arts, Senate House, University of Surrey, Guildford Surrey, GU2 7XH, UK.
E-mail: lsp2003@surrey.ac.uk Web: http://www.computing.surrey.ac.uk/lsp2003

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The Editors especially wish to encourage papers on: recent research within the field of LSP and new comments or reports on particular problems or on situations special to certain countries or regions. Papers should be written in an accessible though rigorous style, which also communicates to non-specialists.