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Editorial

We are happy to publish the first issue of "LSP, professional communication, knowledge management and cognition" which is the slightly modified name of "LSP and professional communication" which published 8 volumes 2001-2008 with Jacques Qvistgaard as editor in chief. During the summer 2009, I took over together with an editorial board consisting of professor Reiner Arntz, Department of Applied Linguistics, University of Hildesheim, Germany, professor Bodil Nistrup Madsen, Copenhagen Business School (CBS), and assistant professor Viktor Smith, CBS, with Françoise Qvistgaard, CBS, as journal administrator.

As the new name indicates, the focus of the present journal has been slightly broadened and will focus on interlinking research across LSP, professional communication, knowledge management and cognition. These areas of research and transdisciplinary insights into the grey zones between them are of vital importance to the development, exchange and acceptance of new ideas and products in scientific domains as well as in trade and public services at national and international levels. The scope of the LSP journal is still to give researchers a peer-reviewed international forum for exchanges of new insights into theoretical and practical approaches in the relevant areas of research. Operational and innovative methods and practices of relevance to creation and distribution of knowledge in intra- and interlingual environments are primary focal points. Contributions are accepted in English, French, German and Spanish.

The journal is hosted by the Department of International Language Studies and Computational Linguistics and the Department of International Culture and Communication Studies at CBS.

The first decision by the new editorial board was to enter the era of electronic publishing, cf. http://lsp.cbs.dk using OSJ (Open Journal System). The transition process has not been hassle free and has caused the 2009 volume to be skipped. Authors as well as readers have had their patience tested, which we regret. The advantages, however, are obvious, one of them being easy access and download facilities. This also concerns the archives containing all 8 volumes of LSP and professional communication. Another advantage which will be appreciated is the fact that the journal is now free of subscription fees. If you are not already registered as subscriber, please visit the site http://lsp.cbs.dk and register as a reader in order to make sure that we can keep you updated.

Please contact us at lsp.iadh@cbs.dk with ideas for articles and books of interest to our readers. Should you experience difficulties in registering or accessing the electronic journal, please contact us.

Henrik Selsøe Sørensen (http://uk.cbs.dk/staff/henrik_selsoe_soerensen)
Editor in chief

__Henrik Selsøe Sørensen__ is associate Professor at the Department of International Culture and Communication Studies, Copenhagen Business School, Denmark. His primary academic interests are Multilingual knowledge engineering, LSP, Terminology, language technology and Machine Translation. He is at present working on a Danish research project called "FairSpeak" which deals with fairness in food label communication.

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Jacques Qvistgaard in memoriam

Jacques Qvistgaard passed away on July 1st 2009 at the age of 82 years after a short period of illness and only weeks after handing over the editorial office of this journal to me.

Throughout his long life Jacques Qvistgaard worked with great energy and without ever losing focus to promote LSP and professional communication in a multilingual context. Since 1957 he had been working with foreign language teaching and soon became one of the leading protagonists of LSP initiatives on the Danish scene. In 1965 he played an important role in creating business language studies at the Copenhagen Business School (CBS). His own main interest was in all aspects of French with special focus on technical language and translation, but more generally also on the use of audiovisual aids and later of language technology in view of strengthening the foreign language studies at CBS. He has especially made an effort to develop the study of technical language and consolidate CBS's reputation nationally and internationally in this field of research and teaching.

The list of achievements of Jacques Qvistgaard is extremely long, and only a few highlights of relevance to LSP and professional communication shall be mentioned here. He created, partly in collaboration with others, initiatives as The LSP Centre, DANTERMcentret (the Danish Center for Terminology), the Danish Society for LSP and Professional Communication (DSFF) and not least the present journal “LSP & Professional Communication” which started as the Unesco Alsed-LSP Newsletter. He worked as a relentless driving force to promote and develop these initiatives over the years. Several dictionaries and terminology collections have benefited from Jacques Qvistgaard’s valuable contributions, and Danish, Nordic and international events have drawn heavily on his organizational talent, e.g. the AILA (International Association for Applied Linguistics) 1983 world congress. Head of department at CBS for a number of years and chairman of numerous associations and committees, Jacques Qvistgaard has also a very long record of dedication to administrative tasks.

Jacques Qvistgaard brought the present journal to its actual position thanks to his superb judgment, tremendous energy, and a fine editorial hand. He was a unique versatile talent, a strong personality and an integral person who will be deeply missed.

Henrik Selsøe Sørensen

Methods of concept analysis – a comparative study

Part 1 of 3

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Keywords: *concept analysis, terminology work, nursing science, research methods*

Abstract

This article is the first one in a series of three articles, which focus on methods of concept analysis and discuss how terminological concept analysis methods could be developed as more generally applicable research methods. In this first article, terminological methods are contrasted with selected concept analysis methods utilized in business studies and nursing science. On the basis of the comparison, the second article to be published will outline a systematic concept analysis method, which can be utilized as a research method in its own right or as a part of any other type of study. The third article will describe concept analysis tools usable for systematic concept analysis in more detail.

1 Background

Concept analysis could be basically defined as an activity where concepts, their characteristics and relations to other concepts are clarified. Creation of conceptual clarity is of great importance for all kinds of research. General research guidelines as well as philosophical literature often mention concept analysis or concept research. These sources do not explicitly describe how to perform a concept analysis. Sometimes the only advice given is "use common sense". The lack of method descriptions in methodological guides has lead many students who are writing their master's thesis and doctoral dissertations to utilize methods described in terminological literature. After all, these methods are aimed at clarifying conceptual and terminological problems and are a good option when no other methods are available. However, researchers or students do not always problematize or seem to be aware of the fact that they are using these methods outside the original professional context of terminology work that they were originally developed for, i.e. systematic collection, description, processing and presentation of concepts and their designations[1] in glossaries or data banks. The methodological sources referenced may be manuals or text books addressed to terminologists working with practical terminology projects with a glossary or a set of entries for a terminology data bank as the end product. These methods as such do not meet all the methodological requirements of academic research without modification and without taking into account the prerequisites of academic research. For instance, a glossary as such does not

[1] ISO 1087:10.

constitute an academic thesis even though it could be part of it or constitute a side product of the research.

In addition to terminological concept analysis, certain disciplines have developed or formulated their own concept analysis methods. These methods are meant for clarification and development of their own concepts. They share a scholarly view of conceptual problems and methodology, but since they are discipline specific, they too, they may need modification before becoming applicable to other fields. In addition, these methods do not seem to have developed such a detailed conceptual apparatus and such a systematic approach to solving conceptual problems as terminology work and terminology science have provided.

In this article, terminological concept analysis methods are contrasted with concept analysis methods that are described and utilized in business studies and nursing science. The purpose here is to find aspects that have to be taken into account when developing a concept analysis method which can be applied in scholarly research. The concept analysis method combining elements from all of these fields will be outlined in the forthcoming article in this same journal, whereas a third article will describe sets of applicable tools.

2 Concept analysis methods

The concept analysis methods to be discussed here are concept analysis as it appears as a part of terminological analysis (Picht & Draskau; Nuopponen; Skuce & Meyer; Suonuuti) and concept analysis methods utilized in business studies (Näsi; Takala & Lämsä) and in nursing science (Walker & Avant). In business studies, Finnish professors Näsi (1980) and Takala together with Lämsä (2001) have discussed concept analysis as a research method. Their thoughts have been applied by various researchers in Finland. Takala and Lämsä's *interpretative research of concepts* belongs to the interpretative paradigm of organization and management research, but can also be classified as a type of conceptual research methods together with "traditional concept analysis" – which Näsi's concept analysis according to Takala and Lämsä (2001:372–4) represents.

Nursing science is a rich source for both descriptions of analysis methods and studies applying these methods. The method of Walker and Avant (1983) will be discussed here since it is the most frequently utilized one. Walker and Avant were also among the first ones to theoretically discuss concepts of the nursing science (Duncan et al. 2007:295). Their method is based on the concept analysis method described by John Wilson in his basic text book on concept analysis from 1963. Their method has been critizised and modified by other nursing researchers but it is still used as is shown by a large amount of studies applying it – also outside nursing research. Other concept analysis methods developed in nursing science are e.g. *evolutionary concept analysis* (Rogers 1993), *simultaneous concept analysis* (Haase et al. 1993), *utility method* (Morse 2000), *principle-based method of concept analysis* (Penrod & Hupcey 2005), and *hybrid model of concept development* (Schwartz-Barcott & Kim 1993).

3 Definition and purpose of concept analysis

The selected sources define concept analysis each from the point of view of their own disciplin. In terminological sources, concept analysis is seldom defined or mentioned, but it is implicitely regarded as an integrated part of terminology work, because concept is considered as a central element in terminological theory. Instead of the term *concept analysis*, terms such as *terminological concept analysis*, *systematic concept analysis* and *terminological analysis* are used variably in terminological literature to refer to the same phase of terminology work.

Terminological analysis could, however, be regarded as a wider activity than concept analysis proper. In addition to concept analysis, it includes also e.g. elaboration of definitions and identifying translation equivalents to terms (e.g. Picht & Draskau 1985; Nuopponen 1996).

Suonuuti (1999:29) who explicitly mentions concept analysis regards it as an activity that is a part of terminology work and where concepts belonging to a whole and their relationships are clarified and described. These elements are included also in the definition of Skuce and Meyer (1990:56): "the description of concepts through an enumeration of their characteristics, or properties, and 2) the description of relations that hold within systems of concepts". The same basic characteristics are to be found in Nuopponen 2003 where concept analysis is defined as the core of terminological methods. Its purpose is to clarify the intension of a concept, its relations to other concepts and its location in a concept system and to create thus a basis for elaboration of concept definitions and reveal synonymy and equivalence between terms in different languages, etc. Based on these definitions, a definition for (terminological) concept analysis could be formulated as follows: concept analysis is an activity where concepts belonging to a whole, their characteristics and relations they hold within systems of concepts are clarified and described.

From business studies, two different views on analysing concepts were scrutinized. Concept analysis for Näsi (1980) means "target-oriented solving of conceptual problems; forming concepts through analytic and synthetic reasoning by using existing concepts and insight". Takala and Lämsä (2001) want to give more emphasis to interpretation of texts in their method for *interpretative research of concepts*, which has as its purpose to interpret meanings and definitions of concepts presented in written, textual form in the light of a chosen theoretical perspective[2].

In nursing science literature, concept analysis is seen as a part of the development of the theory and discipline of the nursing science. For Walker and Avant (1994) *concept analysis* is a concept development method while *concept development* is a critical element in theory development. Concept analysis for them is "a process of determining the likeness and unlikeness between concepts" and its "basic purpose is to distinguish between the defining attributes of a concept and its irrelevant attributes" (1994:38). Walker and Avant distinguish concept analysis from *concept synthesis*, "to extract or pull together concept(s) from a body of data or set of observations", and from *concept derivation*, "to shift and redefine concept(s) from one field to another" (2004:32). All these three are more or less included in the methods of Näsi (1980) and Takala and Lämsä (2001).

The scrutinized concept analysis methods are all based on a worry about vague concepts and terms, and they have been developed to create conceptual and terminological clarity. Näsi (1980:7) for instance is well aware that the requirements for scholarly concepts are clearly stricter than those concerning everyday language. He sees that in the early phase of a new discipline, concept analysis has an important role as a research method of its own when clarifying concepts that refer to the "practical object" of the discipline (Näsi 1980:21). This is clearly visible today in nursing science. Näsi continues that later on, when the discipline has matured, concept analysis will function as a tool for other research methods (ibid.). It may thus have two different roles: an independent method and a tool combined with other methods. A common nominator for business studies and nursing science seems to be an urge to develop

[2] http://lta.hse.fi/2001/3/lta_2001_03_s4.pdf

concepts of their own in order to establish a scientific basis for their discipline. Terminological methods, on the other hand, are meant as tools for any special field – or discipline.

4 Analysis process

In the following, three models are presented, one from each field: terminology work, business studies and nursing science. Takala and Lämsä do not specify any phases at all but state that the analysis proceeds in a hermeneutical circle. For none of these three process descriptions the phases are clear-cut, the phases instead tend to be parallel or interwoven, and the analyst must often return to the previous phases etc.

4.1 Systematic elaboration of terminologies

Terminological textbooks normally describe the basic elements of the theory as well as the process of terminology work or terminology projects. Concept analysis is normally an integrated inseparable element of the process and rarely even mentioned as a separate step. An example of such a description is given by Arntz and Picht (1982:178–186) and Picht and Draskau (1985:164–173), see Figure 1. If the glossary-specific features were eliminated from the process model, it would serve as a more general model for concept analysis.

The process starts with general considerations on various practicalities, e.g. delimitation of the field to be elaborated, sub-division of the field into smaller units, as well as accumulation and evaluation of documentation. After that the material is extracted and concepts and terms preliminary ordered, and more data collected.

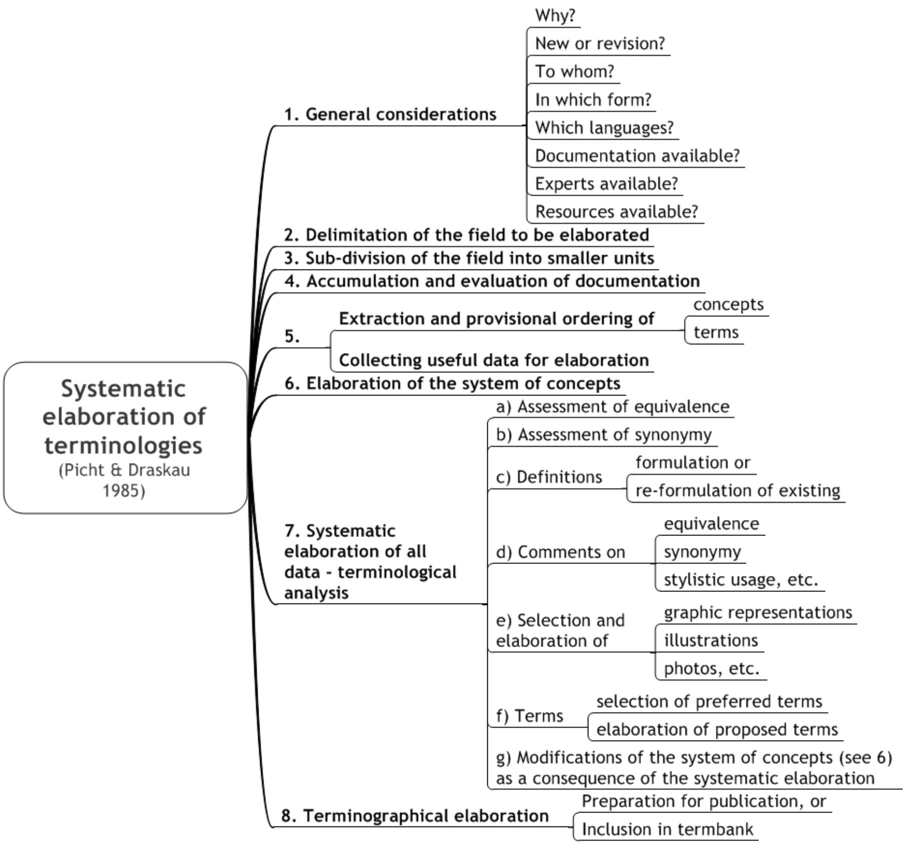

Figure 1. A model of systematic elaboration of terminologies based on Picht & Draskau (1985)

Next steps consist of structuring a concept system and analysing all data systematically. Systematic elaboration means going through collected information on concepts according to the preliminary concept system and establishing their contents and delimiting concepts from other concepts in the same concept system. The procedure up to the point 7 (Figure 1) coincides with what is meant by "terminological analysis" in this paper. The last phase in Figure 1 is glossary specific terminographical elaboration which means preparing the results for a publication or inclusion in a termbank.

4.2 Näsi's four elements of concept analysis

Näsi (1980:12) says that it is not possible to describe an exact step-by-step procedure for concept analysis. He suggests anyhow a set of interwoven phases for concept analysis (see Figure 2).

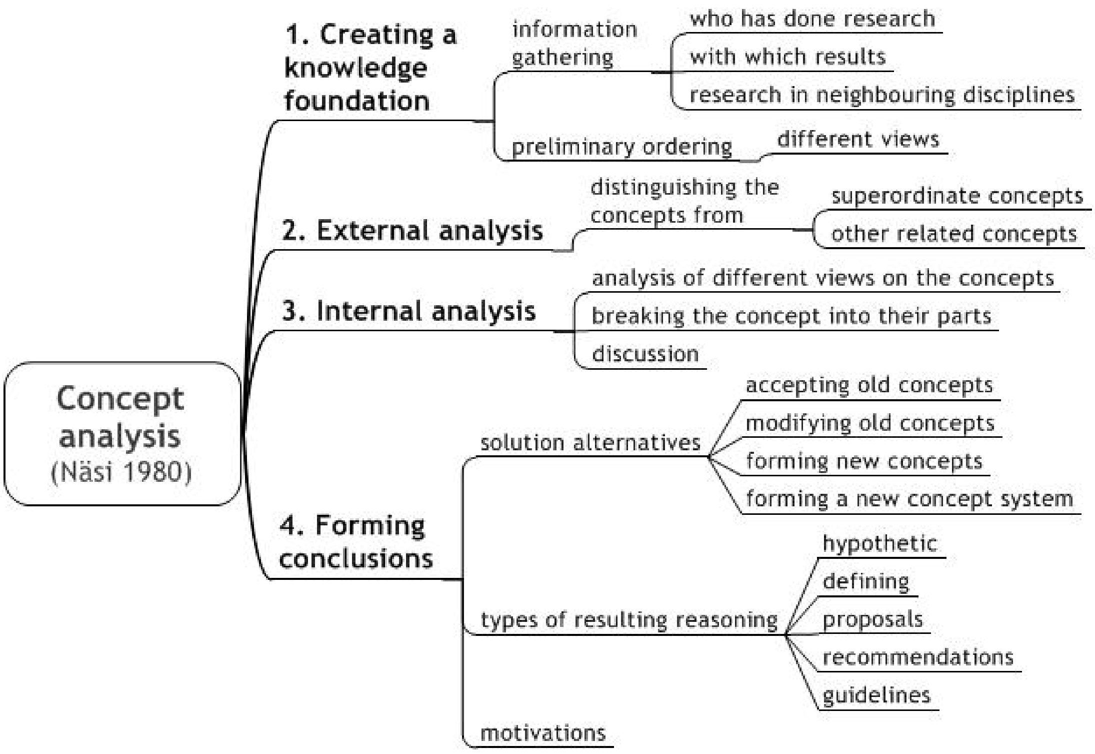

Figure 2. Näsi's concept analysis model

At first, information on relevant research and its results is gathered. This phase has its equivalent in phases 1–5 in the model in Figure 1. The external analysis involves distinguishing and delimiting the concepts to be studied from their superordinate concepts and other related concepts. Important questions to be asked while analysing concepts of a discipline are: who has done research where the question of concepts is focal, with which results, and what is relevant research in neighbouring disciplines. In Näsi's internal analysis, concepts are broken down into their parts, and different views are discussed. Finally, in the conclusion phase, solutions to concept problems are offered. Solutions could be either modifying or accepting the old concepts, or even forming new concepts. Additionally, Näsi distinguishes between different types of reasoning (hypothetic, defining, proposal, recommendations, and guidelines) – depending on the on the type and purpose of the study. The discussion in terminology science has traditionally focused on contrasting normative and descriptive terminology work. Instead of this bipolarity, a continuum could be applied.

4.3 Walker and Avant's concept analysis model

In nursing science, various authors describe very detailed processes. Here, the process model by Walker and Avant (1994) is presented, because it seems to be the most influential model in nursing science. Walker and Avant have reduced Wilson's 13-step procedure to 8 steps (see Figure 3).

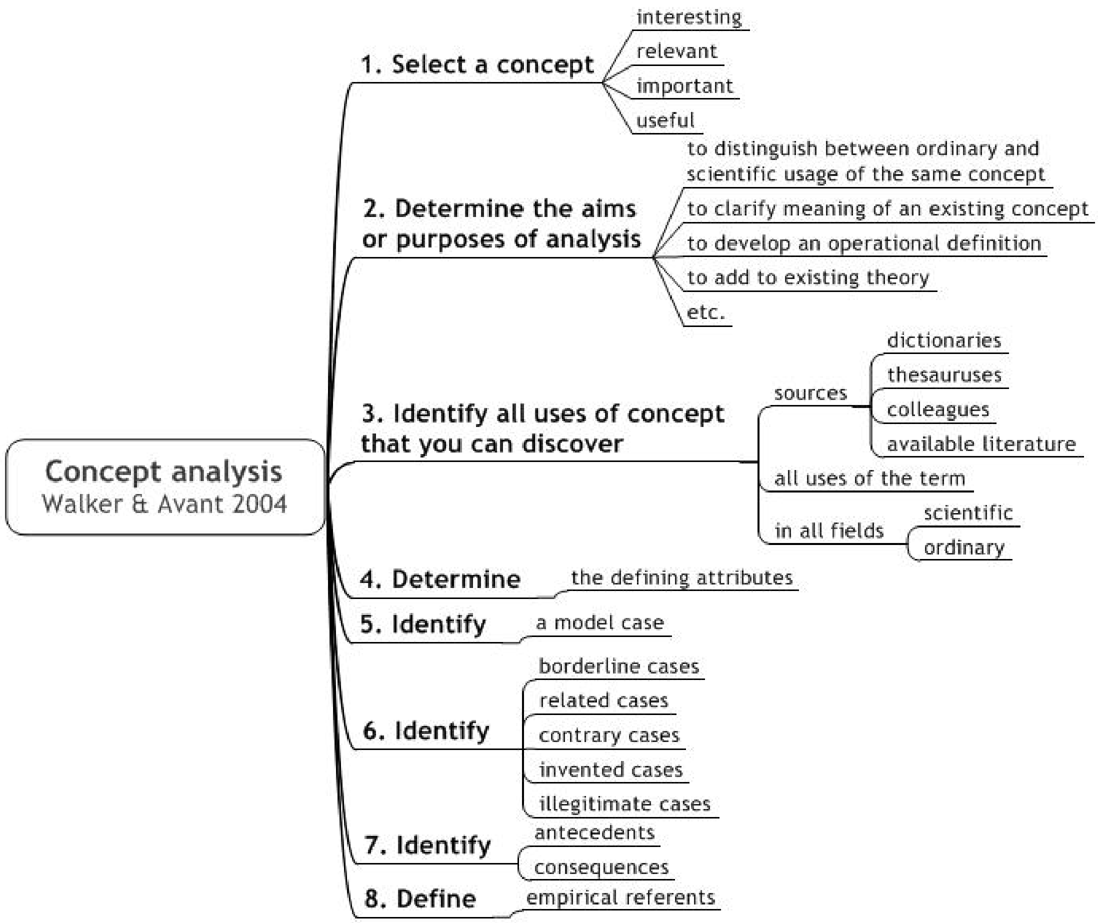

Figure 3. Walker and Avant's concept analysis model

The model starts with selecting a concept to be analysed. Walker and Avant recommend that the concept should be interesting to the researcher, e.g. associated with his or her work. Concepts taken as research objects in nursing science seem to be very abstract and their designations are often used also as normal words in general language without very clearcut meanings, e.g. *trust, compassion, spirituality* etc. The concepts may also be more field specific ones, e.g. *self-healing, patient participation, holistic practice*, *interconnectedness in nursing*. Common to these concepts is that different authors define them differently, or the terms may be used vaguely in nursing practice. According to Schwartz-Barcott and Kim (1993:110), nursing scholars have selected either concepts from other disciplines, concepts that have been identified but are yet underdeveloped in nursing literature, or even new concepts generated in nursing practice or research. In their own hybrid concept analysis model, they combine these.

The second step in Walker and Avant's model is to answer the vital question *Why am I doing this analysis?* The purpose of the concept analysis could be to distinguish between ordinary and scientific usage of the same concept, to clarify meaning of an existing concept, to add to existing theory, to develop an operational definition, or something similar. (Walker & Avant 1994:40).

As the third step, Walker and Avant (1994:40) emphasize that it is important to identify all uses of the concept when collecting material for the analysis. Hereby, they actually refer to all uses of the term, i.e. the concept designation. They state that because concepts are expressed by a word or a term in language, "an analysis of a concept must, perforce, be an analysis of the descriptive word and its use" (1994:38). To them, concept analysis is thus ultimately "only a careful examination and description of a word and its uses in the language coupled with the explanation of how it is 'like' and 'not like' other related words" (ibid.). If their advice to look for "both actual and possible uses of words that convey concept meanings" (ibid.) is taken literally, it may cause the analyst a lot of extra work when exploring totally irrelevant material outside the discipline. Walker and Avant's own example (1994:41) take as point of departure *coping* as a psychological term but involves analysis of homonyms such as *coping falcon's beak* or *coping saw* etc. However, this does not have anything at all to do with the psychological concept called *coping* that nursing science is interested in.

Walker and Avant (ibid.) regard the fourth step as the "heart of concept analysis", i.e. determining the defining attributes or defining characteristics of the concept. When the analyst has identified all the different usages e.g. of the word *fear* on various fields, the next step is to read through them to find characteristics that appear over and over again. According to Walker and Avant (ibid.) the result of this activity is "a cluster of attributes that are the most frequently associated with the concept". Here again it must be noted that this is throughout a semasiological analysis process and with "concept" they actually mean the expression and its different meanings.

As the fifth step, Walker and Avant (1994:42) advice the analyst to develop one or more model cases that represent a "real life" example of "the use of the concept that includes all the critical attributes of the concept". If the concept to be analysed were e.g. *fear*, a model case would be description of a real life situation, which exhibits all of the critical attributes of fear. If the concept is new, they recommend that the first thing to do in the analysis should be to look for a model case.

As the sixth step Walker and Avant include in their model an examination of additional cases. These originate from Wilson's model (1963:28–32), and are divided into borderline, related, contrary, invented, and illegitimate cases. Walker and Avant point out that an "analysis cannot be completed until there are no overlapping attributes and no contradictions between the defining attributes and the model case". The purpose is to assist to decide which characteristics or attributes best fit for the concept of interest and what counts as defining attributes as well as which do not count – making thus the model case stronger. Not all of these additional cases are necessarily included in individual concept studies in nursing science.

The seventh step in Walker and Avant's model is to identify antecedents and consequences. They define these as those events or incidents that happened prior to, or as a result of the "occurrence of the concept" as they express it. There seems to be a contradiction here, because – as they themselves pointed out earlier "concept is a mental image of a phenomenon" and "not the thing or action" (Walker & Avant 1994:24). What they should be talking about here are the events or activities that the concepts "refer to".

In Walker and Avant's model, as the last step, the critical attributes and their empirical referents in the real world are brought together. For nursing the empirical referents are useful in practice because they provide "the clinician with clear, observable phenomena by which to 'diagnose' the existence of the concept in particular clients", as Walker and Avant (1993:46) express it.

5 Discussion

Walker & Avant (1994:47) admit the limitations of their concept analysis: "The feeling of being absolutely in over your head. Since there are no firm rules in concept analysis, this may make you very anxious. There is no way we can say to you, 'First do this, then do that, and when you have done so, all will be wonderful.' We have attempted to give you guidelines but the actual intellectual work must be yours." Also in the concept analysis models of business studies, the more detailed analysis of concepts has been left to the analyst to figure out individually. None of these methods seems to have such a full-fledged set of theoretical tools as terminological theory.

The classifications and descriptions of meta-concepts created in terminology science and terminology work offer researchers as well as terminologists more concrete tools than the unspecified "method of thinking" that the general research methodology literature has to offer. Terminological literature accounts for detailed procedures and methods to break down concepts into their characteristics, to structure concept systems, and to write well formed definitions. However, the overall tone in these descriptions is often terminology work oriented and not always readily converted into a stringent research method needed for an academic study.

A flexible method applicable for many purposes will be outlined by combining elements of terminological analysis with elements from the other, more research oriented concept analysis methods. This method and its tools will be presented in part 2 and 3 of this paper.

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A combined genre-register approach in texts of business English

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Keywords: *genre, register, business English, pragmatics*

Abstract

The present paper uses a combined genre-register approach to carry out an analysis of some of the most representative written and oral professional texts from the field of Business English: the business letter, the job interview, the business meeting and the company presentation. We believe that the combination of these two approaches is an optimal way to help our students of Business English to learn and recall the linguistic peculiarities of some of the most relevant genres in this field of English for Specific Purposes. Genre analysis has become one of the research areas of greatest impact in the didactics of professional and academic English within communicative methodology. Its ultimate aim is communication by means of texts termed genres. Our analysis will be carried out using different parameters such as macrostructure, communicative politeness and discourse. Register analysis focuses on the structural elements (syntax and lexis) which form the backbone of these texts. To this end, the work follows the research lines of Dudley-Evans and St John (1998); Brown and Levinson (1987), Swales (1990, 2004), Bhatia (1993) and Alcaraz Varó (2000): lexicon-grammar or register analysis and text or genre analysis.

1 Introduction

The use of the English language in international communications and in economic activities has increased due in part to globalization. Our students must learn different activities in order to communicate efficiently in English in the fields of international commerce and Economics. To do so they need a linguistic framework to facilitate the learning process. Current research in Business English shows that both traditional and modern approaches are used in linguistic description. As a result, without ignoring the contributions of register analysis, whose interest centres on the study of morphosyntax and lexis, English for Specific Purposes (ESP), in line with the parameters of Pragmatics, also studies the analysis of genre.

Business English is made up of different genres due to the distinct communicative necessities arising from business activities. One of the most common written genres is the business letter since it is still widely used in the world as a main channel of business correspondence in spite of widespread developments in communication technology. The most representative oral genres are the job interview, the business meeting and company presentations (Charles, 1996; Suau Jiménez, 1998; Alcaraz Varó, 2000). The aim of the present work is to analyse both register (syntax and lexicon) and genre with their respective macrostructure, communicative politeness and discourse of the written and oral texts mentioned above. It is our belief that students of Business English who are presented with both approaches will be able to learn and recall the linguistic peculiarities of this specific field in an optimal way. To this end, the work follows the research lines of Dudley-Evans and St John (1998), Brown and Levinson (1987), Swales (1990, 2004), Bhatia (1993) and Alcaraz Varó (2000): lexis-grammar or register analysis and text or genre analysis.

The paper is divided into the following sections. The first section will consist of a brief description of the language of English for Specific Purposes. Secondly, we will introduce genre analysis as a research line. Thirdly, we will introduce the corpus under analysis and the methodology used. The following two sections will illustrate the genre and register of the business letter, the job interview, the business meeting and the presentation of a company in English. Finally, we will draw some conclusions.

2 The language of English for Specific Purposes

The first studies on ESP were made within the framework of register analysis, mainly between 1960 and 1970. This approach was described by Halliday, McIntosh and Strevens in *The Linguistic Sciences and Language Teaching* (1964). Register is defined as the variety of a language in which a set of lexical and grammatical features stand out. Due to the frequency and regularity with which these are repeated, there is a certain sense of a differentiated unit (Dudley-Evans and St John, 1998; Alcaraz Varó, 2000). The purpose of register analysis consisted, therefore, of identifying these grammatical and lexical features. Consequently, the first ESP programmes were essentially of a structuralist type. Their contents were taught to students as they formed part of the language system without an explicit communicative purpose. The concept of register helps to analyse the discourse of business English by studying syntax and lexis. The syntactic component plays a relevant role in the articulation of a whole linguistic system and in the representation of reality. For Hoffmann (1985) and Robinson (1991) the grammatical structures of Business English are related to the importance and frequency of certain structures in the texts or dialogues studied. In order to analyse the syntax of the genres proposed we shall follow the most basic syntactic concepts in economics-business texts: (Alcaraz Varó, 2000:198; Dudley-Evans and St John, 1998:74-94):

a) Transitivity: *The organisation offers legal services.*
b) Passivization: *The figures have been prepared by our new accountants.*
c) Nominalization: *The development of small businesses.*
d) Ergative verbs: *The crisis has deepened…*
e) Personification: *The new plan suggests that…*
f) Long nominal groups: *We have received a consignment of… But on unpacking them we found that six heavy mahogany-finished dressing tables had been sent, instead of the light pine-finish ones asked for.*
g) Hypothetical expressions: *If we pay the tax on time, we won´t be liable for any further payment.*
h) Causal and consecutive expressions: *The company opened because they saw a gap in the market. Interest rates are down again. Therefore, we can look at new investments.*
i) Expressions of purpose: *They moved to a greenfield site so that they would have room to expand.*
j) Expressions of concession: *Even though their resources were limited, their results were excellent.*
k) Restrictive expressions: *As far as I know, the price of oil has fallen down.*

The lexis analysis of the genres proposed is based on the following lexical characteristics of business English (Suau Jiménez, 1998; Alcaraz Varó, 2000):

a. Compound nouns: *Basic economic laws, the tax collection system, etc.*
b. False friends: *Assistant, agenda* and *attend, etc.*
c. Other linguistic resources which feature in business English are those related to the structure of the word, that is, affixes (*overbalance*, *wholesaler*), those related to the meaning of the word such as synonymy (*to haggle, to bargain*) antonymy (*deficit, surplus*) polysemy (*to quote*) and relationships of hypernymy and hyponymy (the hyponym *secure* is lexically related to the hypernym *safe*).
d. Metaphors: *A tailor-made loan, companies are in good health, etc*. Lindstromberg (1991: 207-225) highlights the place that the metaphor has in ESP vocabulary. From the viewpoint of cognitive semantics research works are being carried out on the teaching of figurative lexicon (Deignan et al., 1997; Boers and Demecheleer, 1997; Henderson, 2000; Charteris-Black, 2000; Herrera-Soler and White 2000; Almendárez López, 2001; Cortés de los Ríos, 2001 and Herrera-Soler, 2008), among others.
e. Lexical collocations: *Trade discounts, company car,* etc.

3 Genre analysis as a research line

The concept of non-literary genre was coined with the publication of *Genre Analysis* by Swales (1990). This work outlines the structure and discourse organisation of the parts or *moves* which make up a research work. According to Swales (1990), the non-literary genre is defined as a specific communicative event which can be recognised as such by the members of an academic or professional community which, as well as having one or several specific objectives in common, is structured according to a protocol which is not exempt of variables. Apart from the fact of belonging to a discoursive community, Swales identifies a second aspect: the communicative objective. Swales (1990, 2004) argues that from a language teaching perspective, it is useful to think of genre as consisting of a series of "moves". A move can be thought of as part of a text, which achieves a particular purpose within the text. Each move is taken to embody a number of constituent elements called "steps".

Basically the genres are defined according to the use of language in conventionalised communicative contexts (Bhatia, 1997: 181-195). They serve the purposes of the discourse or epistemological community, whose conventions tend to establish relatively stable structural forms.

Starting from the concept of the non-literary genre, ESP offers genres in the academic field such as the abstract, research articles, the doctoral thesis, the exposé, etc. In the professional field, which is much wider, some professions possess many specific genres, for example, in the business world it is easy to distinguish genres such as the memo, the business letter, etc. (Alcaraz Varó, 2000).

Genre analysis has become one of the research lines of greatest impact in the didactics of professional and academic English within the communicative methodology[1]. It is not content with the simple identification of the lexical-grammatical features of the different varieties of

[1] The introduction of genre analysis has implied a methodological change in ESP didactics, not only as regards the study of language, but also considering the oral and written genres used by professionals in their everyday activities.

the English language, the ultimate aim of register analysis, but rather it directs its attention towards the linguistic and socio-cultural conventions which can be analysed in each genre (Alcaraz Varó, 2000; Fuertes Olivera, 2003; Revilla Vicente, 2008). This analysis is carried out using different parameters such as the macrostructure, communicative politeness and discourse.

3.1 Macrostructure

The macrostructure, i.e. its format or higher organisation, is one of the first conventions of a genre. According to Alcaraz Varó (2000:135), its importance resides in the fact that it provides meaning to the text. Sometimes the incomprehension of the contents of a text is due to not knowing the specific vocabulary, but at other times empirical studies have shown that lack of familiarisation with the macrostructure of a genre is the cause.

The macrostructure consists of the primary and the secondary structures. The primary structure is made up of sections, each of which is made up in turn of moves. These moves correspond to the communicative objectives which each sections aims to accomplish and they make up the secondary structure, which may in turn be made up of lesser parts known as sub-moves. For instance, in a complaint letter the movements consist of formulating the complaint and requesting a solution using pressure tactics.

3.2 Communicative politeness

The concept of politeness can be understood in two ways (Escandell Vidal, 1999:137): either as an established social norm which regulates the behaviour of the members of a given society in order to preserve them from aggressiveness, or as a set of conversational strategies intended to mitigate possible conflict between speakers.

Traditionally, politeness has been treated as an aspect of conversational language. Genre analysis considers this parameter to be of interest in the academic and professional fields as well. It is, therefore, an appropriate topic of ESP and should be included in any syllabus of these courses (Crompton, 1997; Skelton 1988, and Salager-Meyer, 1994). Likewise, Dudley and St John (1998:77) add that learning activities and tasks should be programmed to allow students to assess the function of modifiers in professional and academic discourse, to manipulate the linguistic resources with which they express themselves and to understand the motives which led the writer to include them.

In the framework of pragmatics, linguistic research has come up with different models[2] which explain how this communicative phenomenon of Brown and Levinson (1987) is perhaps the most elaborate and best structured of these models to provide an explanation of communicative politeness. It has two basic concepts. Firstly, rationality, in other words the capacity of speakers to define accurately the aims they pursue in the communicative process; and secondly, the public image, or the social prestige which any individual wishes to hold. This may be negative or positive, and all politeness strategies are derived from the need to maintain it. In this sense we can distinguish between negative and positive politeness

[2] For example, according to R. Lakoff (1973), politeness is understood as a mechanism which attempts to reduce the tension created in communicative interaction. Leech (1983), on the other hand defines it according to the relationship which exists between speakers, which imposes a series of selections which determine the type of statement and qualify its meaning. This author also distinguishes between positive and negative politeness.

strategies[3]. Negative politeness consists of respecting the speaker's territory. The most common strategies of negative politeness are impersonalisation and hedging. These are achieved using impersonal verbs, the use of shields, such as modal verbs (could), semi-auxiliares (seem to), adverbs and adjectives of possibility (it is possible), epistemic verbs (believe, suggest, consider, think) and intensifiers of an emotional kind (of particular interest, of particular importance). Other resources to moderate or soften the content of the message are approximators (somewhat, kind of), expressions of scepticism (in our view, in our opinion) and finally signals of pessimism by means of adjectives and nouns with negative connotations (difficult, problems, etc.). From a linguistic point of view, positive politeness includes the words, sentences or clauses which we should use in our communication to integrate the speaker into our terrain, or to integrate ourselves into his/hers. As such, the author of a research article uses solidarity as a positive strategy by using *we* and recognising the value of the scientific community by means of the complicity when assuming part of what others have contributed.

3.3 Discourse

Discourse is understood as language in action and is made up of a chain of linguistic signals which convey information with a view to developing an intrinsic instrumental language function which produces some effect on the receiver, not to mention other considerations such as sociocultural factors. To carry out the study of discourse, firstly, we should distinguish certain parameters, namely discoursive modality: exposition, persuasion, description and narration and secondly, the communicative functions expressed as acts of speech. It is important to detect the features which allow us to determine the discourse modality of the genre, that is to know if the text is trying to persuade us of something (persuasion), to present some data (exposition), to depict a scene (description) or to recount something (narrative). A speech act is an utterance that serves a function in communication. It might contain just one word, as in *Sorry!* to perform an apology, or several words or sentences: *I'm sorry for the inconvenience caused with your consignment*. Speech acts require not only knowledge of the language but also appropriate use of that language within a given culture. We perform speech acts when we offer an apology, greeting, request, complaint, invitation, compliment, or refusal, etc.

4 Corpus and methodology

The corpus of our study has been taken from Bench (1986), Martin (1987), Littlejohn (1994), Palmer Silveira & Pérez Laval (2000), Tullis & Trappe (2000) and letters on-line: www.business-letters.com/categories.htm. These books and the website were selected since they contain a wide variety of texts and exercises with which students of business English can practice. They reflect the discourse they will be confronted with at their workplaces.

As stated in the introduction, our aim is to analyse the business letter as one of the most characteristic written genres of business English, and also the following oral genres: the job interview, the business meeting and the presentation of a company. For this purpose we will use a combined genre-register approach so that our students of Business English can learn and recall the linguistic peculiarities of these genres. The analysis of each parameter and the syntax and lexis will be illustrated with examples taken from the corpus mentioned above.

Our combined genre-register approach consists of two concrete analyses as follows:

[3] Salager-Meyer (1994:155) establishes a wider classification of the linguistic resources that we use to soften or moderate the verbal message.

1. The genre: Macrostructure, communicative politeness and discourse from the viewpoint of communicative methodology.

   a. Macrostructure: We will show the sections or moves in Swales's words in the body of each genre. For example, in an enquiring letter we will show the following move: Requesting information, catalogues and price-lists (*Could you please send us your latest catalogue and price-list, including details of quantity discounts …).*

   b. Politeness: We will analyze negative and positive strategies to achieve communicative interaction between speakers. For example the act of enquiry constitutes a strategy of negative politeness expressed mainly using indirect acts.

   c. Discourse: Identifying the discoursive modalities of each genre enables us to know if the text aims to convince us of something (persuasion) or to put forward some data (exposition), etc. For example, the writer of a complaint letter aims to solve the problem by means of persuasive tactics. Consequently, persuasion is the discoursive modality of this type of letter, since the persuasive discourse is intended to influence the receiver (*receiver-oriented*). We will also identify the speech acts of each genre. For this aim we will follow Searle´s classification. Continuing with the example of a letter of complaint, the most representative acts of speech are directive (the complaint) and commissive (the threat).

2. The register: Syntactic and lexical peculiarities. For example with reference to the language of the reply to a letter ordering merchandise, from the point of view of syntax, sentences including the passive voice are typically found in this type of letter. Compound nouns are frequently used, such as *pro forma invoice*, *air way-bill, insurance certificate* and false friends like *dispatch* and *collect.*

5 Analysis of genre and register of the business letter

The business letter is the written macrogenre par excellence due to the need for internal communication of the members of this discoursive community. Moreover, it is the business genre with the most sub-genres as a result of the diversity of fields which make up the firm's professional activity (Suau Jiménez, 1998; Wang, 2007).

This genre has the following macrostructure: the letterhead, name and address of the addressee, the date, the greeting, the main body of the letter and the farewell salutation.

There are many types of business letter (*enquiry*, *reply to enquiry*, *order*, *complaints*, *apologies*, etc.) each with its own macrostructure.

Politeness is expressed by means of ritualized language. For instance, *Thank you for your enquiry of 18th May asking for…/I should be obliged if you could kindly send us… /We should be extremely grateful if you would give us your opinion of…* In general terms, native English speakers use more strategies of negative politeness in business letters to preserve their image and more expressions of gratitude and pessimism than non-native speakers (Maier, 1992: 202).

There follows the genre analysis and register analysis of the most common types of business letter: an enquiry letter, reply to this request, order of merchandise, reply to this order, letter of complaint, letter of apology and the letter of job application. The latter is the type of letter which our students most need to write once they have finished their studies and are looking for their first job. This study has collected 34 letters.

5.1 The genre and language of the enquiry letter

5.1.1. The genre

a. The macrostructure of this letter consists of the following movements:

1. Indicating the source of information on the other company or its products: *With reference to your advertisement in…/ As we saw in the advertisement published in…*
2. Showing interest in their products: *We are interested in increasing our…*
3. Requesting information, catalogues and price-lists: *Could you please send us your latest catalogue and price-list, including details of quantity discounts …/ We should be obliged if you would send us…/Please send us…/Please let us know…*

b. The act of *enquiry* constitutes a strategy of negative politeness expressed mainly using indirect acts. These acts are achieved by means of ritualized expressions which often contain modal verbs and conditional sentences, as well as imperative verbs accompanied by *please* acting as a modifier of the request.

c. As for the discourse, this sub-genre is articulated in the following discoursive modality: expositive. The act of speech is directive (requesting).

5.1.2. The language

a. From the syntactic point of view there is frequent use of :

1. Modal verbs: *Could you please send…*
2. Imperatives: *Please let us know…*
3. Conditional sentences: *We should be obliged if you could send us further information…*

b. As regards lexis there is frequent use of:

1. Compound nouns: *Price list, quantity discounts, bulk buying*, etc.
2. False friends: *Obliged*

5.2 The genre and language of the reply to an enquiry letter

5.2.1. The genre

a. The macrostructure of this type of letter consists of the following moves:

1. Acknowledging receipt of the previous letter: *Thank you for your letter/enquiry of* (*date…*) / Referring to the contents of the previous letter: *With reference to your letter … enquiring about…*
2. Indicating the dispatch of enclosed information: *We have pleasure in enclosing… / We are enclosing… / We are pleased to enclose…*
3. Formal closing: *We look forward to… / Please do not hesitate to write if you require further information.*

b. The reply to a request for information, catalogues and price-lists is mainly a strategy of positive politeness. The use of ritualised language such as *We are pleased to enclose… / We have pleasure in enclosing…* is intended to integrate the recipient into the terrain of the writer.

c. As far as the discourse is concerned, this sub-genre is articulated around the following discoursive modality: expositive. The characteristic act of speech is expressive (to please).

5.2.2. The language
a. From the syntactic point of view there is frequent use of conditional sentences to show willingness to provide further information.

b. According to lexis there is frequent use of:
1. Compound nouns: *Price-list, trade discounts, quantity discounts, delivery dates*, etc.
2. False friends such as *to dispatch* and *to deliver.*

5.3 The genre and language of the letter ordering merchandise
5.3.1 The genre
a. The macrostructure of this type of letter consists of the following moves:
1. Acknowledging receipt of the previous correspondence: *We thank you for your letter of (date), enclosing your catalogue, price-list and samples of (items).*
2. Showing satisfaction with the samples and formulating the order: *We have examined your samples and would like to place the following order…*
3. Enclosing the official purchase order and describing the form of payment: *We enclose our official purchase order and will pay for the goods by banker´s draft on receipt of your pro forma invoice.*
4. Formal closing: *We look forward to…*

b. The communicative politeness of this sub-genre is negative. The linguistic resources by which this politeness is transmitted are modal verbs which act as modifiers of the request for merchandise.

c. The discourse of this sub-genre is expositive. The act of speech itself is directive (requesting).

5.3.2 The language
a. From the syntactic point of view, there is frequent use of modal verbs: *We would like to place the following order…*

b. According to lexis there is frequent use of compound nouns such as *pro forma invoice* and *order form.*

5.4 The genre and language of the reply to a letter ordering merchandise
5.4.1 The genre
a. The macrostructure of this type of letter consists of the following moves:
1. Acknowledging receipt of the order: *We are pleased to acknowledge your order of (date) for…*
2. Enclosing documents: *The air way-bill, insurance certificate and invoice for freight charges and insurance are enclosed.*
3. Informing about dispatch: *The goods will be dispatched by air on receipt of your banker´s draft.*
4. Formal closing: *We look forward to receiving further orders from you in the future.*

b. The reply to a letter ordering merchandise mainly constitutes a strategy of positive politeness. The use of ritualized language such as *We are pleased to acknowledge your order* is intended to integrate the addressee into the terrain of the sender. The passive voice is also used as a linguistic resource of negative politeness. By using it, the sender respects the terrain of the addressee and impersonalizes the action of sending the merchandise to request the agreed payment.

c. The discoursive modality of this sub-genre is expositive. The acts of speech themselves are expressive (to please) and directive (to request payment for the merchandise).

5.4.2 The language

a. From the point of view of syntax, sentences including the passive voice are typically found in this type of letter: *The goods will be dispatched…*

b. According to lexis there is frequent use of:
   1. Compound nouns: *Pro forma invoice, air way-bill, insurance certificate,* etc.
   2. False friends like *dispatch* and *collect.*

5.5 The genre and language of a letter of complaint

5.5.1. The genre

a. The macrostructure of this type of letter consists of the following moves:

1. Formulating the complaint: *I am writing to complain about …/I have just received a consignment from you and regret that… / We have taken delivery of the above order which arrived at Pireaus on the M.V. Spitfire*
2. Giving a detailed explanation of the reasons behind the complaint: *We ordered … pencils but the crate only contains … . /Most of the goods are off. In fact the whole consignment looks as if it was loaded and left for two days with no cooling system.*
3. Requesting that the problem be solved using pressure tactics: *If you cannot reassure me about the reliability of your delivery dates, I shall have to seek an alternative supplier/I need a replacement of this consignment immediately. Such a situation cannot be allowed to happen again…*

b. The communicative politeness of this type of letter is negative. Numerous expressions are used to soften the threatening nature of the complaint. The following examples illustrate this point: *If you cannot reassure me about the reliability of your delivery dates, I shall have to seek an alternative supplier / We think you ought to know so that you might take some action to prevent possible damage in future deliveries.* Also, to attenuate the demanding nature of the complaint, nominalizations are sometimes used, such as *I cannot accept the possibility of this delay*. Moreover, the following linguistic resources should be mentioned as strategies of communicative politeness: modal verbs, conditional clauses and the passive voice. As far as the latter is concerned, the writer uses it to mitigate the threatening act, removing the agent or relegating it to a secondary role.

c. The expositive and persuasive discourse modalities are the most important ones. The acts of speech themselves are directive (the complaint, e.g. *I am writing to complain about…*) and commissive (the threat, e.g. *If you cannot reassure me about the reliability of your delivery dates, I shall have to seek an alternative supplier*).

5.5.2 The language

a. From the point of view of the syntax there is frequent use of:
   1. Passive voice: *Such a situation cannot be allowed…*

2. Modal verbs: *I cannot accept…*
3. Conditional clauses: *If you cannot reassure me about the reliability of your delivery dates…*
4. Concessive clauses: *In spite of the fact we have already had to write to you three times this month concerning the above, we now find that we must write yet again.*
5. Consecutive clauses: *We need the pencils to complete deliveries already promised to our customers. Therefore, we must ask you to despatch the additional 8,000 pencils at once*.

b. According to lexis there is frequent use of:
1. Compound nouns: *Delivery dates, alternative supplier,* etc.
2. False friends such as *dispatch*.
3. Acronyms like *M.V.* (*merchant vessel*).

5.6 The genre and language of a letter of apology
5.6.1 The genre
a. The macrostructure of this type of letter consists of the following moves:
1. Referring to a previous contact: *Thank you for your letter of… /We have received your letter of… complaining about….*
2. Formulating the apology: *I apologise for... /I was very sorry to hear about the problems…/We are extremely sorry to…*
3. Justifying the mistake made: *We normally pride ourselves on …. , but in this case…./ The mistake was due to… .*
4. Proposing a solution to the problem: *We are looking into some of the specific points you mentioned to solve …*
5. Reiterating the apology in the hope of maintaining the business relationship with the company: *I can only offer my most sincere apologies and can assure you that … / We can assure you that every effort will be made to ensure that similar errors do not occur again.*

b. The communicative politeness of this sub-genre is negative. The linguistic resources used constitute strategies which aim to respect the speaker's terrain. The following are examples:
1. Modifying adverbs, emotional intensifiers which emphasize the apology: *We are extremely sorry…/We greatly regret…*
2. Expressions referring to the positive image of the sender who has been threatened: *We can assure you that every step has been taken to avoid this type of situation in future.*
3. The use of the passive voice with the aim of emphasizing the proposed solution to the problem: *…have already been forwarded to you/ Every effort will be made …*

c. The discourse of this genre is expositive and persuasive. The acts of speech themselves are commissive (promising) and expressive (apologising).

5.6.2 The language
a. From the syntactic point of view there is frequent use of:
1. Causal clauses and of the passive voice. For example *This was due to/ Every effort will be made…* with the intention of emphasizing the proposed solution to the problem.
2. Concessive clauses: *However, your order is being dealt with and will be sent without further delay*.

b. From the lexis point of view there is frequent use of:

1. Compound nouns such as *delivery dates*
2. Lexical collocations like *sincere apologies.*

5.7 Analysis of the genre and language of the letter of application for a job

5.7.1 The genre

a. The macrostructure of this type of letter consists of the following moves:

1. Identifying the source of the information on the job offer and indicating the interest in the job advertised: *With reference to your advertisement in yesterday´s Guardian I would like to be considered for the post / I should like to be considered for the post of assistant to the Export Manager, as advertised in The Times of March 12th.*
2. Giving details of the applicant's academic qualifications and work experience: *Having graduated from business school in 1989, I began working for the marketing department of United Telecom.*
3. Enclosing the applicant's curriculum vitae: *My further particulars are shown on my curriculum vitae which is attached / Enclosed is my curriculum vitae which will give you further particulars of my career.*
4. Expressing the applicant's willingness to attend an interview: *I am available for interview at any time, and should be happy to come to Toledo if necessary / If I am given two or three days´ notice I could attend an interview at any time.*
5. Formal closing: *I look forward to your reply/hearing from you.*

b. The act of applying for a job constitutes a strategy of negative politeness which is basically expressed by means of indirect acts in English. These acts are achieved by means of ritualised expressions which usually present conditional clauses: *I would like to be considered for the post / I should like to apply for the position / I would like to find out more about the position/If you would like me to call for an interview, I shall be pleased to do so at your convenience.*
Also, the use of adverbs as emotional intensifiers stress the applicant's interest in the job offered: *I am extremely interested in the position you are advertising/I am particularly interested in the situation you are offering.*

This sub-genre is characterised as being an act which threatens the image of the receiver. The conventions imposed by this sub-genre establish the use of language which tries to mitigate the categoric act of applying for work.

c. The discourse of this sub-genre is expositive and persuasive. The act of speech itself is directive (requesting).

5.7.2 The language

a. From the syntactic point of view there is frequent use of:

1. Modal verbs: *I should like to apply for…*
2. Conditional sentences: *If you would like me to…*
3. Passive voice: *I shall be pleased…*

b. From the lexis point of view there is frequent use of compound nouns such as *personal assistant, finance director,* etc.

6 Analysis of the genre and language of the job interview, business meetings and company presentations

The oral genres follow the basic outline of conversation. Traditionally, politeness has been studied as an element of conversational language. For instance, in oral genres of the business or academic fields, where there is frequent interchange of opinions in debates and forums, politeness is shown in the way speakers take turns, alternate, overlaps or interruptions. This study has collected 20 texts.

6.1 The job interview

6.1.1 The genre

The interview is related with the written genre of the curriculum vitae and it is characterised by the asymmetric relationship existing between the two speakers (interviewer and interviewee) as they do not possess the same social power. The genre is the following:

a. The macrostructure of this genre is an occurrence of speech made up of four conversational phases: greeting and phatic communication, analysis of the curriculum, negotiation, phatic communication and farewell. Each of these is generated by the introduction of a new topic. The central move is the analysis of the curriculum in which four steps can be identified (Guillén, 1995:86 and ff.)[4]:

1. Greeting and phatic communication: *Please sit down. You´re…*
2. Analysis of the curriculum:
    a. Motives: *Why do you want to change?/Why do you apply for this job?*
    b. Professional experience: *What's your present job like?*
    c. Expectations: *So you want a job with better prospects?*
    d. Private life: *When do you plan to get married?*
3. Negotiation of salary and conditions of work: *How much would you expect to earn in this job?*
4. Phatic communication: Thanking and saying goodbye: *Thank you very much for your time, (name). You'll be hearing from us soon*.

b. As regards the communicative politeness, the conventions imposed by this sub-genre establish the use of conversational markers to signal the alternation of turns of speech between the interviewer and interviewee, and the use of non-verbal language to achieve the correct politeness.

c. The discourse of this sub-genre is persuasive and expositive. The act of speech itself is directive (requesting).

6.1.2 The language

a. From the syntactic point of view there is frequent use of present simple: *Why do you apply for this job.*

b. From the lexis point of view there is frequent use of synonyms in the job interview, for instance *candidate or applicant, to recruit or to employ, job or position, etc.*

[4] Cited by Alcaraz Varó, E (2000: 159-160).

6.2 The business meeting

6.2.1 The genre

The business meeting is one of the most common oral genres in the business world. Company managers often hold meetings with members of their own companies to discuss issues of interest. Two macrostructures can be differentiated in the business meeting. One refers to the moves and linguistic expressions that a manager should use to chair a meeting. The other indicates the moves and linguistic expressions that the other participants should use:

a. To chair a meeting there are ritualized expressions which follow a specific macrostructure using the following moves:

1. Opening the meeting: *Could I start by asking Mr… for a few words?/Right, we may move on to the agenda then, please, etc.*
2. Setting the tone: *Before we begin, I should like to say that I hope the meeting will be constructive.*
3. Commencing the debate: *Who would like to start with a comment on this?*
4. Controlling the debate: *Who agrees with…?*
5. Summing up: *To sum up this seems a sensible and constructive suggestion*.
6. Closing the meeting: *Thanks for coming everybody.*

To participate in a business meeting there are ritualized expressions which follow a specific macrostructure consisting of these moves:

1. Expressing opinions: *I think/I consider/I feel that/I have no doubt that…*
2. Expressing agreement: *I quite agree/I'm all in favour of that.*
3. Expressing disagreement: *I'm sorry but I don't agree at all/But excuse me. I can't agree.*
4. Suggesting: *How about… ?/Why don't we/Don't you think this would be…?*

b. The communicative politeness of this genre is negative. The linguistic resources which are used are modal verbs (*I can't agree),* expressions of apology with mitigated forms (I'*m sorry/Excuse me)* and emotional intensifiers to show agreement or disagreement (*I quite agree).*

c. This oral genre features the following acts of speech (Alcaraz Varó, 2000: 161):

1. Expressive acts (welcoming, congratulating, apologising, etc).
2. The speaker uses directive acts to get the listener/s to do something: ordering, asking, begging, requesting, etc.
3. The speaker uses representative or assertive acts to show that what he/she is saying is true (assuring, explaining, describing, etc.).
4. The speaker uses commissive acts to express the commitment to act or carry out something in the future (promising, guaranteeing, threatening, etc.).

6.2.2 The language

a. From the syntactic point of view there is frequent use of

1. Present simple: *I think…*
2. Modal verbs: *I can't agree…*

b. From the lexis point of view there is frequent use of:

1. False friends: *Agenda, sensible, etc.*
2. Synonyms: *Think, feel, consider,* etc.
3. Metaphors like *a sensible and constructive suggestion.*

6.3. Company presentation

6.3.1 The genre

The presentation of a company is an oral genre which is used to transmit the history, characteristics and main aims of a company to one or several listeners. The genre is the following:

a. The macrostructure of company presentations consists of the following moves:

1. Introducing the company: *Good afternoon my name´s … and I´d like to talk to you about my company which is called …*
2. Describing the company (location, headquarters, branches, type of company, activity, number of employees, turnover and current projects*): I'll begin firstly by describing our organization and then go on to outline for you the way in which we operate. Well it's based in… The head office is in …but we have a small branch office in… It's a PLC. Laramont´s main business is … This company employs over… people. Our turnover is…Our current projects are…*
3. Summing up: *So, what I´ve been trying to do this afternoon, or in this brief introduction, is to show the kind of organisation we are.*
4. Inviting questions: *Are there any questions?/If there are any questions, I´ll be happy to try to answer them.*

b. The communicative politeness of this oral genre is negative. The linguistic resources which the speaker uses as a kind of indirect language are modifiers such as modal verbs and impersonalization strategies such as the passive voice and impersonal verbs.

c. The discoursive modalities of this genre are narrative and expositive. The most characteristic act of speech is representative (describing).

6.3.2 The language

a. From the syntactic point of view there is frequent use of:

1. Modal verbs: *I´d like to talk about…*
2. Passive voice: *My company which is called …*

b. From the lexis point of view there is frequent use of:

1. Compound nouns like *a limited liability company, head office, branch office*, etc.
2. Acronyms: *PLC*

7 Conclusions

The present article shows the complementarity of the two methodologies used, that is to say, text or genre analysis and lexis-grammar or register analysis, allowing our students of Business English to learn and recall better the linguistic peculiarities of some of the most relevant genres in business English: the business letter, the job interview, the business meeting and the company presentation.

Regarding genre, each professional text analysed in this work presents a specific macrostructure depending on the communicative objectives of the writer or speaker. As for communicative politeness, our study has proved that the written genres analysed feature more strategies of negative politeness to mitigate the content of the message. Only in the reply to enquiry letters and the reply to ordering merchandise have we found strategies of positive politeness. In oral genres only strategies of negative politeness are used.

This paper has also proved that the discoursive modalities in the written genres are expositive and persuasive, whereas the speech act most often found is directive. Regarding oral genres the most representative discoursive modality is expositive, whereas the acts of speech vary according to the communicative aim, with none standing out above the others.

With respect to register, we have analyzed the morphosyntactic structures of the selected written and oral genres together with their lexical characteristics since syntaxis and vocabulary are the backbone of the genres analysed. Our analysis has showed that the most common syntactic structures in the written genres are the use of modal verbs, conditional sentences, passive voice, imperatives, concessive, consecutive and causal clauses. Regarding lexis, compound nouns, false friends and acronyms appear in a greater number. In oral genres there is a tendency to use modal verbs, present simple and passive voice, while the lexis features the use of synonyms, false friends, acronyms, compound nouns and metaphors.

In short, the complementary nature of gender analysis and register analysis can allow students of business English to gain a thorough understanding of the most representative written and oral genres of this branch of ESP. We trust that this analysis will prove a useful methodological tool to allow students to learn the techniques of comprehension and expression of the professional texts analysed in this work.

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El uso de los compuestos clásicos en bioinformática

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Abstract

Greek and Latin have been used to coin new terms in Science, especially since the Renaissance. However, many experts think that in the last sixty years their use in Spanish is moving back in benefit of English both for the specialised communication and the information exchange. The present paper sets out a short theoretical approach to Spanish word-formation focused on the neo-classical compounds because most eminent linguists do not agree about their status. Secondly, we will try to analyze the quantitative and qualitative use of neo-classical compound words in the Spanish discourse of a new discipline: Bioinformatics, as well as to confirm or not their decreasing occurrence in new fields of study with less classical tradition than other ones, such as Medicine or Botany.

1 Introducción

De todos es sabido que desde la Edad Media, pero especialmente desde el Renacimiento, el griego y el latín han servido de cantera para la acuñación de nuevos términos primero en el ámbito científico (del que destacamos la medicina o la botánica) y luego en el técnico por ser en su momento las lenguas de la cultura y del saber. Sin embargo, muchos estudiosos coinciden en afirmar que desde la segunda mitad del siglo XX su presencia en la lengua española está retrocediendo en beneficio del inglés en casi todos los campos, pero especialmente en el de la informática (Martín Zorraquino, 1997:324). No obstante, ello no significa que muchos autores no pongan de relieve la importancia de las lenguas clásicas como pilares de la creación terminológica (Val Álvaro, 1999:4777; Vivanco, 2006:21; Cabré & Rigau, 1984:154, López Piñero & Terrada, 2005:viii-ix) y el hecho, también significativo, de que muchos de estos términos especializados, traspasando las fronteras de su "original especialización" (Lang, 1997:240) se integren en la lengua general y sean asimilados por los hablantes.

1.1 Objetivos de nuestro estudio

El presente trabajo pretende analizar cualitativa y cuantitativamente los compuestos clásicos en la bioinformática; comprobar si el griego y el latín, a través de los compuestos, siguen ocupando el puesto relevante de antaño en el discurso científico moderno y así, confirmar o rebatir su disminución en la ciencia y la técnica contemporáneas. Se ha tomado como campo de estudio esta joven disciplina porque es una ciencia emergente en España y porque sus bases se apoyan tanto en la ciencia como en la técnica. También abordaremos, aunque brevemente, las posturas acerca del tipo de formación que los compuestos clásicos constituyen al existir una cierta disparidad de opiniones entre los lingüistas.

1.2 Aporte teórico

1.2.1 La Bioinformática

Aunque el término "bioinformática" induce a pensar en una disciplina que pone el acento sobre la vertiente informática, en cambio si observamos su sinónimo *biología computacional*, calco de *computational biologics*, el peso se desplaza hacia el lado de la biología, en cuyo seno nace. Toma auge a partir de la publicación de la estructura del ADN (Watson & Crick, 1953), si bien podríamos hacer remontar sus orígenes incluso a las primeras décadas del siglo XX con la creación de la base de datos con la primera información relativa al ADN y a las proteínas (Margaret O. Dayhoff, 1947). Ha alcanzado un hito importantísimo al publicarse la secuencia completa del genoma humano (febrero de 2001) dando paso a una nueva etapa, denominada por los expertos "era post-genómica" en la que indudablemente quedan todavía muchos logros que alcanzar.

Existe, pues, desde su nacimiento una estrecha vinculación a la biología molecular y a la genética; sin embargo, también está presente en otros ámbitos de la biología, como la vegetal, orientada a la agricultura o la conservación de especies amenazadas. No obstante, la perspectiva más extendida acota su campo de acción al estudio de la genética humana (genoma, proteínas). *Sensu lato*, la bioinformática es una disciplina que combina la biología, la informática, las matemáticas, la estadística y la teoría de la información para almacenar, gestionar, interpretar e integrar el ingente volumen de información[1] que la biología molecular, la genómica (rama de la biología que estudia el genoma humano) o la proteómica (centrada en el estudio y predicción del plegamiento o estructura tridimensional de las proteínas) producen. Para tal fin desarrolla aplicaciones informáticas y métodos de análisis estadístico. Se organiza en varias áreas, de las que destacamos el trabajo de los científicos del Proyecto Genoma Humano. En este proyecto multinacional ha sido fundamental el desarrollo de aplicaciones para el manejo de bases de datos, el estudio de las secuencias del ADN y de las proteínas o el alineamiento múltiple de sus secuencias para la reconstrucción de árboles filogenéticos (es decir, el parentesco de las especies, establecido a partir de las semejanzas y diferencias entre sus secuencias de proteínas o ácidos nucleicos).

Asimismo tiene una aplicación directa en la biomedicina (para algunos, una rama diversa de la bioinformática) con el fin de estudiar qué genes están ligados a ciertas enfermedades, hereditarias o no, y así conocer mejor sus bases moleculares, realizar un diagnóstico precoz o desarrollar mejores tratamientos para los pacientes. Son precisamente estas aplicaciones las que han atraído el interés de numerosas empresas (*bioempresas*), tanto farmacéuticas como informáticas, cuyo impacto económico es destacado y creciente en países como Estados Unidos, Canadá y Japón, que, junto con Rusia, son los que más invierten en bioinformática y mayor impulso le están dando gracias a la creación de centros reales y virtuales donde se llevan a cabo investigaciones muy avanzadas.

1.2.2 La composición culta: estado de la cuestión

De entre los diversos mecanismos de formación de palabras (en adelante FP), creemos que la composición culta es el más problemático. Los manuales y monografías consultados tienen en común el hecho de reconocer velada o abiertamente que la composición con bases

1 Sirva de ejemplo el proporcionado por Guigó & Valencia (2000:8): un solo experimento con arrays (matrices) de expresión genera 60Mb de información y se llevan a cabo cientos o miles repetidamente en todo el mundo.

grecolatinas es difícilmente clasificable en un mecanismo de FP concreto, no pudiéndosele atribuir los mismos rasgos que a las formaciones con afijos y/o con bases patrimoniales. Así, Lang (1997:221) declara que "el estatuto de estas formas resulta problemático"; Pensado (1999) y Val Álvaro (1999) reconocen que no se pueden emplear los mismos criterios para la formación nativa y para la culta de modo que habrían de explicarse separadamente. Es más, ciertos autores incurren en contradicciones en sus propias obras, lo que demuestra la dificultad de esta formación. Y sin embargo, se le dedica muy poca atención en las gramáticas generales y en las monografías de FP. Salvo el capítulo de Val Álvaro en la *Gramática descriptiva de la Lengua Española* (1999) dedicado a los compuestos, no hemos encontrado un estudio pormenorizado ni siquiera en las anteriores gramáticas de la Real Academia Española (RAE): En el *Esbozo de una nueva gramática de la lengua española* (1973) se encuentran someras referencias a la composición y la derivación dispersas en varios capítulos, como también sucede en la *Gramática de la lengua española* de Alarcos (1994).

No existe tampoco un acuerdo acerca del tipo de formación a que dan lugar ni una denominación común a los temas que intervienen: unos las consideran raíces (pero con funcionamiento diferente al de las raíces nativas) y dan lugar a "compuestos clásicos" o "neoclásicos", "compuestos cultos", "compuestos eruditos o científicos" (*Esbozo*, 1973:77-78) etc. Si se consideran más próximas a los prefijos o sufijos (teniendo presente que tampoco comparten los mismos rasgos que los afijos patrimoniales), encontraremos un largo listado de etiquetas absolutamente insuficientes: "raíces prefijas y raíces sufijas" (Marcos Marín, 1980:430 citando a Seco; García et al., 2004:275), "elementos cultos", "afijoides-prefijoides" y "seudoafijos, seudoprefijos, seudosufijos (Alvar Ezquerra, 1993:49), "pseudoprefijos latinos o griegos" (Serrano Dolader, 1995:202), "temas", "raíces ligadas" o "bases no autónomas" (Val Álvaro, 1999:4775-6) o la amplia gama de Lang (1997:55, 97 y 269): "afijos cultos internacionales", "lexemas latinos o griegos que, sincrónicamente funcionan como prefijos o sufijos", "afijos neoclásicos constituidos por los sufijoides y prefijoides".

La cuestión fundamental es, pues, ¿en cuál de los procesos de FP podríamos englobar lo que estamos designando "compuestos clásicos"? La bibliografía oscila entre dos polos: composición y prefijación (en ocasiones mediante un paso intermedio de transformación de tema a prefijo) aunque nadie se postula taxativamente a favor de un mecanismo u otro, pues, como expone Lang (1997) o Serrano Dolader (1995), dada la proximidad de los procesos de composición y de prefijación, no es de extrañar que haya quien no establezca fronteras entre ambos mecanismos.

Predomina la consideración de composición en estos autores y obras: el *Esbozo* (1973) distingue compuestos eruditos o científicos y compuestos con prefijo o prefijación, en la que incluye prefijos de origen grecolatino llamados "preposiciones impropias", entre las que hay palabras de varias categorías gramaticales con "poder reproductivo en la lengua española" (1973:76) como *auto*-, *bi*-, *multi*-, *semi*-, *tele*-. En cambio, se enuncian entre las formadoras de compuestos palabras de igual categoría (p. ej. *mono*-, *omni*-, *seudo*- *uni*-). Por lo tanto, parece que el hecho determinante para que una palabra de origen grecolatino dé lugar a un compuesto erudito o a un prefijado dependerá de la productividad o no de sus formantes. Marcos Marín (1980:430) recoge la opinión de M. Seco (*Gramática esencial del español*, 1972) del que dice trata las "raíces prefijas" y "raíces sufijas", que son "adaptaciones de algunas palabras que toman una forma especial al unirse a otras" y que no son otra cosa que palabras grecolatinas (se sabe por los ejemplos) de las que unas se han especializado en aparecer antepuestas (p. ej. *aero*-) y otras pospuestas (como -*algia*). García et al. (2004:312), por un lado, afirman que “hay también otra modalidad <de composición> consistente en tomar vocablos (especialmente del griego o del latín) y emparejarlos como partes de compuestos: *cefalgia*, *endogamia*, *omnívoro* [...]” que van siempre “ligadas a otra de su especie”; pero por otro, señalan que mediante la parasíntesis (un subtipo de derivación que se da cuando actúan simultáneamente un prefijo y un sufijo, condición compartida por Serrano Dolader, 1995:8) se constituyen “ciertas” palabras de origen grecolatino (no se dicen cuáles ni por qué) que en español no pueden aparecer de forma independiente y proponen el ejemplo de *hemeroteca*. Pero a nuestro parecer ¿qué diferencia hay entre *cefalgia* y *hemeroteca*? Justifican, pues, dos tipos de formaciones distintas con ejemplos que son, para nosotros, iguales. No obstante, su opción final es la de considerarlos compuestos ya que concluyen diciendo: “Este tipo de compuestos suele darse en nomenclaturas científico-técnicas” (García et al. 2004:312).

Los siguientes autores se muestran en cambio más proclives a la prefijación y a la derivación (entendiendo por tal la sufijación): Lang (1997:97) reconoce que palabras como *agorafobia, dactilógrafo, piscifactoría* se forman por prefijación; otras, por sufijación, pues son “lexemas latinos o griegos que sincrónicamente funcionan como prefijos o sufijos” (*ibidem*). Es en posición inicial, en su opinión (sin aducir datos concretos o estudios de frecuencia), la de mayor productividad en español (*cfr*. apdo. 3.2). Para Alvar Ezquerra (1993) la formación mediante prefijos y sufijos cultos es derivación ya que es condición de la composición que sus elementos integrantes aparezcan libres (opinión unánime entre los autores consultados) y la mayoría de los temas cultos no lo son. Sin embargo, cuando se unen dos “afijoides”, Alvar Ezquerra (1993:50) habla de dos “elementos” cultos cuya resultante está muy próxima a la composición; pero no se atreve a incluirlos en dicha formación. En último lugar, la nueva gramática de la RAE (*Gramática descriptiva de la Lengua Española*, 1999), al no estar redactada por un mismo autor, ofrece diversas consideraciones aunque en líneas generales se tiende a hablar en términos parecidos. De todos los capítulos, el de Val Álvaro aborda en profundidad la composición culta y, adoptando el estudio de Marchand aplicado al inglés (*The Categories and Types of Present-Day EnglishWord-Formation*, 1969:132 y ss) distingue la composición con base neolatina en la que ambos integrantes del compuesto pueden ser griegos o latinos y la prefijación con base nativa con un primer elemento grecolatino que ha de ser ligado (los llamados “compuestos híbridos”). Así pues, un mismo elemento podrá formar parte de un compuesto o de un prefijado: todo dependería del segundo formante. Para Varela & Martín (1999) no es admisible hablar de “prefijos cultos”, “prefijos grecolatinos” etc. y descartan la consideración de las raíces clásicas como una forma de prefijación “atípica” por tres criterios:

a) Distributivo: porque la mayoría de ellos pueden aparecer en primer lugar (*filólogo*), como los prefijos, pero también en segundo (*bibliófilo*), algo vedado a los prefijos y porque dos raíces clásicas se pueden combinar entre sí, mientras un prefijo más un sufijo, nunca. Comparten este criterio Val Álvaro (1999), Lang (1997) y Adams (1973).

b) Formal: la variación de algunos temas depende de su posición (inicial o final); en cambio, los alomorfos de un prefijo nada tienen que ver con su posición (siempre inicial).

c) Funcional: los auténticos prefijos no son núcleo de la palabra sino que son “adjuntos que modifican el significado de la palabra completa de manera 'circunstancial'” (Varela, 1999:4998), no así los temas clásicos.

Varela & Martín incluyen entre los prefijos españoles los de origen culto, así como algunos adjetivos/pronombres (*auto-*, *neo-*, *mega-*, *hetero-*), cuantificadores (*multi-*, *pluri-*) o adverbios (*endo-*) que funcionalmente caracterizan semánticamente a la base léxica del mismo modo que los prefijos, por lo que creemos entender que consideran compuestos cultos aquellos en que intervengan temas nominales, verbales o calificativos de uso menos extenso que los citados, salvo que sufran un acortamiento (*vid. infra*). Rainer (1999) considera sufijos de origen grecolatino toda una serie de raíces verbales (*-ícola*, *-ífico*, *-ífero*, *-ígero*, *-oide*) y designa como "otros" los que no son fáciles de enmarcar dentro de las etiquetas morfológicas establecidas, pues algunos tienen un uso lexicalizado y otros son de uso marginal (*-icida*, *-íloquo*, *-ívoro*). En cambio, todos ellos son para Val Álvaro (1999) temas grecolatinos formadores de compuestos adjetivos. Por último, Serrano Dolader (1999) considera que las antiguas raíces clásicas ya no constituyen palabras existentes, en consecuencia funcionan actualmente como prefijos y sufijos. Sin embargo, con anterioridad (1995:202) declaraba que las formaciones con "semipalabras o pseudoafijos" (entre la que se hallan algunas que originalmente no lo eran: *tele-*, *foto-*, *hidro-*), por tener un carácter "de evidentes cultismos", no habían sido tenidas en cuenta en su estudio sobre la parasíntesis puesto que la diferencia entre composición y prefijación en formaciones cultas no está bien "resuelta".

Si analizamos los autores de formación o *impostazione* clásica – Echeverri (1979), Quintana Cabanas (1989), Martínez Hernández (1992), López Piñero & Terrada (2005), Estébanez (1998) y Pingarrón (1998) –observamos: a) que no tratan los mecanismos de FP, salvo Martínez Hernández y López Piñero & Terrada; simplemente se limitan a definir (cuando lo hacen) y a listar cuáles son los prefijos y sufijos. b) Que cuantificadores (*multi, pluri, oligo*...), calificativos que indican tamaño (*mega, micro*), indefinidos (*hetero, homo, omni, pan(t)* etc.) no son prefijos, de manera que cuando van unidos a otro/s tema/s constituirán compuestos.

No queremos concluir este somero aporte teórico sin comentar otros tres procesos: Primero, los híbridos o hibridismos: Aunque hemos hecho mención a esta formación considerada ya sea composición ya sea prefijación, muy pocos (Val Álvaro, 1999) usan este término. La composición que mezcla griego y latín es apenas tratada por las gramáticas y monografías de la lengua española, pero sí por dos autores "periféricos": Eseverri (1988:8), quien considera "hibridismos" la combinación de una raíz griega y otra latina o bien de una griega y otra española (nativa)[2] y para el inglés, Adams (1973:129), que deja bien clara esta posibilidad de mezcla de lenguas clásicas entre sí o con otra nativa sin limitar o determinar la posición del elemento clásico, como hacen Val Álvaro y otros, al primer lugar. Segundo, los procesos de acortamiento, cuyo estudio ha ido progresivamente en aumento: desde la única alusión del *Esbozo* (1973:178) al hablar de los sustantivos femeninos en -o como *moto*(*cicleta*) hasta ser considerado por sí solo un procedimiento independiente de FP (García et al., 2004:272). Pero ¿hasta qué punto constituyen palabras distintas respecto a la forma completa? No creemos que *kilo*, *tele* u *otorrino* respecto a *kilogramo*, *televisión* u *otorrinolaringólogo* sean una nueva palabra, como propugnan García et al. En nuestra opinión no son más que compuestos clásicos que en determinados contextos sociolingüísticos (no siempre coloquiales), al igual que sucede con palabras patrimoniales (*Toni, chuches* etc.), se acortan mediante determinados fenómenos morfofonéticos. Así opinan también Cabré & Rigau (1984) para el catalán, que es perfectamente aplicable a nuestro caso. Lo que sí es importante es el proceso que sigue a muchos de los acortamientos, bien sea de un compuesto (con el significado global de éste y no con el del propio tema o raíz), de un derivado o de una palabra simple: la creación de

2 Dado que es un diccionario de helenismos, no contempla los hibridismos con el latín.

nuevos compuestos. Ahora bien, cabría preguntarse si realmente dichos compuestos se han formado a partir de un acortamiento o si se han acuñado directamente sobre el tema clásico. Dando por válida la primera hipótesis, los temas clásicos se convertirían en prefijos en opinión de Lang (1997:112) y Pensado (1999:4458). El tercer procedimiento, siglas y acrónimos en la ciencia y la técnica, ha sido poco tratado por nuestros autores cuando son precisamente de amplio uso, especialmente en el ámbito de la informática, como bien destaca Adams (1973:136-138).

2 Materiales y método

2.1 Materiales

Para llevar a cabo la parte aplicada de este estudio, se ha creado un corpus cuyas fuentes debían responder a una serie de criterios previamente sopesados: En primer lugar, documentos escritos (los *corpora* orales no creemos sean útiles a nuestros propósitos), originales, no traducidos. En segundo lugar, en formato electrónico ya que agilizaba su tratamiento mediante una aplicación informática específica. En tercer lugar, dada la diversidad de áreas que abarca la bioinformática, consideramos que el *corpus* sería más homogéneo si lo acotábamos a un único campo de estudio, decantándonos por el estudio del genoma humano y su aplicación a la biomedicina porque sus retos nos parecen los más interesantes. Por último, pretendíamos un equilibrio entre textos escritos por especialistas en informática y en biomedicina tanto por su número como por su volumen y fecha de publicación con el fin de comprobar si existían diferencias de frecuencia, formantes etc. en cada subcorpus. Sin embargo, de la lectura de los documentos se desprende que no puede hacerse una distinción neta entre los pertenecientes al ámbito biológico (o biomédico) y al informático ya que ambas disciplinas tienen parecida presencia en todos ellos.

Con tales premisas ha resultado verdaderamente difícil hallar materiales originales con que constituir nuestro corpus, fundamentalmente porque libros y revistas especializadas están escritos mayoritariamente en inglés para facilitar su difusión, por lo que podemos desgraciadamente afirmar que el español no es una lengua de divulgación científico-técnica en el campo de la bioinformática. Sirva de ejemplo el hecho de que mediante el buscador de revistas electrónicas de la Biblioteca de la Universidad Politécnica de Valencia (UPV) no se haya podido extraer ningún documento sobre bioinformática en nuestro idioma o que el buscador especializado "SpringerLink" no permita seleccionar artículos en español.

Finalmente, hemos conseguido constituir un corpus de 99.005 palabras (tokens) cuyos lemas totales (types) ascienden a 8.372 extraídos a partir de catorce documentos en soporte informático, fechados entre 2000 y 2007, relativos al campo de la bioinformática aplicada a la genómica y la biomedicina, pero de distinta naturaleza: textos académicos (documentos nº 10, 11, 12 y 13 reseñados en la sección "Corpus constituido" apdo. Referencias)[3]; estudios científicos (doc. nº 3), un e-book y un capítulo de un libro (docs. nº 14 y 4 respectivamente), artículos (docs. nº 1, 5, 7), algunos de divulgación (docs. nº 6, 8, 9) y un manual de uso de un programa informático (doc. nº 2). Sobre la posible influencia de esta variedad textual en los resultados finales hablaremos en el apartado 4.

2.2 Método

Antes de usar el software de análisis léxico WordSmith Tools, hemos eliminado del corpus

3 Agradecemos a M. A. Peiró y a J. Mª Silla su permiso para la utilización desinteresada de sus Proyectos Final de Carrera inéditos, así como también a sus directores Dr. D. Juan Císcar, D. Juan M. García Gómez y D. Antonio Gabaldón.

los abstracts en inglés, las direcciones URL, fórmulas, combinaciones de nucleótidos y secuencias génicas. Hemos decidido no tomar en consideración un grupo problemático, pero muy numeroso por razones obvias: los elementos y compuestos químicos puesto que históricamente la terminología de la química es poco deudora del mundo grecorromano, como mucho a través del árabe (por ej. *alcohol*, *colirio*) y la mayoría de los afijos de la química y bioquímica se han extraído del latín y del griego a veces de forma artificial y con un significado específico que no tenían en origen o era muy difícil de relacionar[4].

Hay que hacer constar que, a pesar de las condiciones de selección, el corpus no está íntegramente en español. Se utiliza bastante el inglés tanto al incluir citas textuales como en la propia terminología. Puesto que superaba el ámbito de este trabajo, hemos descartado el estudio de sus compuestos e híbridos, pero sí los hemos contabilizado a efectos meramente contrastivos (tabla I y apdos. 3.3, 3.4 y 4).

En suma, el objeto de nuestro análisis ha tenido en cuenta estas formaciones: compuestos clásicos en sentido estricto y otras formaciones que en construcciones nativas serían calificadas como parasíntesis o derivación con cualquiera de estas posibilidades combinatorias: [raíz+raíz+sufijo] como *fenotípico;* [prefijo+raíz+raíz], como *enciclopedia* o incluso [prefijo+raíz+raíz+sufijo] aunque sin simultaneidad ni exigencia mutua entre prefijo y sufijo, como *epidemiológico* o *hiperleucocitosis*. Bajo esa misma etiqueta incluiremos los híbridos de todo tipo y los acortamientos, siglas y acrónimos acuñados sobre un compuesto clásico o híbrido.

3. Análisis
3.1 Datos estadísticos
3.1.1 Por frecuencia
Los datos totales, sin discriminar el tipo de información, son los siguientes:

	Español	Inglés
Compuestos clásicos[5]	**264**	51
Porcentaje sobre total lemas (types)	3,15%	0,06%
Ocurrencias	**1789**	534
Porcentaje sobre total palabras (tokens)	1,8%	0,53%
Ocurrencias formas plenas	1754	268
Porcentaje ocurrencias/total ocurrencias	1,77%	0,27%
Compuestos en formas abreviadas (siglas, apócopes)	11	**35**
Ocurrencias formas abreviadas	35	**266**
Porcentaje ocurrencias/total ocurrencias	0,03%	**0,26%**

Tabla I. Número de formaciones y ocurrencias

Salta a la vista que la frecuencia de uso de los compuestos clásicos es mínimo en relación con el total de palabras, lo cual supone una gran decepción aun sumando los compuestos del inglés (total 2,33%). Si restamos del total de palabras las preposiciones, conjunciones

4 Como –amina, unión de *-am*(oníaco*)*, cuya etimología parece derivar de Amón o de la palabra “arena” (ἄμνος) y del sufijo –ina que indica procedencia, pertenencia. O –asa, de alta aparición en nuestro corpus, por ej. en las siglas ADNasa y ARNasa, evolución del sufijo griego –sis a través del francés.
5 Los dobletes gráficos o acentuales (*auto-organizativo*/*autoorganizativo*, *video*/*vídeo, colorectal/colorrectal* etc.) se han considerado como un mismo término.

coordinantes más frecuentes –*y, o, pero, sino*– y artículos (31.421 oc., 31,74% del total), las cifras no aumentan espectacularmente: los compuestos en español supondrían el 2,64% del total del corpus reducido (2,59% las formas plenas y 0,05% las abreviadas) y un 3,43% añadiendo las formas en inglés. Por número de formaciones, ni siquiera se alcanza el 5% de lemas. Sin embargo, no se ha de perder de vista a la hora de ponderar los datos la relativa presencia de términos químicos que engruesan nuestro corpus y, por lo tanto, hacen disminuir el porcentaje de compuestos clásicos. No obstante, con estos resultados, no podemos defender la frecuencia de uso en la lengua de la bioinformática de los compuestos cultos, lo cual no implica que no abunden las raíces grecolatinas, pues si este trabajo hubiera versado sobre su presencia en la prefijación y la derivación (sufijación), pensamos que los resultados seguramente no serían tan negativos.

Para valorar la frecuencia de uso de los compuestos clásicos, hemos establecido seis rangos:

f≥ 100	4	50> f ≥ 25>	6	10> f ≥ 5	26
100> f ≥ 50	2	25> f ≥ 10	20	f < 5	206

Tabla II. Número de compuestos por cada rango de frecuencia

Como no podía ser menos, el compuesto más repetido es *bioinformática*, con 219 ocurrencias (0,221% del total de tokens). El salto al segundo puesto, con casi un tercio menos de apariciones, lo ocupa una palabra que no habríamos esperado inicialmente: *filogenético* (145 oc., 0,146%) ya que quizás se pensaría que, debido al tema, fuera más lógico que siguiera la palabra *biología* (que ocupa el cuarto puesto con 131 oc., 0,132%) o quizás el adjetivo *bioinformático*, que ocupa en cambio el octavo lugar, con 53 oc. (0,053%). Sin embargo, si tenemos presente cuál es uno de los objetivos primordiales de la bioinformática en su aplicación a la genómica, se comprende que este adjetivo sea el segundo en uso en colocaciones como *paquetes filogenéticos, árboles filogenéticos, reconstrucción filogenética*, etc. El tercer lugar se encuentra el adjetivo *biológico* (140 oc. 0,141%). Ahora bien, el dato más significativo es la elevada cifra de compuestos de reducida aparición (menos de 25 ocurrencias) que aumenta sensiblemente en el rango menor a 5 oc., que es más del doble de los otros juntos y supone la mayor variedad léxica dentro de la escasez de uso señalada.

3.1.2 Por categorías gramaticales

Sabemos de antemano (Cabré&Rigau, 1984:155; Martín Zorraquino, 1997:323 Cabré, 2004:25) que en los lenguajes de especialidad predominan las formaciones de base nominal, como confirman los datos: sustantivos, 180 (68,18%); adjetivos, 77 (29,16%); verbos, 3 (1,19%) y adverbios, 4 (1,51%). Los sustantivos superan en dos terceras partes el conjunto de términos. Cerca de un tercio corresponde a los adjetivos sobre una base nominal, generalmente presente también en el corpus, como *bionformática > bioinformático*, *cromosoma> cromosómico*, *ribosoma> ribosomal*/*ribosómico*, *topología>topológico*. Ello se puede hacer extensible a los verbos: *hidrólisis>hidrolizar* y a tres de los cuatro adverbios, todos en –mente: *biológicamente*.

3.2 Temas y tipos de formación

Es en este punto (tablas III y IV) donde podemos apreciar mejor la variedad de los temas grecolatinos en el lenguaje de la bioinformática y sus posibilidades combinatorias.

	Griego	Latín	Total
Temas en posición inicial (compuestos de dos bases)	56	23	79
Temas en posición final (compuestos de dos o más bases)	29	11	40
Temas en posición inicial y final (compuestos de dos bases)	11	0	11
Temas en posición inicial y media (compuestos de dos o tres bases)	5	0	5
Temas en posición inicial, intermedia y/o final (compuestos de dos, tres y cuatro bases)	5	0	5
Temas sólo en posición intermedia	1	0	1
Total	**107**	**34**	**141**

Tabla III. Clasificación de los temas por lengua y posición.

A continuación, mostraremos el número y combinación de temas en los compuestos clásicos e híbridos (a excepción de siglas y acrónimos):

Compuestos				Híbridos							
g+g	g+g+g	g+g+g+g	l+l	g+l	g+g+l	l+g	l+g+g	g+e	g+g+e	e+g	l+e
155	8	1	15	11	1	18	1	32	1	2	20

Tabla IV. Clasificación de los compuestos por número de bases y combinación de lenguas.

A la vista de todos estos datos cabe afirmar:

a) La preeminencia absoluta de los temas griegos (71,328%) sobre los latinos (28,671%) y que aquéllos prefieren combinarse consigo mismos o con el español.

b) Respecto a su distribución, la mayor variedad de temas se sitúa en la posición inicial (hecho que defendía Lang, 1997:237) y donde se concentra también el mayor número de temas latinos, siendo la segunda posición ocupada tanto por temas clásicos como por bases patrimoniales.

c) Los temas griegos tienen mayor capacidad combinatoria (hemos encontrado compuesto de hasta cuatro temas: *nanobiotecnología*), si bien el número de temas con tal capacidad disminuye a medida que se crean compuestos largos, en los que nunca interviene una base nativa.

d) Los datos negativos respecto al latín serían aún inferiores si viéramos como palabras nativas algunos términos que en nuestra opinión no lo son, como *molécula*, *espectro* y forman parte de compuestos cultos, como *biomolécula* o *espectrometría*.

e) Por el número de compuestos a que dan origen, también el griego supera al latín: en primer lugar, un sólo tema, de extensísimo uso, larga tradición y de múltiples combinaciones, está presente en 50 compuestos (incluidos híbridos), *logo*: *biológicamente*, *hematológico*, *histopatología*, *logaritmo*, etc. En segundo lugar, naturalmente, *bio* (32 formaciones), que puede aparecer en posición inicial e intermedia: *biofísico*, *biocomputador*, *microbiología* etc. Por último, el tema *geno* (origen), con 17 formaciones, cuya presencia es evidente por la selección del contenido de los textos que integran nuestro corpus, tal como hemos indicado en el punto 2.1; por lo tanto, este tema griego es, junto con *bio*, un elemento básico en compuestos, derivados y parasintéticos de la bioinformática, genómica y biomedicina. El resto de temas se distribuye en estos rangos de frecuencia:

$20 > f \geq 10$	5	Además de *geno: auto*, *grama/grafo*, *micro, multi.*
$10 > f \geq 5$	13	*nomía/-o*, *nano*, *metría/o* etc.
$f < 5$	121	*onco*, *fero*, *plasia*, *lito* etc.

A la vista de estos datos podemos concluir que sólo dos temas generan muchos compuestos (en total, 82 términos diferentes, 58,15% del total), mientras que la mayoría tiene reducida capacidad combinatoria o, al menos, no se usan excesivamente en el lenguaje de la bioinformática. Sin embargo, cabría preguntarse si son esos mismos tres primeros temas (incluimos *geno* por estar estrechamente ligada a los pilares de la bioinformática) los que se hallan en las palabras de más alto índice de frecuencia y si crean todo tipo de palabras.

	tema	**nº términos**	**frecuencia**	**categorías gramaticales**
	logo	50	641	nom., adj., adv.
	bio	32	704	nom., adj.,
	geno	17	231	nom., adj.
total………………………		99.........................	1576	

Tabla V. Relación entre los tres temas con mayor capacidad productiva, frecuencia de sus compuestos y categorías gramaticales a que dan lugar.

En líneas generales, los tres primeros temas suponen casi la mitad de los compuestos y prácticamente la totalidad de la frecuencia de aparición, por lo que podemos afirmar que en conjunto los temas más productivos van ligados a las palabras de mayor uso. Sin embargo, el tema que más apariciones presenta es el segundo en cuanto a variedad de términos, hecho que se puede considerar justificado por el propio objeto de estudio de la bioinformática, mientras que *logo* es un tema que se puede encontrar en cualquier disciplina humanística, artística o científico-técnica.

3.3 Acortamientos

Tres son los procedimientos de acortamiento o abreviación que afectan a los compuestos clásicos en nuestro corpus:

1. Apócope, como en *alelo* (2 oc.) por *alelomorfo*, siempre en su forma truncada; *fotos* (2 oc.) aparece alternando con *fotografía* (4 oc.) y v*ideo* (1 oc.), que alterna con *videocámara* (2 oc.) y *cámara de vídeo* (1oc.). En cambio las formas *clado* ("rama") y *grafo*, aparentemente acortadas, son en realidad formas libres, lo cual desmontaría la teoría de quienes sostienen la imposibilidad de que las raíces clásicas lo sean y, por lo tanto, sean funcionalmente afijos: *clado* significa "OTUs <Operational Taxonomic Units> que comparten un ancestro común" (Silla, 2007:38) y no es equivalente a *cladograma* (en términos sencillos, representación en forma de diagrama del parentesco evolutivo de varias especies que comparten un ancestro común e incluye tanto a dicho ancestro como a sus descendientes vivos o ya extinguido; todos ellos constituyen un *clado*). Y *grafo,* sólo o en la sigla GAD (*grafo acíclico dirigido*) o DAG[6], se usa con su sentido básico, es decir, "dibujo", "trazo" etc.

6 Grafo acíclico dirigido es una representación gráfica "similar to hierarchies but differ in that a more specialized term (child) can be related to more than one less specialized term (parent)", Gene Ontology (http://geneontology.org/GO.doc.shtml).

2. Compuestos formados tras el acortamiento de otros términos[7] (algunos, neologismos): *fenograma* (fenotipo+grama), *filograma* (filogenia+grama), *inmunoteñido*, pero especialmente con *biología*: *biocomputación*, *bioinformática/-ico, biomedicina*, *biomédico, biometría*, *biométrico*, *biotecnología* o *bioempresas* (calco del inglés *biocompanies*). Dudosas son en cambio algunas formaciones con *tele*-, que se podrían analizar como apócope de *teléfono* sobre el que se forma un nuevo compuesto híbrido o bien directamente sobre *telo* (lejos): *telecomunicación, teleconsulta* o *telemedicina.* Aunque escapa a nuestro estudio, pensamos que éste es el procedimiento que subyace a numerosos híbridos del inglés presentes en el corpus, especialmente a partir de *biology*/*biological* o *genetics,* usados mayoritariamente para designar nombres comerciales (empresas de biotecnología, software etc.), bases de datos etc.: *Global Telegenetics, bioPYTHON*, *bionavigator*, *LexGen*, o dispositivos especiales: *biochip* (40 oc, 0,04%), *microarray* (85 oc., 0,08%) etc.

3. Por lo que respecta a siglas y acrónimos en los que intervenga un compuesto clásico o híbrido, en líneas generales su variedad y frecuencia en español es insignificante en comparación con los del inglés (*cfr*. tabla I). Destacaremos sólo las 17 ocurrencias de C.N.I.O. (Centro Nacional de Investigaciones *Oncológicas*). En el resto predominan los compuestos con *bio* (*bioempresas*, *biomédicas*, *biotecnología*).

3.4 Neologismos

Tomando en consideración las recomendaciones de Lerat (1997) para quien el diccionario de la lengua es el punto de partida y la consagración de la lengua especializada, nuestro diccionario de referencia ha sido la última edición (la vigésimo segunda) del *Diccionario de la Real Academia Española* (DRAE), versión online; además, hemos intentado cruzar la información recurriendo a un diccionario especializado (González, 2005), en el que, no obstante, también existen lagunas que se explican porque "las fronteras de las disciplinas extienden sus ramas conceptuales continuamente de modo que sólo la lectura de la actualidad científica permite vislumbrar el significado de los nuevos conceptos. Aunque hoy en día proliferan los diccionarios especializados, inmediatamente quedan carentes de actualidad y, en muchos casos, obsoletos" (Marco Stiefel, 2000:204). Por último, puesto que uno de los objetivos de la ciencia y la técnica es la transmisión del conocimiento y es precisamente a través de los medios de comunicación como se hacen llegar al gran público (Marco Stiefel, *ibid*.), ha resultado de gran utilidad el banco de neologismos del Observatori de Neologia (BOBNEO) de la Universitat Pompeu Fabra de Barcelona, constituido por textos de la prensa oral y escrita y en continua actualización.

Hemos contabilizado un total de 75 neologismos, casi un tercio del total de compuestos cultos, que, salvo *bioinformática* y otros dos, presentan un bajo número de ocurrencias (185, 0,18% sobre el total). La primera datación de algunos de ellos se remonta a finales de los '80 o principios de los '90 del siglo XX, según datos de BOBNEO, tiempo suficiente para que la RAE los hubiera incorporado a su diccionario, como *milisegundo*, *bioinformática* y *biomolécula* (todos de 1989) o *inmunohistoquímica* (1991). En cambio, un grupo significativo (31 términos) aún no ha sido recogido ni por el diccionario técnico consultado ni en BOBNEO: *bicatenario*/*monocatenario*, *biotecnológico*, *citogenético*, *filograma*, *inmunoteñido* (existe *inmunotinción*), *micromatriz*, *nanodispositivo*, *nulisomía, organomegalia*, *pseudo-energía*, *ribosomal*… De otros dos tampoco se han hallado

7 No hemos aludido en nuestra contribución al término *genoma* y derivados (ni a otras formaciones similares) ya que pensamos está formado con el sufijo griego –ωμα (de valor colectivo) y no acuñado por su creador H. Winkler (1920), como se cree, como un acrónimo de *gen*(e)+(chromos)*ome*. Cfr. Lederberg-McCray (2001:8).

referencias puesto que *biovisualizador* es el nombre dado por su autor (J.C. Calvo) a una herramienta informática y el otro, *nonanosistema,* podría ser un *hapax legomena* o bien simplemente una errata.[8]

Estos neologismos se pueden agrupar en cuatro campos:

a) Componentes de la célula, funciones moleculares o procesos biológicos (18 términos), como *citogenético, mitocondrial, biomolécula, biomolecular, bidireccional*, *biomacro-molecular, centrómero*, *monoclonal, semiconservativo*, *pseudogén.*

b) Nuevas disciplinas, ramas técnicas o de la biología y sus relaciones con otras disciplinas o con el mundo empresarial (15 términos): *biotecnológico* (10 oc., 0,03%), *bioempresa*, *nanobiología*, *nanobiotecnología*, *nanobioingeniería*.

c) Nuevas técnicas de análisis, de laboratorio, de representación, criterios de valoración, dispositivos, "herramientas" etc. (33 términos), tales como *auto-estimación* (21 oc., 0,02%), *bidimensional, biomarcador, filograma, espectromería, fluorocromo, genotipado/genotipaje, inmunoteñido, inmunohistoquímica, multietiqueta,* <algoritmo> *multiobjetivo*, *micromatriz, nanodispositivo*, *pseudo-secuencia*, *uni-/multivariante.*

d) Enfermedades y su tratamiento, alteraciones genéticas relacionadas con ésas, servicios al paciente (9 términos): *organomegalia, colorrectal,* <leucemia> *linfoblástica,* <leucemia> *linfocítica,* <enfermedad> *multifactorial, farmacogenético, telemedicina, teleservicio* etc.

Por el tipo de composición, destacan las formaciones híbridas griego+español (27 términos, 36% del total de neologismos) en las que hemos incluido *biorrobótica* y *microrrobot* ya que, aunque el término *robot* procede del checo a través del inglés, está incorporado al español desde hace tiempo, así como los formados con *ribo*-, acortamiento del inglés *ribose,* del alemán *Ribose*, adaptación libre de *Arabinose* o "arabinosa, azúcar de la goma arábica" (DRAE), procedente a su vez de Ἀραβικός, arábico). Les siguen las compuestas sólo por temas griegos, ya sean dos o tres (24 términos, 32%). En cambio no hay ningún neologismo integrado por dos bases latinas: éstas se combinan con griegas (13 términos, 17,33%) o con patrimoniales (11 términos, 14,66%). Todo ello confirma lo dicho en el punto 3.2. Sin embargo, a todos esos datos subyace nuestra creencia de que una buena parte de estos neologismos son préstamos del inglés, lengua que los acuñó recurriendo a fuentes clásicas dado que las fechas de su primera aparición escrita son anteriores (y a veces, con muchos años de diferencia) a las formas españolas. He aquí algunos ejemplos:

Español	Fuente	Año	Inglés	Fuente	Año
Autorreplicación	González	2005	*self-replication*	BNC	1992
Multidimensional	---	----	*multidimensional*	BNC	1989
biomolécula	BOBNEO	1989	*biomolecule*	OED	**1901**
bioinformática	BOBNEO	1989	*bioinformatics*	OED	1978
kilobase	González	2005	*kilobase*	BNC	1975
micromatriz	----	----	*microarray*	OED	1967
microrrobot	BOBNEO	2001	*microrobot*	OED	1982
nanotecnología	BOBNEO	1998	*nanotechnology*	OED	1974
telemedicina	BOBNEO	2006	*telemedicine*	OED	1967

Tabla VI. Neologismos españoles con la datación de sus correlatos ingleses.

8 Hemos intentado recabar confirmación del término del autor del texto, pero no se nos ha facilitado.

4 Conclusiones

Los datos expuestos en el apartado 3 son el resultado de la postura teórica que hemos adoptado y que creemos ha quedado patente a lo largo del artículo: y es que descartamos la consideración como prefijación y sufijación de todas aquellas palabras formadas por raíces o temas que en las lenguas clásicas eran palabras plenas y no meros prefijos o sufijos, así como la terminología "remedial" que se intenta aplicar a estas situaciones. Pensamos que la composición clásica debe constituir un mecanismo diferente de la composición patrimonial en cuanto a los requerimientos mínimos formales, distribucionales o funcionales. Para quien tiene una formación clásica es inadmisible que *bio, logo, multi, poli* sean considerados simples prefijos o sufijos. En cambio, los estudiosos con una visión exclusivamente sincrónica los ven como unos formantes más que por el hecho de que no se hayan integrado en la lengua como formas autónomas, como sí ha sucedido a otras (*génesis, ritmo, música, gen*) son equiparadas a afijos españoles. Precisamente, hemos citado dos ejemplos de temas libres (*clado* y *grafo* que, incluso, presenta una forma prefijada, *subgrafo* con 3 oc.) que habitualmente aparecen en palabras complejas, por lo que en potencia una forma grecolatina ligada podría convertirse en forma libre.

Por otra parte, a pesar de nuestra consideración amplia de "compuesto clásico", contraria a las posturas de reputados estudiosos, reconocemos que cuantitativa y cualitativamente su uso es muy reducido, más incluso de lo que esperábamos. Ésta es la conclusión fundamental de nuestro estudio. Era indudable que la bioinformática tenía que usar en su lenguaje de especialidad los compuestos clásicos (incluidos parasintéticos, acortamientos etc.). Creíamos que, puesto que es una confluencia de varias disciplinas, al menos la biología arrastraría consigo una buena cantidad de compuestos (cfr. Quintana, 1989:15 y ss., Estopà et al., 2000:855-6, López Piñero & Terrada, 2005:ix), aunque no es menos cierto que la informática ha aportado al español muchos híbridos ya integrados en la lengua común y que paradójicamente apenas cuentan con representación en el corpus: *megabytes/MB* (9 oc.), *terabytes/TB* (3 oc.) y *teraflops* (2 oc.). Pero no ha sido así. Por lo tanto, algunos mitos sobre la preeminencia de las lenguas clásicas en el lenguaje científico-técnico (uno de cuyos rasgos es justamente la elevada presencia de compuestos cultos así como de compuestos sintagmáticos, siglas y abreviaciones) no se sostienen aquí si hablamos en términos absolutos. ¿Sería éste motivo suficiente para considerar que nuestro corpus está más cerca del lenguaje general que del discurso de especialidad? Basándonos sólo en los datos obtenidos, tendríamos que responder que sí. Pero este lenguaje se define también por rasgos discursivos o gramaticales, entre otros, que no han sido abordados en esta contribución. Por ello, deberíamos ser cautos a la hora de caracterizarlo y ponderar los resultados negativos a los que podrían haber contribuido tres hechos:

1. El propio corpus: de pequeño tamaño, integrado por pocos textos y de naturaleza variada, si bien a grandes rasgos se dividirían en dos tipos: divulgativos (tres) y especializados (once). Cabría pensar que los primeros han hecho disminuir su especialización y de ahí la baja incidencia de los compuestos cultos. No creemos, sin embargo, que esos tres documentos hayan sido determinantes en la escasa presencia de la composición culta ya que, aun constituyendo aproximadamente la cuarta parte del número de textos, del volumen del corpus (26,81% de palabras) y de las ocurrencias de los compuestos (427 oc., 23,86%), contienen 104 compuestos diferentes, es decir, casi la mitad del total, entre los que hay que incluir varios neologismos (por ej. formados *pseudo* y *nano*) y el *hapax legomena*. Pensamos que la razón se debe, en primer lugar, a la caracterización de estos artículos, especializados por la

temática y de media o media-alta densidad ya que están escritos por expertos para un público no general, sino con una cierta formación e intereses. En segundo lugar, el otro grupo de textos está destinado a especialistas y contiene numerosos diagramas, secuencias, muestras de tejidos, etc. incomprensibles para los profanos. Para hacer llegar parte de esa información al lector interesado, pero no experto, ésta se ha de transformar en palabras. De entre todas ¿qué mejor que los compuestos clásicos, muchas de cuyas raíces son conocidas por un amplio sector de lectores (en este sentido es muy acertada la denominación de Lang (1997:221) de vocabulario "de carácter internacional"), que históricamente se han empleado en la terminología de la ciencia y que son económicos, pues un solo compuesto proporciona una información que, de otro modo, se tendría que expresar con más palabras, y por ende comportan una "compressió semàntica elevada" (Cabré & Domènech, 2001:546)? Eso justificaría, en nuestra opinión, al menos la variedad de compuestos en el subcorpus divulgativo.

2. La no inclusión de compuestos de la terminología química y bioquímica (del tipo *desoxirribonucleico*, *aminoácido* etc.), con una considerable presencia en el corpus.

3. Nuestro trabajo se ha efectuado con un solo corpus, no tomándose como referencia ningún estudio sobre la composición clásica en otros ámbitos o ni contrastándolo con otros de la misma materia. Tampoco se ha llevado a cabo un cálculo de las formaciones prefijadas o sufijadas con una base clásica, como *análisis, parámetro* etc. que sin duda habría aumentado el peso de términos de origen grecolatino y habrían atenuado el pesimismo antes manifestado.

Centrándonos ya en nuestros compuestos, hemos visto la relativa poca variedad de temas en los términos de mayor frecuencia. En cambio, los de escasa o mínima aparición suponen prácticamente la totalidad y además ofrecen una amplia gama de temas: usuales en los lenguajes de especialidad y en su mayoría en términos incorporados a la lengua general (*arquía*, *grafía/grama/grafo, filo* –"amor"–, *poli, nomía, pan*(*t*)*, multi* etc.), menos "conocidos", pero muy variados, los propios[9] de la biología o la medicina (*cito*, *clado*, *geno*, *filo* –"raza"–) y de la técnica (*nano*, *micro*, *tecno*), que es la vertiente, en nuestra opinión, más parca en temas o raíces específicos, como por otra parte parece ser habitual (Estopà et al., 2000:855, Vivanco, 2006:21). Siguiendo precisamente a Vivanco, sí se confirma la presencia mayoritaria del griego en las ciencias a causa de lo que llama "tradición milenaria". Según esta autora, su presencia, aunque poca en la "tecnología dura", se explica por el trasvase de información de la ciencia a la técnica, cuyo vocabulario es más joven y más moderno y donde predominan relativamente las formaciones híbridas del inglés con temas latinos. Pero nuestro corpus no cumple absolutamente sus previsiones: por una parte, es cierta la juventud del léxico de la bioinformática en lo que a compuestos cultos se refiere y de hecho casi una tercera parte de éstos son neologismos, algunos recogidos por vez primera en 2007 (BOBNEO: *biomacromolecular*, *nanobiología*), otros incluso ni siquiera están atestiguados en las dos fuentes de referencia. Sin embargo, pertenecen casi más al ámbito científico que al técnico, por más que una buena parte corresponde a técnicas, procesos y herramientas de análisis. Por otra parte, el número de compuestos latinos es menor, de híbridos con el inglés mínimo (con *data* y *semi*) y nulo en el caso de los neologismos. Otro de los tópicos, la progresiva infiltración del inglés en el español de la mano de las innovaciones tecnológicas anglosajonas (Vivanco, 2006:37) y especialmente en la informática (Martín Zorraquino,

9 Teniendo siempre presente que un mismo término no es exclusivo de una disciplina, sino que adquiere significados o matices específicos según el campo en que se use. Tal es el caso de *ontología*, *cristalografía* u *ortólogo*, con significados diferentes en bioinformática y en filosofía, geología o fonética, respectivamente.

1997:324) tampoco parece ser aplicable aquí (al menos en cuanto al tipo de formación que estamos tratando), salvo en algunos casos donde se prefiere la utilización del término inglés (*microarray*) frente al español (*micromatriz*). Podrán quedarse tranquilos Gili Gaya y D. Alonso para quienes, según Martín Zorraquino (1997:330-331), "el aumento de los tecnicismos en inglés, en detrimento de los que reflejan una composición de elementos grecolatinos, constituía un peligro para la estabilidad lingüística". En este sentido, no parece que el inglés desestabilice el español ni por número de formas (al menos, plenas) ni por su frecuencia ni por el rechazo de los formantes grecolatinos que están, en última instancia, presentes en ellos ("neo-classical compounds" y "splinters"): *biochip*, *cytoscheleton*, *microarray*, *Gene Ontology* (*GO*), etc. Hay que admitir la importancia de las siglas y acrónimos, uno de los rasgos caracterizadores del lenguaje científico-técnico, en inglés ya que triplican en número a las españolas y sus ocurrencias son casi ocho veces más que las del español. Además, detrás de ciertos compuestos e híbridos es casi indudable que está el inglés o están fuertemente influidos por él. No obstante, puesto que recurren al léxico grecolatino, que no nos es precisamente ajeno, su incorporación al español con los mínimos retoques fonéticos y/o morfológicos hace que tales formas sean sentidas como propias. En resumen, esas formas, ya sean plenas o acortadas, se alzan sobre bases clásicas. Dicho esto, en nuestra opinión el inglés, lengua generadora de neologismos, es al menos en este campo la heredera de las lenguas clásicas en detrimento de sus "naturales" herederas (las lenguas romances). En ese sentido, cabría afirmar que, por el momento, griego y latín siguen *vivos* gracias a la capacidad lexicogenética del inglés desde donde se incorporan al español.

Quizás nuestro análisis haya estado sesgado por nuestra formación académica y nuestra posición suponga un retroceso o ir contracorriente, tal como Martínez Hernández (1992) critica acusando, tal vez con razón, a los estudiosos de las lenguas clásicas de que estamos fuertemente marcados por el componente histórico. Pero defendemos el recurso a los formantes clásicos en la terminologización y pensamos que siguen sirviendo de fuente para la creación de nuevos términos ya sea en español, ya en inglés.

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LSP Professional Communication Knowledge Management Cognition

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Fachsprache Deutsch: die Darstellung von Begriffsbeziehungen in Fachtexten[1]

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Abstract

German for Special Purposes: The Representation of Conceptual Relations in Specialized Texts

The work of terminologists is not only the elaboration of glossaries, but also includes the explanation and representation of specialized knowledge. This task is facilitated by the use of a model of lexicological analysis for term definition that is in consonance with psycholinguistic models of information processing. This also means that terminological definitions should not only reflect the meaning of specialized concepts, but also encode the cognitive-interpretative conceptual model of the entire knowledge domain. This article describes a method for the representation of terminological units of specialized knowledge that is the basis for a terminological database of the domain of coastal engineering, and consequently, includes concepts from the specialized domains of hydrology, oceanography and meteorology. The objective of such a knowledge representation consists of a conceptualization of the coastline with all of its possible characteristics (sea, shore, harbour, etc.) in a dynamic representation that can account for natural and non-natural agents, modifying processes, instruments, and affected entities. This article explains how concepts are interrelated within the same domain as well as how such relations are linguistically encoded in specialized texts. The results obtained are based on the analysis of concordances from the corpus of German texts, which have been generated by the computer application Wordsmith Tools.

1 Einleitung

Bei Fachsprachen denkt man im Allgemeinen unwillkürlich an Fachausdrücke, deren Verständnis der Allgemeinheit verschlossen ist, auch wenn diese Fachwörter nicht das einzige Merkmal dieser Sprachverwendung ausmachen. Zum besseren und leichteren Verständnis eines fachsprachlichen Textes werden gerne Glossare erstellt, die das Verstehen von Fachtexten und auch das Erwerben von Fachwissen erleichtern sollen. Darüberhinaus sind gerade für die Analyse und Definition von Fachtermini psycholinguistische Modelle von

[1] Dieser Beitrag stellt Ergebnisse des Forschungsprojekts BFF2003-04720, *Ingeniería de Puertos y Costas: Estructuración de Conocimiento y Generación de Recursos Terminológicos* vor und wurde im Rahmen des Forschungsprojekts SEJ2006-01829/PSIC, TRACCE: “Evaluación y gestión de los recursos de accesibilidad para discapacitados sensoriales a traves de la traducción audiovisual: la audiodescripción para ciegos”, das vom spanischen Ministerio de Educación, Cultura y Deporte finanziert wird, ausgearbeitet.

Informationsprozessen besonders hilfreich, da sie erlauben, die terminologische Definition in Abhängigkeit von Fachbegriffen zu erläutern und das zugrundegelegte kognitive Interpretationsmodell in die gesamte Wissensdomäne einzuordnen (Faber & Jiménez 2002; Montero & Faber 2008).

Die Schwierigkeit, Fachtermini zu verstehen, besteht darin, dass sie keine simplen lexikalischen Einheiten sind, sondern den Reflex einer vielfältigen Anhäufung von Fachwissen darstellen. Mittels ihrer semantischen Eigenschaften dienen sie zur möglichst präzisen und exakten Beschreibung eines speziellen Wirklichkeitsausschnitts in einem Fachgebiet. Gleichzeitig spiegeln sie dessen Wissensfortschritt wider, denn der Fachmann benutzt die Fachsprache als Kommunikationsinstrument für seine besonderen Anliegen. Fachsprachen dienen also dazu - und ihre beständige Entwicklung beweist es -, eine begriffliche und sprachliche Genauigkeit für den Sprachgebrauch von z.B. Ingenieuren oder Wissenschaftlern bereitzustellen, so dass überhaupt eine Beziehung zwischen Sprache und objektiver Wirklichkeit hergestellt werden kann. Neue kognitive Inhalte brauchen eine linguistische Benennung, die noch nicht im Gebrauch ist, mit anderen Worten, sie sind auf eine Benennung mit monosemischer Referenz angewiesen (Baumann 1998). Aber gerade die Genauigkeit in den Fachsprachen wird dann allerdings auf Kosten der Allgemein-verständlichkeit erkauft. Zwar wird immer wieder die Benutzung der Allgemeinsprache für fachliche Beschreibungen in der Expertenkommunikation postuliert, jedoch hätte dies zur Folge, dass Definitionen ungebührlich lang würden und in eklatanter Form dem Prinzip der sprachlichen Ökonomie widersprächen (Arntz, Picht & Mayer 2002:24; Jung 2005), so dass auch weiterhin einer kondensierten Wissensdarstellung in Fachwörtern der Vorzug zu geben ist.

Wie fließend die Grenzen und Unterschiede zwischen Fachsprache und Gemeinsprache sein können, soll an einem Beispiel aus dem Alltag verdeutlicht werden. Im Allgemeinen sind wohl die Begriffe *löten* und *schweißen* bekannt. Zu einer ersten generellen Erklärung und Beschreibung könnte man sagen, es handelt sich um das Zusammenfügen von zwei metallenen Gegenständen, was für den alltäglichen Sprachgebrauch ausreichend sein dürfte. Nicht aber für die Fachwelt, wie z.B. den Maschinenbau. Dort gehören beide Fertigungsverfahren zur Fügetechnik, wo diese Verfahren genauer zu unterscheiden sind. So käme es beim Löten darauf an, ob es sich um Weichlöten (Schmelztemperatur des Lots liegt unter 450ºC) oder Hartlöten (Schmelztemperatur des Lots liegt zwischen 450 °C und 1100 °C) handelt. Beim Schweißen wäre es wichtig zu wissen, ob es sich um Press-Schweißen (Vereinigen metallischer Werkstoffe unter Druck) oder um Schmelz-Schweißen (Vereinigen metallischer Werkstoffe unter Anwendung von Wärme) handelt. Man könnte gerade bei der jeweiligen Schweißtechnik noch genauere Begriffsbezeichnungen anführen, aber es soll hier dieses Beispiel genügen, um zu zeigen, worin ein Unterschied zwischen Allgemeinsprache und Fachsprache liegen kann (Matthes & Richter 2008:28-33). Zusammenfassend wäre zu sagen, die Fachsprache ist begrifflich genauer und ihre Terminologie komprimiert semantische Charakeristika. So benutzen Fachwörter einen höheren Abstraktionsgrad und setzen gleichzeitig ein bestimmtes Fachwissen beim Rezipienten voraus, ohne lange Erklärungen zu benötigen.

In diesem Beitrag soll nun eine Methode zur Darstellung von Fachwissen vorgestellt werden, die einzelne Termini in ihren begrifflichen Zusammenhang stellt und die verschiedenen bestehenden Verbindungen unter ihnen verdeutlicht. Auf diese Art und Weise werden wichtige Hilfestellungen zum Textverständnis gegeben, da die begrifflichen Hintergründe des Textaufbaus klarer in Erscheinung treten. Bei dieser Untersuchungsmethode wird eine umfangreiche Terminologiedatenbank ausgewertet, die nicht nur über terminologische Daten, sondern auch über eine Darstellung der Begriffsstrukturen des zu behandelnden Wissensbereich durch ausführliche Bilddateien verfügt (vgl. Jiménez & Seibel 2004; Prieto Velasco 2007, 2009). Dadurch ist es möglich, ein Instrumentarium zu erstellen, um annähernd erklären zu können, welches Wissen ein Experte kodifiziert, wenn ein Terminus in verschiedenen Kontexten aktiviert wird. Es soll nicht nur gezeigt werden, wie Fachwissen in Fachtexten aktiviert wird, sondern auch, welche einzelnen Beziehungen zwischen den einzelnen Begriffen eines Wissensbereichs bestehen. Mit Beispielen von einzelnen Ergebnissen des Forschungsprojekts *PuertoTerm* soll erklärt werden, wie einzelne Begriffe in einem Text aktiviert werden und wie ihre Beziehungen untereinander sprachlich im Fachtext ausgedrückt werden.

2 Zur angewendeten Methode

Ein Grundanliegen des Forschungsprojekts *PuertoTerm* besteht darin, das Wissensgebiet des Küsteningenieurwesens mit seinen Teilgebieten z.B. der Hydrologie, Geologie und Meteorologie in einem Beschreibungsmodell zu erfassen und so die zugrundeliegenden Strukturen, die dazugehörenden Begriffe mit ihren Definitionen und Interrelationen darzustellen, so dass sich auch der fachfremde Benutzer der Datenbank ein Bild davon machen kann, um was es sich bei den einzelnen Termini handelt. Dabei werden die Analyseprinzipien des lexikologisch-funktionalen Models (Faber & Mairal 1999; Faber & Jiménez 2002; Montero & Faber 2008) benutzt und die Begriffsstrukturen der Wissensdomäne aus terminographischen Hierarchien abgeleitet, die auf der Begriffs-information, herausgearbeitet aus einem Textkorpus von Fachtexten und Fachwörterbücher, basieren. Demnach ist die Verwendung von Programmen zur Textkorpusanalyse, die Häufigkeitslisten oder automatisch Konkordanzen eines Terminus herstellen, allein nicht ausreichend. Die einzelnen Daten sind zu interpretieren auf Grund eines kohärenten und sytematischen Bezugsrahmens, der auf einer textlinguistischen Analyse basiert (Bourigaut & Slodzian 1999:29). Bei dieser Art von Terminologiearbeit sollten Informationen zusammengetragen werden, die aus der Textkorpusanalyse, aus Fachwörterbüchern und Fachtexten, terminologischen Datenbanken und Expertenwissen stammen und dann auf kommunikativen und soziokognitiven Hintergrund hin fokusiert werden (Jiménez & Seibel 2007; Temmerman 2000).

Die beim Forschungsprojekt *PuertoTerm* benutzte Methodologie geht auf Forschungen im Bereich der Korpuslinguistik zurück, wo das erworbene Fachwissen in Ontologien dargestellt wird und die Fachbegriffe nach ihren inneren Beziehungen innerhalb einer Wissensdomäne angeordnet werden (Faber & López & Tercedor 2001). Das Besondere dabei besteht darin, dass die Fachausdrücke nach Vorgängen und Ereignissen angeordnet werden und so ihre Begriffsbeziehungen untereinander veranschaulicht werden können. Dadurch werden die einzelnen Fachwörter nicht mehr in Form einer Wortliste oder eines Glossars angeboten, sondern sie werden in ihren Begriffsbeziehungen dargestellt, um die gesamte Dimension ihrer Bedeutung zu reflektieren. Dies bedeutet folglich auch, dass die zugrundeliegenden Begriffe nicht kontextfrei dargeboten werden, sondern sich immer schon in einem verstehens-relevanten Kontext, einem sie determinierenden Ereignis des Fachbereichs, situieren.

Dazu wurde ein Beziehungsmodell erstellt, das mit Hilfe von vier Grundschemata aufzeigt, wie einzelne Begriffe aufeinander bezogen sind, bzw. inwiefern sich die jeweilige Beziehung beschreiben lässt. Die *Handlungsträgervorlage* umfasst das jeweilige Agens des Geschehens oder Ereignisses, also die eigentliche Wirkursache des natürlichen Phänomens, das beschrieben werden soll. In Fachtexten aus dem Bereich des Küsteningenieurwesens tritt häufig *Wasser* in Form von *Welle, Fluss, Strom,* etc. aber auch der *Mensch* im Allgemeinen als Handlungsträger auf. *Wasser,* ein *Fluss* oder *Bach* wirkt auf etwas ein und bewirkt oder verändert etwas.

Damit ist aber nicht mit ausgesagt, dass ein Handlungsträger nicht auch *Handlungsobjekt* sein könnte, also eine Veränderung oder einfach einen bestimmten Einfluss erfährt, wie desweiteren im Diskussionsbeispiel *Niederschlag* zu sehen sein soll. Der Handlungsträger *bewirkt* einen Prozess oder *beeinflusst* ein Handlungsobjekt, d.h. das *Wasser vermindert* oder *bewegt* z.B. den *Strand* als Handlungsobjekt, wobei dann nach der Beschreibungsvorlage diese Veränderung gemessen, nach Eigenschaften beschrieben oder deren Situation simuliert werden kann. In diesem Sinn kann jeder Terminus aus seinen Beziehungen heraus verstanden werden, wozu nachfolgendes Modell den Rahmen abgeben soll (nach Faber, Márquez & Vega 2005:1354):

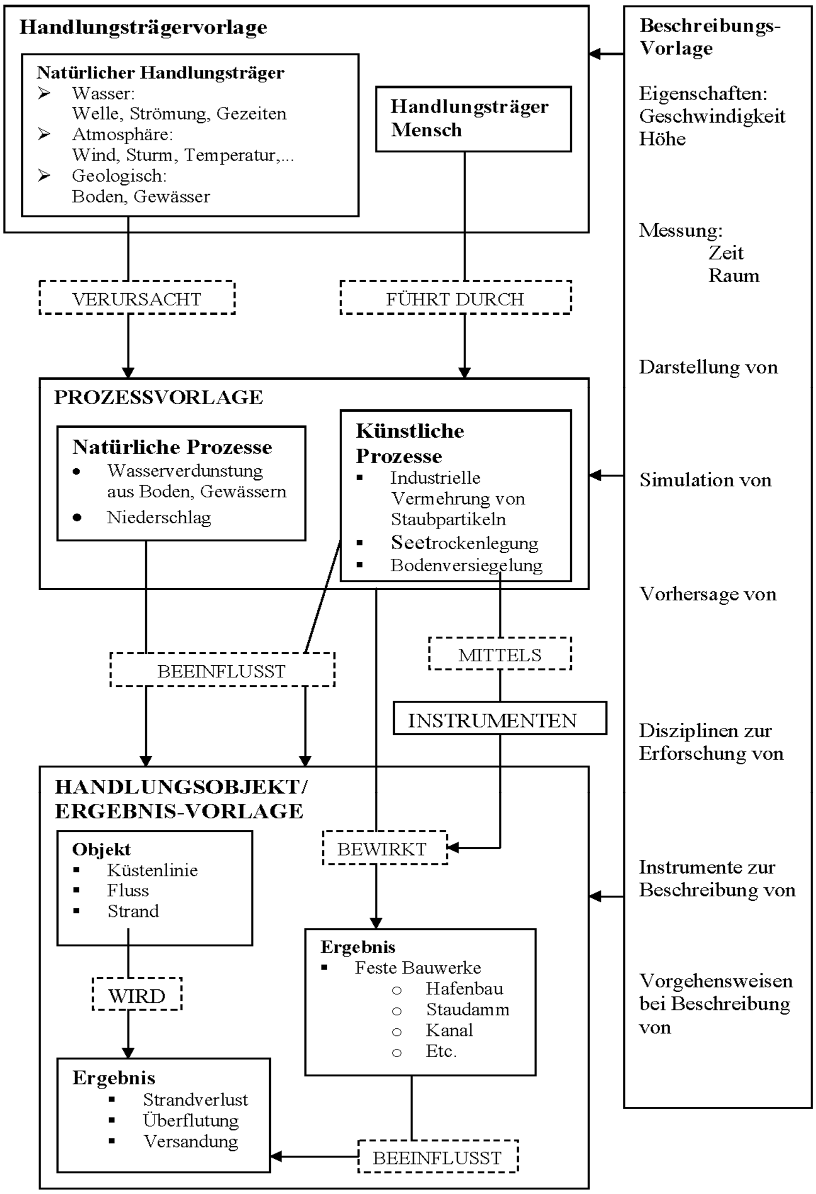

Schaubild 1: Beschreibungsrahmen der Begriffsbeziehungen

Zur Ausarbeitung der konkreten Beziehungen zwischen den einzelnen Fachwörtern wurde in einem ersten Schritt ein Textkorpus zum Thema Küsteningenieurwesen erstellt, das z.B. die Wissensbereiche der Hydrologie, Geologie, Bodenkunde, Wasserbau und Hafenbau umfasst, um dann in einem zweiten Schritt Fachwissensinformation in ihrem Kontext zu extrahieren. Zur Zeit steht ein deutschsprachiger Textkorpus von mehr als 300 Texten (20MG) zur Verfügung, die aus dem Internet heruntergeladen wurden, um ihre elektronische Verwendung zu erleichtern. Anschließend wurde auf Grund von Fachwörterbüchern eine Liste von mehr als 2000 Fachtermini erarbeitet, deren Definitionen die Grundlage für die Untersuchung der im Textkorpus bestehenden Begriffsbeziehungen darstellen. Mit Hilfe des Computerprogramms *WordSmith-Tools*, das die Erstellung von Konkordanzen im Textkorpus erlaubt, wurde dann der Kontext, in dem die einzelnen Begriffe auftauchen, untersucht (Faber, López & Tercedor 2001).

3 Analyse einer Begriffbeziehung: *Niederschlag* und *Abflussverhalten*

Die Bedeutung dieser Methode liegt darin, wie zu sehen sein wird, dass ein Begriff nicht isoliert durch ein Fachwort erfasst wird, sondern in seinem spezifischen Kontext. So kann ein Terminus je nach Perspektive zu verschiedenen Fachsprachen gehören, da er unterschiedlich verwendet wird. Das Beispiel der Termini *Niederschlag* und *Abflussverhalten* soll diese Vorgehensweise erläutern.

> (1) Concordance
> 5 an Pflanzenoberflächen. **Niederschlag** (engl. precipitation): Wasser der Atmosphäre, das nach Kondensation oder Sublimation von Wasserdampf in der Lufthülle ausgeschieden wurde und sich infolge der Schwerkraft entweder zur Erdoberfläche bewegt (fallender Niederschlag) oder zur Erdoberfläche gelangt ist (gefallener Niederschlag).
>
> (2) Concordance
> 109 **Niederschlag** ist nach DIN 1996 Wasser der Atmosphäre, das nach Kondensation oder Sublimation von Wasserdampf in der Lufthülle ausgeschieden wurde und sich infolge der Schwerkraft entweder zur Erdoberfläche bewegt (fallender Niederschlag) oder zur Erdoberfläche gelangt ist (gefallener Niederschlag). Während Niederschlag in der DIN-Norm als Produkt eines Prozesses definiert wird, bezeichnet man gemeinhin auch den Prozess selbst als Niederschlag.
>
> (3) Concordance
> 167 Als **Niederschlag** bezeichnet man alle Formen von Wasser in flüssiger oder fester From, das auf der Erde auftrifft. Dies kann Regen, Schnee, Hagel, Tau, Reif oder auch Rauhreif sein. Man unterscheidet zwischen gefallenem, …

Die Kombination dieser Definitionen im Sinne eines höheren übergeordneten, also hyperonymen Begriffs mit Definitionen von untergeordneten, d.h. hyponymen Begriffen wie *Regen, Schnee, Hagel* und *Nebel* ermöglicht es, ein Schema zu erstellen, das die Beziehungen zwischen den einzelnen Begriffen repräsentiert, die dem natürlichen Phänomen des Niederschlags zugrundeliegen. Gezeigt werden dabei die Entstehungsfaktoren des Niederschlags, d.h. welche Elemente beim Zustandekommen des Niederschlags eine Rolle spielen:

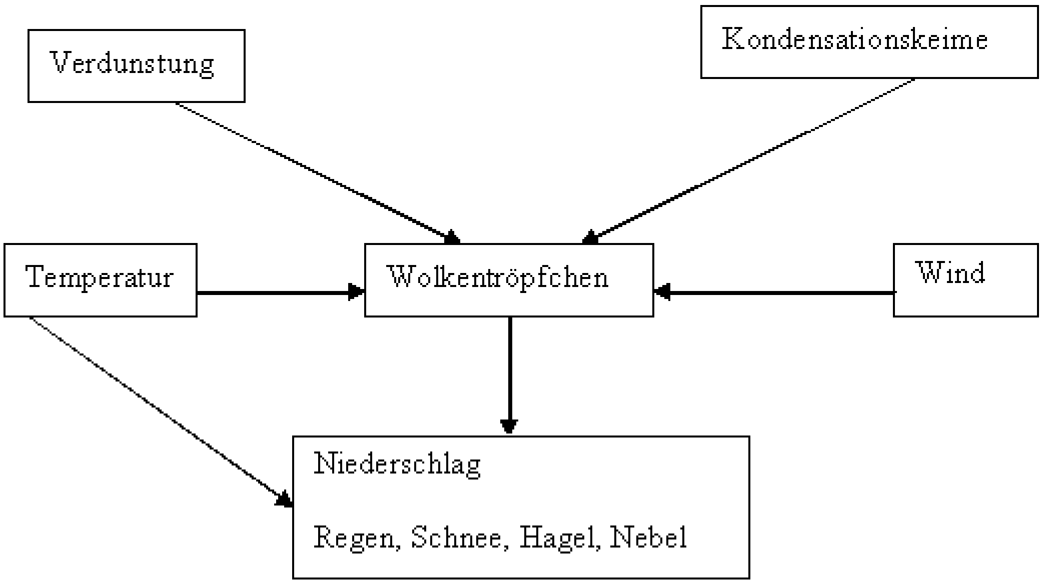

Schaubild 2: kognitives Schema des Niederschlagsereignisses

Dieses Schema zeigt, wie so manche Begriffe, die auch in der Alltagskonversation genutzt werden wie z.B. *Regen*, bei einem Gespräch zwischen Fachleuten gewisse Detailkenntnisse von Naturerscheinungen voraussetzen, ohne dass es notwendig wäre, diese auch zu erwähnen. So ist für den Experten klar, dass *Regen* die Bildung von *Wolkentröpfchen* voraussetzt, ohne dass er dies beim Gespräch mit einem Kollegen eigens erwähnen müsste. Wir können daher sagen, dass dieses Schema die Grundkenntnisses des Ereignisses *Niederschlag* darstellt, die von Klimatologen und Hydrologen geteilt werden. Während sich jedoch ein Klimatologe eher für weitere Einzelheiten dieser Erscheinung interessieren dürfte, z.B. das Zusammenspiel von Temperatur, Kondensationskeime und Verdunstung, ist es sehr wahrscheinlich bei einem Hydrologen so, dass er mehr die Folgen von Niederschlag im Auge hat, wobei er das Verhalten von angehäuften Wassermengen in einem Wasserlauf untersucht und dessen eventuellen Konsequenzen für den Bau eines Staudamm studiert.

Dies wäre im Allgemeinen auch die Art und Weise, wie sich eine Fachsprache von der Allgemeinsprache unterscheidet, denn der Experte aktiviert mit einem einzigen Terminus ein ganzes Begriffsschema, das wiederum zu einem anderen Schema gehört. Es kann hier nur angedeutet werden, dass in der Darstellung der Wissenskonfiguration nach diesem Beschreibungsmodell die Chance liegt, die Grenzen zwischen den einzelnen Fachsprachen auf der horizontalen Ebene genauer zu beschreiben, auch wenn sie weiterhin fließend bleiben. Der Terminus *Niederschlag* gehört sicherlich nicht zu einem Fachgebiet allein. Denn *Niederschlag* als Ereignis interessiert den Ingenieuren wegen seiner Folgen sicherlich sehr. Hingegen gehört die Wolkenbildung durch die Anbindung von Wassertröpfchen an Kondensationskeime aber sicherlich nicht zu seiner Disziplin, sondern eben zur Meteorologie. Der Übergang zwischen einzelnen schematischen Darstellungen von Begriffsbeziehungen soll an einem Beispiel verdeutlicht werden. So wird das Schema *Niederschlag* bei der Beschreibung, wie die Wassermengen abfließen, d.h., des *Abflussereignisses* zu Grunde gelegt, wie man im folgenden Diagramm sehen kann[2]:

[2] Für eine detaillierte Analyse der Möglichkeiten der Benutzung von Schaubildern im fachsprachlichen Diskurs vgl. Prieto Velasco (2007, 2009).

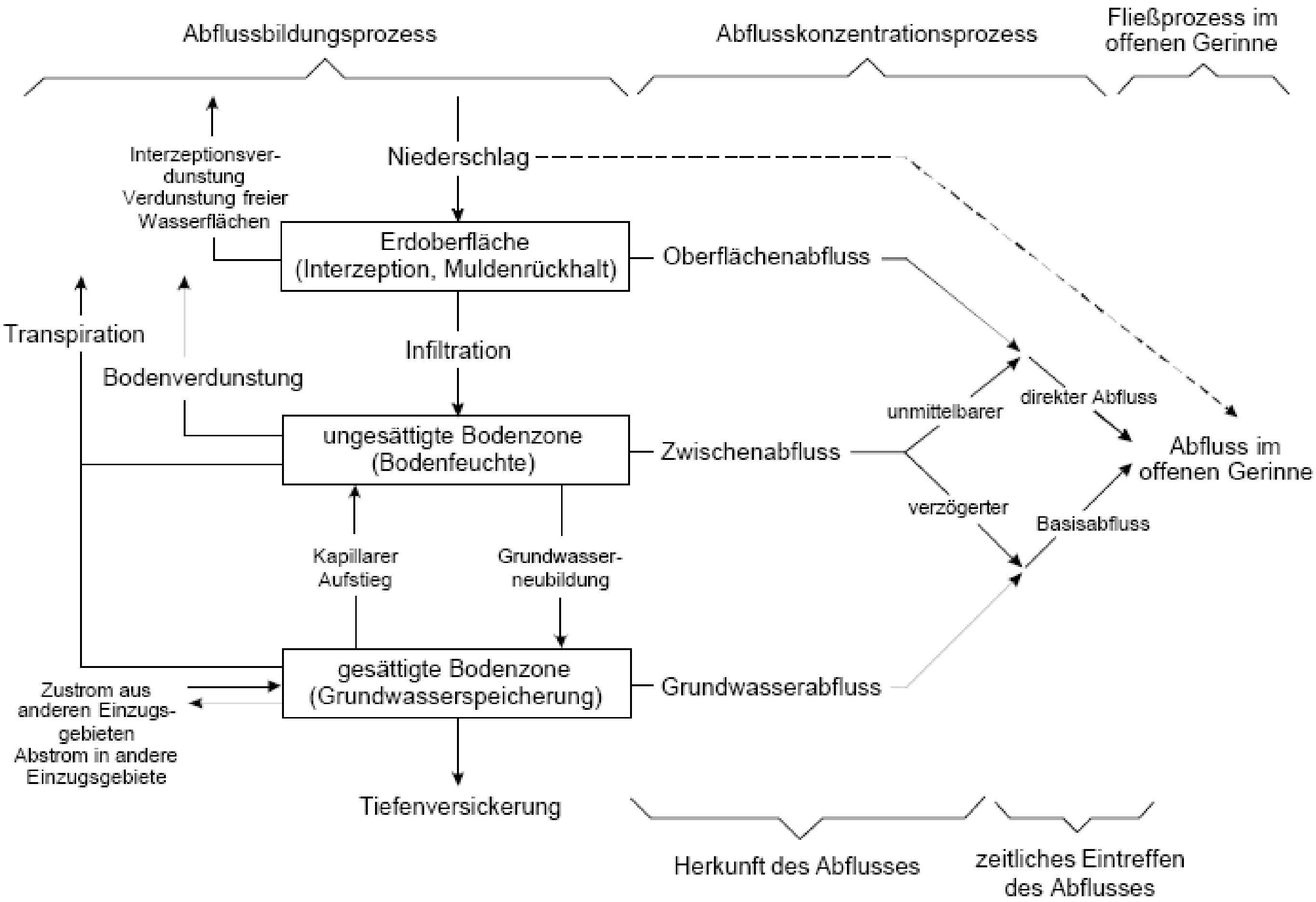

Schaubild 3: Schematische Darstellung des *Abfluss*prozesses (Nuetzmann 2009)

Diese schematische Darstellung hebt besonders die drei Komponenten des Abflussereignisses hervor: *Abflussbildungsprozess*, *Abflusskonzentrationsprozess* und *Fließprozess im offenen Gerinne.*

Der Bildungsprozess des Wasserabflusses basiert hauptsächlich auf der Verdunstung, die sich dann wieder in einem Kreislauf zu Niederschlag entwickelt, wohingegen dann das Niederschlagsaufkommen und seine angehäufte Wassermenge in einem Flusslauf (*Abflussbildungsprozess)* aus zwei Perspektiven beschrieben wird:

- Herkunft des Abflusses: *Oberflächenabfluss*, *Zwischenabfluss*, *Grundwasserabfluss*
- Übergang zum Fließprozess im offenen Gerinne: *direkter Abfluss*, *Basisabfluss*, wodurch er Teil des Fließprozesses im offenen Gerinne wird.

Wie zu sehen ist, werden im Schaubild 3 diese Grundkenntnisse des Niederschlagsereignisses, das einen spezifischen Abfluss verursacht, vorausgesetzt, ohne dass irgendeine detaillierte Erläuterung oder gar Erwähnung der natürlichen Voraussetzungen eines Niederschlags gegeben wird. Das Besondere eines solchen Schaubildes liegt demnach in seiner graphischen Darstellung des Abflussereignisses an sich.

Obwohl alle Wortkombinationen, die den Terminus *Abfluss* beinhalten, auf dem Niederschlagsereignis basieren, benutzen Fachtexte den Terminus oft ohne ausdrücklichen

Verweis darauf. Tatsächlich kann mit WordSmith Tools beobachtet werden, dass Texte, die vom *Abfluss* sprechen, nicht unbedingt auch den *Niederschlag* erwähnen, wie folgende Konkordanzen zu *Abflussverhalten* zeigen:

> N Concordance
> 1 ... ungsereignis hinsichtlich Dauer, Intensität und zeitlichem Verlauf abweicht, umso weniger zuverlässig werden die Berechnungsergebnisse. 4.6 Untersuchung von Einzugsgebieten. In einem weiteren Untersuchungsschritt wurde das ***Abflussverhalten*** ganzer Einzugsgebiete betrachtet. Die Modellsimulationen wurden hierbei zum einen für ein ländlich bis kleinstädtisch strukturiertes Wohngebiet und zum anderen für ein städtisches Kerngebiet für verschiedene ...
>
> 2 ...gsplätze aufgenommen sowie Untersuchungen zur rezenten Geomorpho-dynamik eines alten Siedlungsareals durchgeführt (Kap. 5). Östlich von Oursi, nördlich des Mare de Yomboli, wurde entlang eines Transekts das Infiltrations- und ***Abflussverhalten*** auf den unterschiedlichen Oberflächen der charak-teristischen Landschaftseinheiten untersucht (Kap. 7.2.2.1). Die Sedimente zwischen dem Dünentop und dem verflachten (südlichen) Altdünenabschnitt ...
>
> 3 ...untersuchte Drainagen mit vergleichbaren naturräumlichen Ausstattungen die Abflussbildung des hypodermischen Abflusses veranschaulichen. Abb. 7-3 enthält ein Beispiel für das ***Abflussverhalten*** einer 2,4 ha großen Drainage unter Weidelgras am westlichen Ortsrand von Haselbach im September 1998. Weitere sechs Drainageeinzugsgebiete weisen im gleichen ...
>
> 4 .... des Direktzuflussgebietes sowie der Seen zu einem hydrologischen Ganzen. Dieses hydrologische System muss dann mit dem hydraulisch gekoppelten Seensystem verbunden werden. So wird es möglich sein, das heutige ***Abflussverhalten*** des Thunersees vollständig zu analysieren und daraus Verbesserungen zu erzielen, um künftige Hochwässer im Aareraum zu verhindern...

In diesen Beispielen ist zu erkennen, wie mit einem Fachwort aus dem Abflussereignis das ganze kognitive Schema aktiviert wird. Die Autoren verwenden nur den Terminus *Abflussverhalten*, ohne den zugrundeliegenden Niederschlag zu erwähnen bzw. weitere Einzelheiten des ganzen Abflussprozesses näher zu erläutern. In diesem Sinne setzt ein Hydrologe das Niederschlagsereignis voraus und fokussiert seine unmittelbaren Konsequenzen aus der Sicht seiner Fachdisziplin. Das Fachwort *Abflussverhalten* fasst den ganzen Prozess zusammen und gleichzeitig aktiviert es alle damit verbundenen Begriffe, ohne diese zu nennen.

4 Die Komponenten der Begriffsbeziehung *Niederschlag/Abfluss*: die Perspektive in Funktionsverbgefügen

Die ausführliche Analyse der aus dem Kontext eines Fachtextes gewonnenen Information zeigt, dass ein Experte mit einem Terminus die Aktivation eines ganzen kognitiven Schemas erreicht. Zuvor wurde schon gezeigt, wie mit dem Begriff des *Niederschlags* mehrere bestimmte einzelne Begriffe, die in einem Fachtext vorausgesetzt werden, aktiviert werden. Dieses Phänomen der Schemaaktivierung ist nicht nur in der Übersetzungswissenschaft unter *scenes-and--frames-semantics* bekannt (Fillmore 1977; Vannerem & Snell-Hornby 1986;

Jung 2007). Dies besagt, ein Terminus ist fähig eine vollständige kognitive Repräsentation beim Empfänger auszulösen. Gerade die Fachsprachen nutzen diesen Aspekt in einer maximalen Art und Weise aus und darin besteht einer der Hauptgründe für Verständnisschwierigkeiten bei der Lektüre von Fachtexten (Prieto Velasco 2007, 2009). Für den Experten stellt dies kein Problem dar, da er bereits mit den kognitiven Relationen der Termini vertraut ist und das dazugehörende kognitive Schema kennt.

Im Folgenden ist zu sehen, wie ein Hydrologe diesen Terminus bei der Beschreibung des Wasserabflusses benutzt, ohne das Niederschlagsereignis an sich im Detail in Bezug auf die Niederschlagsart zu erklären. Mit Hilfe der ausführlichen Analyse der mit WordSmith-Tools erarbeiteten Konkordanzen wurden das folgende Diagramm erstellt, das die Fachwörter zeigt, die bei einem Fachgespräch in einer bestimmten kommunikativen Situation benutzt werden, um das besagte kognitive Schema zu evozieren:

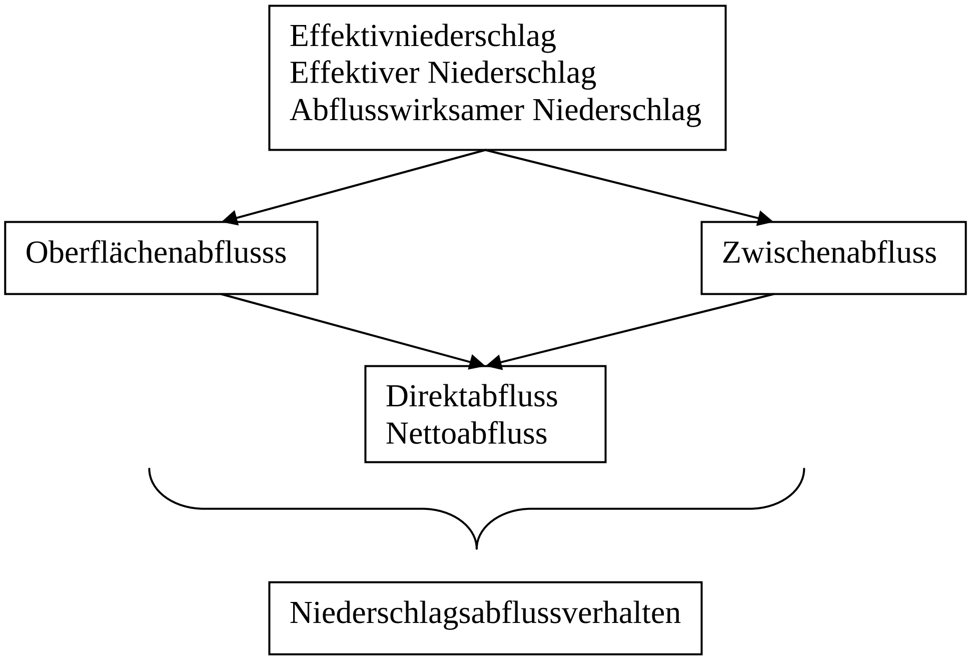

Schaubild 4: Termini, die das kognitive Schema *Abfluss* evozieren

Im deutschsprachigen Textkorpus konnte festgestellt werden, dass in hydrologischen Texten die Niederschlagsart nicht ausdrücklich erwähnt wird, sondern eben nur das Ereignis an sich und seine Konsequenzen von Interesse sind. Ganz anders wäre es bei der Klimatologie, denn dort würde der Fachmann wissen wollen, um was für eine Art von Niederschlag es sich handelte, ohne dass ihn die Folgen interessierten. D.h., man kann einen Wechsel in der Perspektive in den benutzten Termini feststellen. Während die Termini *Effektivniederschlag, effektiver Niederschlag* und *abflusswirksamer Niederschlag* sich deutlich auf das Niederschlagsereignis beziehen, setzen die anderen Termini die Beschreibung eines Aspekts des Abflussereignisses voraus und handeln von Prozessen, die sich nach einem Niederschlag ereignen.

Ein anderer interessanter Aspekt wäre in diesem Zusammenhang, wie die Begriffsbeziehungen auch in der Syntax ihren Ausdruck finden. Besonders auffallend sind hierbei die Neuschöpfung und der Gebrauch von einer Art Funktionsverbgefügen (van Pottelberge 2007, López Campo Bodineau 1997). Diese erlauben es ja bekanntlich, die Bedeutung des zugrundeliegenden Verbs auf syntaktische Charakteristika einzuschränken und somit den semantischen Schwerpunkt auf das benutzte Nomen zu verschieben und die eigentliche Handlung zu betonen. Dadurch wird erreicht, dass die Aktionsart, wie z.B. durativ, resultativ oder punktuell, in abgestufter Weise dargestellt werden kann. Gerade weil die Funktionsverbgefüge also die Aktionsart bei der Prädikatsbildung in den Vordergrund stellen, erscheint ihr Gebrauch in Fachsprachen sehr fruchtbar und gewinnbringend zu sein, da sie es erlauben, ein Geschehen genauer und präziser darzustellen.

Dies macht sich der Fachmann bei der Erfassung des Phänomenes des Niederschlagsabflusses zu Nutze. Interessanterweise kennt die Hydrologie dazu drei Funktionsverbgefüge, um das Resultat eines Niederschlags zu beschreiben: *zum Abfluss gelangen, zum Abfluss kommen, zum Abfluss beitragen*. Alle drei Funktionsverbgefüge und deren Ableitungen (z.B. *zum Abfluss Beitrag = einen Beitrag zum Abfluss leisten*) beziehen sich auf die Wassermenge, die in einem bestimmten Gebiet in offenen Gerinnen wie Gräben und sogenannten Vorflutern (Bächen oder Flüssen) abfließt. Dennoch kann man diese Funktionsverbgefüge nicht unterschiedslos verwenden, wie aus den folgenden Beispielsätzen hervorgehen soll:

(5) Der negative Trend der Abflüsse im Gailtal in den Sommermonaten lässt sich jedoch durch die fehlenden Winterniederschläge erklären, die erst ab dem Frühjahr zum Abfluss gelangen. (http://gpool.lfrz.at/gpoolexport/media/file/Mitteilungsblatt-85.pdf 29.04.09.)

(6) Unter Interzeption versteht man den Anteil des Niederschlages, welcher hauptsächlich durch die Vegetation abgefangen und nicht durch direkten Bodenniederschlag oder Stammabfluss auf den Boden, und damit zum Abfluss gelangt.
(http://www.ikzm-d.de/seminare/pdf/ruth_wasserhaushalt.pdf 29.04.09.)

(7) Der Anteil des Direktabflusses am Gesamtabfluss ist hier mit etwa 40-60 % eher klein, weil der Basisabfluss wegen der Schnee- und Eisschmelze relativ hoch ist und der Niederschlag im Hochgebirge nur teilweise direkt zum Abfluss gelangt (Zwischenspeicherung des Schneeniederschlags).
(http://hydrant.unibe.ch/publi/abstract/gufe.pdf 29.04.09.)

(8) Die Durchschnittskurve (Regressionsgerade) nimmt dann einen steilen Verlauf, da der Niederschlag zumeist nicht ganz zur Hälfte zum Abfluss gelangt.
(http://www.digibern.ch/jahrbuch_oberaargau/jahrbuch_1968/JBOAG_1968_058_090_niederschlag_langetegebiet.pdf 29.04.09.)

(9) Dass etwa die Hälfte des gefallenen Niederschlags im Jahr wieder zum Abfluss gelangt, darf als für unser Gebiet allgemeiner Fall bezeichnet werden.
(http://www.digibern.ch/jahrbuch_oberaargau/jahrbuch_1968/JBOAG_1968_058_090_niederschlag_langetegebiet.pdf 29.04.09.)

Wie bei diesen Beispielsätzen zu sehen ist, bevorzugt der Hydrologe das Funktionsverbgefüge *zum Abfluss gelangen* dann, wenn es darum geht, darauf hinzuweisen, dass nicht die ganze Wassermenge eines Niederschlags den Abfluss bildet. Denn bevor aus einem gefallenen Niederschlag ein kontinuierlicher Abfluss entstehen kann, wird ein Teil des Niederschlages in kleinen natürlichen Unebenheiten des Geländes zurückgehalten, ein anderer verdunstet oder fließt erst stark verzögert ab. Es wird demnach indirekt darauf hingewiesen, dass Niederschlag nicht automatisch gleichbedeutend mit abfließender Wassermenge ist und es steht die zeitliche Verzögerung zwischen Niederschlag und eigentlichem Abfluss, die sehr unterschiedlich sein kann, im Vordergrund.

Anders sieht es bei dem Funktionsverbgefüge *zum Abfluss kommen* aus, denn da interessiert vor allem der Anteils des Niederschlags, der direkt Teil des Abflusses eines Einzugsgebiets wird.

> (10) Der Endabflussbeiwert gibt nun an, welcher prozentuale Anteil des Bruttoniederschlages über einen definierten Zeitraum nach Abdeckung sämtlicher Benetzungs- und Muldenverluste zum Abfluss kommt. (http://www.siwawi.arubi.uni-kl.de/downloads/mitarbeiter/illgen/DA_ILLGEN_2000_Summary.pdf 29.04.09.)

> (11) In vielen N-A-Modellen findet sich daher als eine Variable für die Bestimmung des Abflußbeiwertes eines Gebietes (=Anteil des Regens, der direkt zum Abfluß kommt) der sogenannte "Basisabfluß" (= Abflußhöhe vor Ereignisbeginn). (http://www.duerreych.de/Literatur/Casper1999/casper1999.html 29.04.09.)

> (12) Nach Baumgartner und Liebscher (1990) wird der Abfluss am meisten von der mittleren jährlichen Niederschlagshöhe beeinflusst, wobei bei geringen Niederschlagshöhen das die Verdunstung bestimmende Klima eine große Rolle spielt, da erst das Bodenwasserdefizit aufgefüllt werden muss, bevor es zum Abfluss kommt. (http://www.ikzm-d.de/seminare/pdf/ruth_wasserhaushalt.pdf 29.04.09.)

> (13) Ist der Boden sehr trocken, werden erst die Bodenwasservorräte aufgefüllt, bevor es zum Abfluss kommt. (http://www.ikzm-d.de/seminare/pdf/ruth_wasserhaushalt.pdf 29.04.09.)

> (14) Aufgrund des geringen Speichervermögens der Böden kommt das Niederschlagswasser schnell zum Abfluss und verursacht vielfach Überschwemmungen (http://www.geo.fu-berlin.de/geog/fachrichtungen/angeog/abschlussarbeiten/PDF/Diplomarbeit_Robert_Wenzel.pdf 29.04.09.)

Beim Funktionsverbgefüge *zum Abfluss beitragen* steht deutlich die Geländefläche, deren Bedeutung für Abflussbildung näher untersucht wird, im Vordergrund und es interessiert besonders der Zusammenhang zwischen Niederschlagsmenge und Flächengröße beim Zustandekommen eines Niederschlagabflusses. Demnach wird der Blickwinkel auf ein Einzugsgebiet eingeschränkt und untersucht, wie hoch das Wasseraufkommen einer bestimmten Geländefläche in Bezug auf den Gesamtabfluss ist.

> (15) Modelliert wird in dieser Arbeit nur das Gebiet, das natürlicherweise zum Abfluss beiträgt, das sich also unterhalb der untersten Staumauer im jeweiligen Gebirgstal befindet. (http://www.ifu.ethz.ch/hydrologie/education/undergraduate_studies/diploma_thesis/completed/modelling_d.pdf 29.04.09.)

> (16) Der Basisabfluss umfasst jene Komponenten, die stark verzögert – via Grundwasser – zum Abfluss beitragen. (http://hydrant.unibe.ch/publi/abstract/frle.pdf 29.04.09.)

> (17) Das Niederschlagswasser, welches direkt auf gesättigte Flächen fällt, trägt nun unverzüglich zum Abfluss bei. Die Abschätzung wie groß das zum Abfluss beitragende Sättigungsgebiet ist, bleibt also ein ungefährer Schätzwert. (http://www.hydrology.uni-kiel.de/lehre/seminar/ws05-06/zacharias_abflussbildung.pdf 29.04.09.)

(18) Bei dem Prozess der Abflussbildung spielt der effektive Niederschlag eine wichtige Rolle. Er beschreibt den Anteil des Niederschlages, der zum Abfluss beiträgt. (http://www.hydrology.uni-kiel.de/lehre/seminar/ws05-06/zacharias_abflussbildung.pdf 29.04.09.)

(19) Unter einem Einzugsgebiet wird die Fläche verstanden, die zum Abfluss beiträgt http://www.ikzm-d.de/seminare/pdf/schmitt_hochwasser.pdf

Aus diesen Fallbeispielen lässt sich erkennen, dass die jeweiligen Funktionsverbgefüge in einem spezifischen Kontext zu benutzen sind. So bevorzugen *zum Abfluss kommen* und *zum Abfluss gelangen* als Subjekt ein Substantiv, das sich direkt auf Niederschlag bezieht (*Niederschlag, Regen, Wasser*, etc.), wohingegen das Funktionsverbgefüge *zum Abfluss beitragen* meistens in einem Zusammenhang steht, wo das Subjekt für das Niederschlagsgebiet (*Fläche, Einzugsgebiet, Teilfläche*, etc.) steht.

5 Schlusswort

In diesem Beitrag wurde untersucht, wie in Fachsprachen der kognitive Hintergrund zum Tragen kommt. Auf der Basis eines Rahmenmodells von Begriffsbeziehungen, das auf den terminographischen Definitionen beruht, konnte ein kognitives Schema zum *Niederschlagereignis* und dann zum *Abflussprozess* ausgearbeitet werden, das den jeweiligen Begriffshintergrund widerspiegelt. Mit Hilfe der Computeranwendung WordSmith-Tools wurden dann Konkordanzen erstellt, die zeigten, dass z.B. in Texten der Hydrologie einzelne Termini das *Abflussprozess*schema aktivieren, das ein *Niederschlagsereignis* voraussetzt, ohne aber näher auf dieses Ereignis mit seinen meteorologischen Voraussetzungen einzugehen. Es wurde gezeigt, dass sich das Fachwort *Niederschlag* im deutschprachigen Textkorpus vor allem auf das Ereignis an sich bezieht, ohne dass seine klimatologischen Komponenten eine besondere Rolle spielten, d.h., bei hydrologischen Untersuchungen ist der Niederschlag der Ausgangspunkt der Untersuchung, um zu sehen, wie das Wasser auf und im Boden seinen Lauf nimmt. Bei der Beschreibung dieses Naturereignisses verwendet der Hydrologe je nach Kontext Fachausdrücke, die gewisse Aspekte des Abflussereignisses evozieren. Interessanterweise verfügt dabei das Deutsche über drei Funktionsverbgefüge, die auf das gleiche Naturereignis anspielen, sich aber darin voneinander unterscheiden, dass eine Komponente besonders hervorgehoben wird. Während *zum Abfluss kommen/gelangen* sich auf den Niederschlag beziehen und meistens in ihrem Kontext auch erwähnen, hebt das Funktionsverbgefüge *zum Abfluss beitragen* das Niederschlagsgebiet hervor, in dem sich der Niederschlag und seine Konsequenzen, nämlich der Abfluss einer Wassermenge, ereignen.

Mit anderen Worten könnte man sagen, im Fachbereich der Hydrologie ist das *Niederschlagsereignis* Ausgangspunkt für das Studium des Verhaltens von Wasser, das den Boden erreicht hat, d.h., für das *Niederschlagsabflussverhalten.* Um dieses Verhalten näher zu beschreiben, benutzen Hydrologen Termini, die abhängig vom Kontext einen spezifischen Ausschnitt des Abflussereignisses evozieren, wie z.B. die Bildung oder die Konzentration von Abfluss. Bei der kurzen Analyse von *zum Abfluss gelangen / kommen / beitragen* dürfte deutlich geworden sein, dass die Begriffsbeziehungen zwischen einzelnen Fachausdrücken sich auch im syntaktischen Bereich niederschlagen und den spezifischen Kontext für diese Funktionsverbgefüge darstellen.

Die Ergebnisse dieser kleinen Studie unterstreichen somit die multidimensionale Beschaffenheit der Begriffe in den Fachsprachen. Fachwörter repräsentieren innerhalb eines

Fachbereichs oft unterschiedliche Möglichkeiten, an ein Phänomen der Wirklichkeit heranzugehen, sei es eben z. B. aus der Perspektive des Handlungsträgers oder des Handlungsobjekts. Es dürfte allerdings auch deutlich geworden sein, dass die Kenntnis der Bedeutungen von Fachwörtern allein nicht genügt, um einen Fachtext vollständig verstehen zu können. Erst das Erfassen der Begriffsbeziehungen zwischen den Termini ermöglicht ein umfassendes Verständnis der Wirklichkeit, die im Fachtext ausgesagt werden soll.

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A Socio –Textual Analysis of Written Wedding Invitations in Jordanian Society

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Abstract

The present study examined the generic structure of wedding invitations in Jordanian society in order to find out what components people employ to articulate the communicative purpose of these invitations. It also investigated the effect of socio-cultural aspects on the generic structure of wedding invitations through focusing on the relationship between language and cultural representations within the discourse of this genre. The sample consisted of 55 invitation cards from a collection of 150 cards covering the periods from 1979 until 2006. These cards have been subjected to the model of analysis proposed by Holmes (1997) and a modified version of the model outlined by Clynes and Henry (2004). The results showed that this genre was built around six obligatory and two optional moves. These moves communicate a lot of information about the prevailing socio-cultural values in Jordanian society that are encoded in the rhetorical and organizational components of this genre.

1 Introduction

A Wedding invitation is an important part of wedding because it is the first thing in the ceremony that guests will see before the wedding starts. It announces good news to family and friends and lets them know when the wedding will take place. So it needs to include some basic information that will help the guests understand where they need to be and what time the ceremony will begin. It should include the date and time of the wedding, the location, and the names of the hosts at a minimum. All of this information will help inviters to clear up any confusion and prevent people from showing up too early, too late, or at the wrong location in such a special day. Choosing the appropriate invitation card and style is not an easy decision. All brides and grooms would like to make their wedding invitations perfect and special and thus tend to be very careful when they choose their wedding invitation cards. Different types and styles and modes of invitation are used. The most common mode in Jordanian society is the written invitation.

To understand the special characteristics of written wedding invitations in Jordan, and to make it more obvious, we should consider it in its native context in terms of the social norms and conventions that give rise to such occasions. In Jordan, as in most Arab societies, socio-cultural practices influence most aspects of one's life. Understanding these practices is very important in interpreting the constructions of invitations. Jordan belongs to the Arab World and Islam is the religion in the country. Jordanian people speak a variety of spoken Arabic known as Jordanian Arabic. Like other countries in the Middle East Jordan is considered to be a developing country. Although in the last ten years it has witnessed a rapid development and actual progress in all sectors of life, it keeps observing its norms and traditions in all aspects of people's life. Wedding in Jordan has specific customs, norms and traditions. It starts with a well-known tradition called *Jaha* (proposing the hand of the bride from her curator). This involves two groups of people: the groom's curator, relatives and friends who go to the bride's house to propose; and the bride's curator, relatives and friends who welcome the first group who satisfies their request. Then there is what is called *Aked Karan* when the couple exchanges vows at the bride's house before a religious official (ma'thoun). Later there is *Zafaf* ceremony, when the couple sits in state (usually on a stage) to be viewed by the invitees while the wedding reception proceeds[1]. It is for the *Zafaf* that wedding invitations are usually issued not only to the extended families but to the wider community as well.

The present study is interested in the analysis of a corpus of Jordanian wedding invitations to determine what the generic components have in common. In particular, it aims at examining the affects of some socio-cultural factors that may determine the content and structure of Jordanian wedding invitation.

2 Literature review

Language analysis has received a lot of attention for a long time, but the last three decades, have witnessed an increasing interest in the study of genre analysis that significantly developed out of discourse analysis.

2.1 Discourse and genre

Discourse analysis started with register analysis (analyzing the surface level of linguistic description), followed by grammatical rhetorical analysis (functional language description), then the analysis extended to interactional analysis (language description as discourse), getting to genre analysis (language description as explanation). By considering the above discourse analysis approaches, we can easily detect a move from the surface level of description to a deeper description of language (Bhatia 1993).

Discourse has been defined by Kress (1989:19) as "the institutionalized modes of speaking and writing which give expression to particular attitudes toward areas of socio-cultural activity". These modes enable the speaker/writer to know whether to say, do or write something or not. He says that there are a number of discourses that operate within any one's social group and which the members of that group understand, use and follow according to the ideology they adopt. In short, discourse for Kress is a motivation of text. Bhatia (2004:20), however, views discourse as genre and argues that this extends the analysis beyond the textual product to incorporate context in a broader sense in order to find the way text is

[1] Commonly the bride and bridegroom have a seat on a higher place (like a stage) in the wedding hall where they sit beside each other while people are singing and dancing in front of them. The bride and the groom participate in the dancing usually for a short time after the cake show and then go back to their places.

constructed, the way it is often interpreted, used and exploited in specific institutional or professional contexts to achieve specific disciplinary goals. He attributes the popularity of analyzing discourse as genre to the fact that through genre analysis one may understand members of a specific discourse community who use genre to achieve their community goals:

> Investigation of conventionalized or institutionalized genres in the context of specific institutional and disciplinary practices, procedures and cultures, is a means for understanding how members of specific discourse communities construct, interpret and use these genres to achieve their community goals and why they write them the way they do. (Ibid:10).

In other words 'genre analysis explores discourse features in the broad context of the communicative event, and attempts to provide the rationale of the discourse features in terms of authors' publicly retrievable intentions and institutional conventions.' (Allison 2004:265). Hence, texts become 'typical' because people who produce these texts follow 'certain rules, prescriptions, traditions, ingrained habits, role models, etc. that have effects on three 'typical characteristics' of genres: content, form and function (Leeuwen 2005:121). Thus genre is a model or schema, because its regularity in this specific discourse community serves as an example for constructing new issues in the same field, which share the same purpose.

Many scholars (i.e. Miller 1984; Bhatia 1989, 1993, 1997, 2004; Swales 1990; Dudley-Evans 1994) view genre as a social and cultural activity - a communicative event. The idea of social aspects of genre has been emphasized by a number of other scholars. Connor (2000:25) states that 'genre leads ultimately to the understanding of culture. That is, out of what kinds of processes are various cultures made'. Similarly Bazerman (1994:79-101) sees genre as a 'socio-psychological category defined by a structural arrangement of textual features'. For Kress (1989:36) 'genre is the term which describes that aspect of the form of texts which is due to the effect of their production, in particular social occasion'. This means that genre helps to understand how texts interact and how they shape meaning in relation to complex social system. Swales (1990) provides a similar view and argues that the schematic structure through which the communicative purpose is articulated is the result of social practices and conventions. A view that is supported by Connor (2000) who contends that genre does not exist in isolation but as part of a structural system of interacting genres each performing complementary social action.

2.2 'Homely' Discourse

Homely discourse, to which wedding invitations belong, is a term which refers to a genre of socially constructed text of discourse, such as 'thank-you notes', 'congratulations', 'obituaries', and 'invitations'. This kind of discourse received little attention compared to research on a variety of socially constructed academic and professional genres such as 'abstracts', 'introductions'…etc. This term was first introduced by Miller (1984). It simply refers to 'everyday language'. Johns (1997:6) defines them as 'Recognizable socially constructed text genres of everyday life'. This kind of discourse is simply defined by its name (e.g. wedding invitations, death announcement...etc). As it is convenient and efficient for people to share names of texts in academic and professional settings, it is also convenient to share these names outside academic and professional settings in everyday language. This naming enables readers or writers to begin their reading or writing of a text with considerable confidence, and it evokes in readers and writers certain expectations about the content and the form of a specific text. In addition, it evokes an understanding of the central purpose that texts serve within communities of readers and writers. It gives us a full and complete summary of the content. So, we know, expect, and conclude the purpose of the text from its title. For example in newspapers, when readers read the title 'obituary announcements' they know from the title what will be said about the death and funeral arrangements and other details. Another easily recognizable 'homely' genre is the 'wedding invitation'. It is immediately identified by name and the audience or readers will immediately expect to find the names of a bride and a groom, the time and the place of the ceremony.

2.3 Socio-Cultural Aspects

Culture is another important aspect which affects language and plays a significant role in homely discourse, because, as mentioned above, homely discourse refers to everyday language which differs according to different cultures. Although there are usually repeated elements that are carried from text to text in 'homely' discourse and other genres, still every situated text is modified by the social forces in its particular context. Various frameworks in sociolinguistics have linked language use to context and culture. Halliday and Hassan (1989) point out that, in order to determine the way in which a particular text is constructed and interpreted, it is useful to refer to the cultural background from which the text drives its meaning. Moreover, Bloor (1995), and Holmes (1992) share the same view believing that when people use language to express meaning, the form of the language they use is influenced by the complex elements of that situation. These elements are the participants, the setting or social context, the topic and the function of the linguistic choices which generally reflect the influence of one or more of these components. Holmes (1992) contends that the choice of one linguistic form rather than another is a useful clue to non-linguistic information; this means that linguistic variation can provide social information. A view reflected by Badger (2003) who points out that the most important aspect of the way in which texts are embedded in situation is that they carry out some communicative purpose - which is the key concept in genre. This communicative purpose is derived from the situation in which it is used. This goes with defining genre as a recognizable communicative event, characterized by a set of communicative purpose(s) shared by its members. From this perspective, many scholars view genre as a social and cultural activity that depends on social factors. Miller (1984: 165) suggests that learning a genre is not just or simply learning linguistic forms and conventions. It is also learning how to 'participate in the actions of a community'. Even the schematic structure of a particular genre is, according to Swales (1990), the result of the conventions of a specific discourse community. Bhatia (1993:69) confirms this idea stating that 'in some contexts, dominant socio-cultural factors do influence certain types of professional genres. He describes generic forms as 'socially constructed and are even more intimately controlled by social practices' (Ibid:360). These generic forms are selected and developed over centuries by participants in a particular community to codify their repeated social practices as these are closely related to their culture. This lead Devitt (cited in Badger 2003:257) to assert that genre and situation are so linked as to be inseparable; genre determines situation in the same way as situation determines genre.

2.4 Genre as a sociolinguistic practice

Nowadays, the term genre is thought to be referring to a sociolinguistic activity in which the participants are able to achieve particular goals (Henry and Roseberry 2001). Al-Ali (2003) contends that in order to understand a complete purposive text which represents a social activity, one must consider two perspectives: one perspective identifies the text's generic structure based on its genre category membership, which involves reference to the context of culture, and the other describes the immediate contextual minor functions based on its register, which is brought into existence by the lexical and syntactic linguistic structures. Vergaro (2004:187-188) says that from a social perspective, what defines genre is the communicative purpose. She explains that understanding genre as a social action requires genre to be recognized as such by their users. She confirms that meaning does not reside in the signs each text consists of. It is constructed by people through cognitive acts. There are thus cognitive reasons that lead users of a language to recognize communicative events as instances of particular genres and to assign particular terms, or labels, to these events.

To understand how the invitation genre organizes and articulates the communicative purpose of the social occasion, a genre analyst needs to take into account the social practices and constraints that give rise to each individual genre. Miller (1984) and Kress (1989) emphasize the significance of understanding the social occasion in which the text emerges for the interpretation of the construction. Miller (1984:151) argues that a social understanding of genre can help account for the ways we encounter, interpret, react to, and create particular texts. The purposes of the participants and their goals have their effects on the form of texts which are constructed in those situations. Bhatia (1997) defines genre as a class of texts characterized by a specific function that tends to produce distinctive structural patterns. However, he stresses the idea that there is no universal form of discourse for structuring knowledge and, therefore, most institutionalized forms of discourse, are socially constructed, interpreted and used. The general goal of a genre analyst is to explore the construction of a genre in order to identify the *moves* and strategies of a genre, the allowable order of the move, and the key linguistic features.

The next step is to explain why these features were chosen by expert users of the genre to achieve their communicative purpose (Bhatia 1993). But what does *move* mean? And how does it assign to stretches of language? This is what the discussion below tries to answer.

In this study the researcher uses the term *move* to refer to each meaningful unit/ component which conveys a rhetorical function. This is inspired by the Swalesian approach of genre move analysis (Swales 1990) which was developed by Bhatia (1993) and applied to different professional and academic settings: a move is any meaningful unit presented by lexical or grammatical forms (linguistic aspects), conveying a specific goal. Each move combines with other moves - in some way - to give the overall communicative purpose of the activity in which the members of the community are engaged. So, analyzing the move structure of a text means assigning a pragmatic function to a stretch of language and building the schematic structure through which its communicative purpose is achieved (Vergaro 2004:184). In most cases, the unit of analyzing moves is the sentence, but it may be below the level of sentence as a clause or even a word. However, we have to keep in mind that the boundaries between each move and the other are not clear cut. In many cases it is very hard to identify each move separately, because it is sometimes syntactically possible that one is embedded within another. In this study the moves in the genre of wedding invitation in Jordan will be analyzed and their social connotations will be highlighted

3 Corpus and Method

The sample for the present study was collected randomly from different sources. Some were sent to the researchers' family, relatives and friends; others were collected from famous printing presses in the researchers' local area. A total of 150 Jordanian wedding invitations were selected covering the period between (1979 – 2006). After collecting the data, the researchers checked the different types of Jordanian wedding invitations for similarities and differences in generic components. From this preliminary check it was noticed that there were no big differences in their generic components. Therefore, a sample of only 55 Jordanian wedding invitations was analyzed. All the invitations were written by Jordanian people. All names and any other information that may identify the inviters or invitees were removed. Since the focus in this study is on the generic components, Arabic transcription was given without any phonological or morphological details. In the translation of the extracts, an attempt has been made to preserve relevant elements of Arabic discourse without obscuring the meaning of the text.

4 Procedure of Analysis

The data were analyzed both qualitatively and quantitatively. Qualitatively they were analyzed by taking into account the rhetorical purposes of the text when assigning a pragmatic function to a stretch of language. This would enable us to tag a stretch of language as a particular move. So the primary communicative purpose and the related sub-purposes were central for the analysis. There were cases where a unit of text had multiple functions in the context. The common practice was to analyze it according to the most salient function - following Holmes (1997). The analysis was based on a modified version of the model outlined by Clynes and Henry (2004) (derived from Nwogue 1991) on Brunei and Malay wedding invitations. However, some modifications have been made due to the differences between Jordanian culture and Brunei Malay culture and to the fact that a wedding invitation in Jordan is not as complex as that in Brunei Malay. It was necessary to omit some moves and add others, and sometimes it was necessary to change the name of a move only in order to make it more expressive.

Quantitatively, the occurrence of the various moves in the corpus was counted and their sequence established in order to find out the obligatory and optional moves that govern Jordanian wedding invitations. People's opinion about the function of some moves was also surveyed through a questionnaire and interviews with several Jordanian people to give the analysis more credibility and validity.

5 Analysis and discussion

The analysis of the data in this study has focused on three main aspects: the common moves that organize the Jordanian wedding invitation; the common schematic order for the identified moves and variation in their order; and the non-linguistic features that may be found in Jordanian invitation cards.

5.1 Identification of moves

The common moves that have been identified in the analysis include: opening, identifying the celebrating families, stating the names of people issuing the invitation, inviting the guests, identifying the bride and groom, arranging the ceremony (location, date, time) closing, notification.

5.1.1 Opening

This is the introductory move which consists of one or more specific quotations taken literally from the Holey Qurân, or a prayer or a few poetry lines. All of them express either people's wishes of God blessing to protect the couple getting married or the importance of marriage in people’s life. Almost in all the examined cases, these quotations among other quotations are written in bold, and italics, with beautiful Arabic handwriting usually at the top of the card making a beautiful decoration. Figure 1 is just an example.

*[*O, God bless them and bring your blessing upon them and bring them together with good*]*

Figure 1: An opening expression

Although the main communicative function of the opening move is to introduce the invitation, each quotation has its own sub-communicative functions. In Islam any verse from the holy Qurân must be preceded by the formulaic phrase /*bismillah alrahman alraheem*/ (in the name of Allah. Most Gracious Most Merciful) and followed by the formulaic phrase /*sadaqa allah alazeem*/ (Amen). Clynes and Henry (2004) and Al-Ali (2004) have observed this as well in their studies. Using Qurânic verses can be seen as a sign of adherence to Islamic teachings and achieving solidarity among the members of the Muslim community (i.e. they all believe in God and His book). According to Islamic rules introducing anything by God's saying brings luck and safety to it. So it is a blessing to start marriage with God's words. The following quotations clarify this:

Opening Quotations

1. Prayers:

"اللهم بارك لهما وبارك عليهما واجمع بينهما بالخير" .

Allahumma barik lahuma wa barik alyhumma wajma' beynahumma bilkhair

(O, God bless them and bring your blessing upon them and bring them together with good)

2. Qurânic verse:

"ومن اياتة ان خلق لكم من انفسكم ازواجا لتسكنوا أليها وجعل بينكم مودة ورحمة"

(الروم ايه 21)

Wa min ayatihi an khalaqa lakum min anfusikum azwajan letaskuno elayha wa ja'al baynakum mawaddatan a rahmah

("And among His signs is that He created for you wives from among yourselves, that you may find repose in them, and He has put between you affection and mercy. Verily in that are indeed signs for a people who reflect." The Romans: Verses 21(31).)

Poetry can also be used in the opening move for different purposes. Besides its aesthetic use it is also used for religious purposes. Some people are so careful about preserving Qurânic verses that they do not wish to use them in invitation cards which are likely to be thrown away after the event. The following quotation is an example of a poetic opening

3. Poetic verses:

هيا طيور الخير زغردي	فوق الجباه المؤمنات وغردي
افراحنا طابت وفاح عبيرها	فجذورها تروى بسنة احمد

Haya toyoor alkhair zaghridi *fawq al jibah almo'minati waghrridi*
Afrahuna tabet wa fah abeeruha *fajuthuruha turwa bisunnati Ahmadi*

(Come on birds of good utter trilling cries of joy, and warble upon the forehead of women believers)
(Our wedding has a pleasant fragrance, with roots watered from the *Sunna* of Ahmad[2]).

These quotations are restricted to wedding invitation occasions. Poems or prayers are used to express happiness and rejoice the occasion. Sometimes people create their own poetry and not just quote it in order to signify the importance of the occasion.

5.2.2 Identifying the celebrating families

The second move is identifying the celebrating families. It acts as a heading for the invitation. This move is recognized by using the expression: *Afrah Aal...* (Wedding reception of … [names of the two families]). There are two strategies for producing this move. First, if the groom and the bride are from two different families, a phrase for each family is written either on each side of the card or in the middle, and if they are from the same family (relatives, cousins…etc) only one phrase in the middle of the page is found. The following examples show the two different ways. (Italics are names of Jordanian families)

1.
/Afraah aal / -hmouri /w aal /-zubi
(*Al-Hamori* and *Al-zub*i wedding ceremonies)

2.
/afraah aal /–shraireh
(*Al- Sharayrih* wedding invitation)

The main communicative purpose of using this move is introducing the families who are celebrating the occasion.

5.2.3 Stating the names of people issuing the invitation

In Jordanian culture, the fathers of both the groom and the bride are, typically, stated each on either side of the invitation card. So, two different names are mentioned in this move, unlike some other cultures (e.g. Britain) in which the person(s) paying for the event or hosting it issue the invitation and thus their names are stated. This move includes: Titles such as *haj* (the person who has performed pilgrimage), (doctor), (pharmacist) which are usually written above the name. Using such titles - professional, academic or social - relates to Jordanian culture or even to Arabic culture, in which people solicitude a lot in social positions. It also includes the inviter's full name; and other expressions-such as /*wa aqiilatuh*/ (and his wife) to assure that women are involved.

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[2] *Sunna* referes to the prophet's traditions and sayings. *Ahmad is* another name for Prophet Mohammad

In the case that the groom/bride's father is dead, the brother (if any) usually takes the responsibility of issuing the cards, usually, in the name of the father using the phrase /*Abnaa' al marhoom*/ (sons of deceased…), followed by the father's name. This is a confirmation of solidarity among the family members. Sometimes the eldest uncle may issue the card (i.e. X invites you to attend his nephew's wedding), also as a confirmation of solidarity among the extended family members and as a sign of showing respect to older people (see tables 1, 2)

Table 1: Different strategies for naming inviters in case of dead father.

Strategy	Frequency	Percentages
Father's name with expression 'son of blessed'	11	≈58%
Eldest brother's name	4	≈21%
Eldest uncle's name	4	≈21%
Total	19	100%

Table 2: People's opinion about the reasons for using different strategies for the inviter's name in the case of dead father: *Why do you think the invitation cards are sometimes issued in the name of either the eldest brother or the eldest uncle not the groom himself in case of dead father?*

Reason	In Numbers	Percentages
Old traditions	16	≈38%
Moral Support	23	≈55%
No-reason or unrelated answer	3	≈7%
Total	42	100%

5.2.4 Inviting the guests

This is a single formulaic sentence using some formal vocabulary items. All of the collected samples used the same phrase: *yatashrafoon beda'watikum lehodhur haflat zafaf* ... (are honored to invite you to attend the wedding party). Although there are two invitations in the sample that do not have a specific phrase of inviting the guest, this move is implied by sending the invitation to the invitees. This is because the communicative purpose of any invitation is to request the attendance of a particular person to attend something.

5.2.5 Identifying the bride and groom

This move states the names of the couple getting married, usually the first names. It consists of three parts.

(a) Specifying the relation between inviters and bride/groom

If the inviters are the bride and groom's fathers, this move can be recognized either as a part of the "inviting guest" phrase *yatashrafoon beda'watikum lehoduur haflat zafaf* (are honored to invite you to attend the wedding reception of their /*waladeihum* (children), referring to son and daughter), or it can be written in a separate line above each name with words like *waladihi* (his son), and / *ibnatihi/kareematihi* / (his daughter/his honorable daughter). Figure 2 is a translation of a typical invitation card with these moves

In the Name of Allah, Most Gracious, Most Merciful "And among His signs is that He created for you wives from among yourselves, that you may find repose in them, and He has put between you affection and mercy. Verily in that are indeed signs for a people who reflect." (Qurân: The Romans, verse 21)[3]	
Al – (name of family)'s weddings ceremony	
(Name of groom's father)	(Name of bride's father)
Are honored to invite you to attend the wedding reception of	
His son	His honorable daughter
(groom's first name)	(bride's first name)
This will be with God's willing from ten o'clock to twelve o'clock on Friday 8/8/2003 evening at Arabella Hall, in Irbid - South of Amman New Bus Station. May happiness stay in your flourishing homes	
	Groom's evening party starts on Wednesday In (family name) divan

Figure 2: A translation of a sample text of Jordanian wedding invitation with obligatory and optional moves.

(b) Titles: Identifying the groom and bride's social position

Titles indicating the academic qualification achieved by one or both the groom and the bride such as doctor, lawyer…etc, are usually mentioned above their names (i.e. *engineer*). This makes invitations more appealing in the sense that the party will be different. Mentioning titles of specific jobs rather than others relates to the Jordanian culture in which titles like doctor and engineer, in particular, indicate richness and prestige. People who hold such jobs are highly respected; other jobs, although important, do not connote such esteem. In spite of the fact that most invitation cards reflect these titles if the inviters have them, the majority of the people involved in the questionnaire (76%) criticized the use of titles on invitation cards arguing that it is an unjustified practice because other jobs are also important.

Table 3 shows people's opinion about using titles in wedding invitation cards.

[3] Translations of Qurânic verses are taken from Al-Hilali 1995 the rest is the researchers' own translation

Table 3: People's opinion of giving titles in the card: *Do you think that mentioning titles of some jobs in invitation cards is a justified practice?*

Reason	In Numbers	Percentages
Justified	4	≈10%
Unjustified	32	≈76%
No answer	6	≈14%
Total	42	100%

(c) Stating the first name for both the groom and the bride
Most of the wedding invitation cards today state the first name of both the groom and the bride. However, some people state the groom's name only and instead of the bride's name the word */kareematuh/* (his honorable daughter) or (their/his sister) is used. This was very common in the past when mentioning the name of the female relative was considered taboo. It was considered more honorable to keep the name of the bride hidden. Some people still believe so and they replace the bride's name with an expression that reflects more respect */kareematuh/* (his honorable daughter). Because it is derived from the word */karamah/* (honor or revere or venerate) which means the girl is an honored and precious being. However, recently it has been very common to mention the bride's name (see Tables 4, 5) 69% of the informants involved in the study believe that this relates to recent developments in women's awareness of their equal rights in Islam.

Table 4: Frequency of using the bride's name in the corpus.

Procedure	Frequency	Percentages
Stating the bride's name	44	80%
Stating only the grooms name	11	20%
Total	55	100%

Table 5: People's responses on the question" *Do you think that mentioning the bride's name is a kind of development in preserving women's rights?*

Opinion	In Numbers	Percentages
Yes	29	≈69%
No	11	≈26%
Maybe	2	≈5%
Total	42	100%

5.2.6 Arranging the Ceremony
Names of the bride and the groom are usually followed by ceremonial arrangements including: time, date and location. The information must be very obvious and all important details about the reception must be given in this move. Sometimes this move is introduced by a well-known expression in Islam /*bimashi'at Allah* / (with God's willing), which is used by almost all Muslims because it is derived from their beliefs that nothing may happen in this life without God's willing.

5.2.7 Closing
This is the seventh move in Jordanian wedding invitations. This move pragmatically functions as a 'plea' for the invitee usually in a prayer form to close the invitation card politely, so we call it the closing move. Certain culture-based expressions coined especially for this occasion[4] are usually used as a closure. The following quotations reflect the most common ones:

Closing Quotations
1.:
دامت الافراح حليفة دياركم العامرة
Damat al'afraah haleefat diyarikum al'amirah
(May happiness last in your flourishing homes)

2.:
بحضوركم تتم سعادتنا وتكتمل فرحتنا
Behuduurikum tatimmu sa'adatuna wa tactamilu farhatuna
(With your presence our joy and happiness will be completed)

3.:
طاب اللقاء وزاده تشريفكم
Tab alliqa'a wa zadahu tasriefa
(The meeting will be nice and your attendance boosts it more)

4.:
دمتم مشعلا تستضاء بكم محافل الافراح
Dumtum mish'allan tustadha'u bekum al'afraah
(May you always be torch lightening up weddings)

5.2.8 Notification
Useful supplementary information is mentioned in this move, this information is usually written in small font on the left or right side of the bottom of the card. It could be a note about additional parties that will be held before the wedding such as: the groom's evening party /*ta'lileh/ or* the bride's farewell party - *Henna* party. These parties are limited to relatives and close friends. It could also provide specific details concerning the wedding reception organization. These include: the number of guests that can attend the reception, or a note on prevention of children's attendance. Most Jordanian Muslim families tend to have a lot of children and so most wedding invitations include notes asking for not bringing children to the party. In some cards we may find this directly written as: *please do not bring children*. In some other invitations, it is expressed in an indirect way to save the inviter's face as: *the hotel administration prevents children's attendance at all.*

[4] In the Arabic culture there are fixed expressions for every occasion. These expressions are difficult to translate into another language as they are culture based. The translations provided are the researchers' own.

5.3 Moves order

Most of the invitation cards analyzed manifested the following order of moves:

Opening
Identifying the Celebrating Families
Stating the name of people issuing the invitations
Inviting the guest
Identifying the Groom and Bride
Arranging the Ceremony
Closing
Notification

However, some invitations in the corpus reflected a different order where the genre was completely manipulated. The following is a translation of an invitation card that manifests this practice.


أفراح آل الشرايري
كل وحدة تقول راح اللي في بالي تزوج معرسنا الغالي
المهندس ياسر
واختار من كل بنات الكون
دانيــا
احلى قمر بالسما العالي يوم الخميس ٥ / ٨ / ٢٠٠٤ قعدنا ننادي بالصوت العالي
في صالة البتراء راح تكون احلى الليالي الساعة عشرة ونص تكون لمة كل الحبايب والأهالي
حرم الحاج محمد توفيق الشرايري حرم الحاج خالد فندي الشرايري
السهرة مساء يوم الاربعاء

Figure 3: Invitation Card

Every girl says the dearest one I am thinking about is getting married
The engineer
(groom's name)
and he has chosen from all the girls in the world
(bride's name)
Most beautiful moon in the high sky, Thursday 5/6/2004 we will be rejoicing in a loud voice in (auditorium name) the most beautiful night will be, at half past ten, reunion for all relatives and beloved will be.
(names of both inviters)

Figure 4: Translation of the Card in Figure 3

This invitation has the same information and the same communicative purpose, but the whole structure is different. The way it is presented is more prosodic. Using the poetic genre to replace the normal invitation genre is an obvious example of how people can manipulate different genres for different purposes. It seems that people sometimes tend to change the ordinary way of writing wedding invitations in order to be different making the unusual usual and the usual unusual, a practice which may seem more attractive (Momani 2001).

Figure 5: Invitation Card

5.4 Non – Linguistic Features

Invitation genre in general includes common non-linguistic clues that differentiate the invitation genre from other genres. These include decorative borders, different size of font for different moves, different styles of writing, different colors, and centered alignment of some moves or even all moves. But there are specific non-linguistic features that differentiate wedding invitation genre from other invitations, such as using images like wedding rings, hearts, and bouquets of mixed flowers, bunches of roses and individual roses. Figure 6 shows some of the common images used in Jordanian wedding invitations.

Figure 6: Non – Linguistic Features

6 Summary of Findings

It has been found that six of the identified moves mentioned above are obligatory. These include: the opening move; stating the name of people issuing the invitation; inviting the guest; identifying the groom and bride; arranging the ceremony; and the closing move. The other two moves, identifying the celebrating families, and notification, are optional. (For statistics of the recurrence of both moves see Table 6).

Table 6: Common Generic Moves that Govern the Jordanian wedding invitation

Move	Definition (No. of invitations in which the move was present in corpus of 55)
1. Opening	Introduce the occasion by using direct quotations from holy Qurân or different forms of prayers (52)
2. Identifying the celebrating families	Naming the genre and celebrating families (17)
3. Stating the name of people issuing the invitations	Inviter's names (full names) (55)
4. Inviting the guest	A single formulaic sentence using Arabic polite vocabularies (53)
5. Identifying the groom and bride	First name of the couple getting married (55)
6. Ceremonial arrangements	Details about the occasion (55)
7. Closing	Polite ending (55)
8. Notification	Further necessary information about the ceremony (44)

6.1 The effects of the socio-cultural aspects on the generic structure of wedding invitations in Jordan.

In Jordanian wedding invitations, prototypical features of Jordanian culture are clearly displayed. The following factors are the main features.

6.1.1 Religious factors

Religion is a very important aspect in Jordanian society and we can obviously say that religious factors influence all aspects of Jordanian life. It is not surprising, thus, to find out that Jordanian wedding invitations reflect this influence very clearly. Although there are several minorities in Jordanian society, who live in harmony with Muslims and share a lot of common traditions that do not contradict with religious background, Islam remains the dominant religion. It plays a crucial role in the Jordanian way of life, including birth, marriage and death. Marriage is an important part of the life of all Muslims who follow prophet Mohamed's teachings. They have to get married in order to complete their religion. Thus, the language of Jordanian wedding invitations is, generally speaking, characterized by religious features. This is evident in most of the generic components adopted and the number of religious phrases used in Jordanian wedding invitations (see Table 7).

Table 7: Frequency of each introductory quotation in the corpus

Quotation	Frequency	Percentages
Quotation 1. (prayer)	21	≈38%
Quotation 2. (Qurânic verse)	20	≈36%
Quotation 4 (poetic)	3	≈5.5%
Other quotations	8	≈15%
No quotation	3	≈5.5%
Total	55	100%

The data reveal an extensive use of invocations in Jordanian wedding invitations. Many cases of invitations start and close by invocations for Allah. Sometimes to bless the couple getting married, the marriage itself, or even to bless the invitees. As it has been found in the analysis, wedding invitation in Jordan begins in many cases with a Qurânic verse, which is preceded and followed by two formulaic verses derived from Islam. Although there are cases where invitations start with different forms of prayers, these prayers are also a type of invocations to Allah (God) and all of them are derived from Islam. The opening verses embody a persuasive message directed to potential unmarried audience to follow them and get married. Also the 'closing' move is an invocation to Allah to protect the invitees and the ceremony. Another important evidence of religious influence in Jordanian wedding invitation is manifested in the sixth move 'arranging the ceremony' which is commonly introduced by the religious phrase /*bimashi'at Allah*/ 'with God's willing'. Titles sometimes reflect a religious influence as well. "*Al-haj*" title which introduces many inviters' names is considered as one of the prestigious and important titles that all Muslims long to have. It is given to a person who has performed pilgrimage and it connotes commitment, reverence, wisdom, and integrity.

From the above discussion we can say that the examined data revealed a high frequency of religious phrases that reflect the religious influence on Jordanian wedding invitation.

6.1.2 Gender

Although Islam is a religion that protects women's rights, it is widely known that Arab countries are lagging countries which exercise suppression against women. Jordan is a developing country but it is like other Arab countries where men are more involved in social, political and economic life than women. Women are usually involved in activities such as running the household, shopping…etc. The examined data did not exactly reveal the same results, but in jobs where titles were used (i.e. prestigious jobs), the difference between women and men can be observed easily, there are only 8 out of 55 brides with prestigious titles (doctor, engineer, lawyer…etc). On the other hand 17 grooms have such titles. These results do not mean that other brides or grooms are uneducated or even unemployed; they may have jobs but not prestigious ones.

However, these findings confirm that the situation, concerning the attitude towards women in society, is changing to the better. For example, nowadays women in Jordan are involved in all aspect of life and all types of jobs, there are women who are doctors, lawyers, engineers…etc. and these jobs are no longer restricted to men. Furthermore, the variation of using the bride's name instead of the phrase /*kareematuhu*/ (his honorable daughter) in many Jordanian wedding invitations also reflects that women's position in Jordan has changed. The old traditions which consider announcing the bride's name in public as taboo have changed over time and the results illustrate this. However, the word / *kareematuhu* / (his honored daughter) is still used to reflect respect for women because the word connotes an honorable meaning, as it is derived from the Arabic word *karameh* (dignity and respect).

6.1.3 Family

The data analysis revealed the importance of the nuclear family and in some sense that of the extended family in the person's life. In Jordan the extended family is a very basic cultural unit supplemented by the tribal system (Al-Ali 2004:21). The analyzed data reflected the influence of the family in the two moves of: 'announcing the occasion' and 'stating the name of people issuing the invitation', in which the family names of inviters are mentioned. Mentioning the family name in two moves reflects the significance of the tribe in Jordan and it means that inviters are very proud to be part of these tribes. Names of inviters can also be evidence of the importance of the tribal system in Jordan. In almost all cases the inviter's names have been written in three parts (first name, father's name and the extended family name) sometimes the grandfather's name is also written as a sign of honoring ancestors.

6.1.4 Titles

Another social feature manifested in 'stating the name of the people issuing the invitation' and 'naming the bride and groom' moves is the high frequency of prestigious titles such as doctor, lawyer, *haj*, Mr.…etc. This emphasizes the importance of titles in the Jordanian society as is the case in many other Arab countries, because Arabic culture evaluates the social status of the individual highly (Al-Ali 2004). Al-khatib (1997) finds that Jordanian people are fond of using titles, as a sign of prestige in Jordanian congratulation and thank you announcements. However, this contradicts with other views in different societies. For example Clynes and Henry (2004) in their study about wedding invitations in Brunei and Malay found that titles are not used at all in spite of the fact that these titles receive much more concern than they do in the Jordanian society. The following is an example of the wording of a typical wedding invitation in Jordan:

Opening…….

> Mr., Dr, lawyer, engineer, haj (Bride's father) and his wife (*haramahu* (no name) and Mr., Dr, lawyer, engineer, haj…etc (Bridegroom's father) and his (wife) (no name) have the honor to invite you to attend the wedding ceremony of their *Kareematuhu* (daughter) (bride's name) and Mr., doctor, engineer, lawyer…etc. (groom's name) on (date) at (time) in (location)

Closing…..

6.2 Non-linguistic features that characterize Jordanian wedding invitations

Optional non-linguistic features are those related to the wedding card appearance, size, type and size of font, layout, and graphics. Jordanian wedding invitations have common characteristics that differentiate wedding invitations from other types of invitations. Hearts, marriage rings, bouquets of flowers are images that are restricted to wedding invitations. Specific decorations used either in the inside sheet or on the card itself are also restricted to wedding invitation cards. The font in almost all cases is larger for 'stating the name of people issuing the invitation' and 'naming the bride and the groom' in contrast with other moves. But we can say that the font for the whole invitation is large not small. The size of the card is different and it relates to the inviter's taste and financial situation as bigger card cost more. Choosing a certain size, color, and decoration in addition to the shape of the card depends largely on the financial situation of the groom. Recently new shapes of wedding invitation cards have been used in Jordan, such as cards made of wood as a gift for invitees or velvet cards, jute cards…etc. Also using images of the groom and the bride as a background is a recent fashion in Jordan. More recently electronic invitations have been introduced to the Jordanian people and it will be worth investigating the practices in these invitations in future research.

7 Conclusion and Recommendations

This study was an attempt to investigate the main components of written wedding invitations in Jordan. The aim was to provide guidelines about how these invitations are made. Two main components have been identified: linguistic and nonlinguistic components. The nonlinguistic components concern the shape, size, type and size of font, layout, graphics, color and design of the card. The linguistic components involve the wording of the invitation which provides the guests with an idea of what to expect at the ceremony. There are different acceptable ways to express the desire for the guest to attend the event that fit with this occasion. In Jordan wedding invitations start with an opening which usually consists of religious or poetic verses. This is usually followed by a few details that must be included. Informing the invitee who is getting married, where the ceremony is being held and when the ceremony takes place is essential to the wording of the wedding invitation. Forgetting any of these important details can leave the guest confused about important details.

The specific wording of wedding invitation depends on who is sending the invitation. If the ceremony is being hosted by the bride's parents, then the wording of the invitation will indicate that they are the ones who request the guest's presence at the ceremony. When the parents are divorced, or one parent is deceased or when the bride and groom are issuing their own invitation, other common scenarios are appropriate. Typical wedding invitations in Jordan are issued by the parents of both the bride and the bridegroom

In case the groom's father is deceased, his sons issue the invitation on his behalf (i.e. sons of blessed/deceased… [name of father] invite you to attend their brother's wedding..).

Certain expressions used in the invitation cards are culture-based expressions. They are taken from the cultural and religious discourses. Translating them literally may not convey their connotations. Other occasions such as obituaries, graduations and birth have their own fixed expressions.

From the analysis the researchers have established the following recommendations in order to shed light on 'homely' discourse and genre studies.

1. Studies of generic structures of 'homely' discourse in Arabic and in Jordanian Arabic in particular are very few in contrast with generic structures of academic and professional settings. So it is significant for future researchers to deal with other Arabic 'homely' discourses in order to fill in the gap, such studies may include advertisements, greetings, apologies, …etc.

2. This study is limited to only one type of Jordanian written invitations. Further studies of types of Jordanian written invitations may include invitations for national occasions, conferences, meetings, dinner parties, birthday parties, peace making between tribes…etc.

3. Studies of developments in written wedding invitations and manipulations of their structure require further research. It is also recommended that research on oral and electronic invitations be conducted in order to find out similarities and differences in their generic components.

4. It is also recommended that further research be conducted to study the language of invitations in general and wedding invitations in particular in the practice of different ethnic or religious minorities living in Jordan to see if the overall patterns are the same or different.

5. This study may have implications for researchers in sociolinguistics where cross-cultural studies of different strategies used in wedding invitations can be conducted to confirm the similarities and differences between any two cultures. It would be interesting for example to compare Jordanian wedding invitations with Syrian or Egyptian or British wedding invitations.

6. This study may also have implications for both text linguistics and teachers of ESP (English for specific purposes). It is suggested that ESP teachers start teaching language using genres that are familiar to students such as the language of 'invitation' in order to make the process of teaching easier and more flexible and interesting.

Finally this study does not make the claim that the different moves in the analysis are a particularity of Jordanian wedding invitations. It may not be much different from wedding invitations in many other Arab countries, although this is an issue that requires further research.

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Knowledge organisation in LSP texts and dictionaries: A case study *

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Abstract

In LSP dictionaries the specialised knowledge contained and organised in texts is selected and restructured. This paper is focused on the analysis of a case study: the *Dizionario generale plurilingue del Lessico Metalinguistico* (DLM – General Multilingual Dictionary of the Metalinguistic Lexicon). The dictionary of linguistics terminology under examination is planned to complement the reference products available in this area of knowledge. In fact, it has a particular outline as the materials it records are directly drawn from the most representative texts produced throughout the history of linguistic speculation. The plan of the DLM establishes that the terminological information stored (definitions, cross-references, formal variants, translations) is directly drawn from the original texts, and not elaborated by the compilers. Therefore, the definitions of the indexed terms are not produced by terminographers: they are 'defining quotations' identified and extracted by specialists from the source texts.

Specialised texts play an essential role in this project as they are analysed in order to both identify the core concepts used (or introduced) by their authors and to reconstruct the conceptual networks delineated in each of them. In the compilation of the DLM the problematic issues inherent in textual analysis clearly emerge. This is due to the fact that texts are multifaceted units where the various factors related to their structural organisation and informative content interact. The different degrees of 'density' of specialised information which is displayed in texts is determined, among others, by the conceptual, communicative, pragmatic, structural, cognitive, and socio-cultural components of LSP texts.

The procedures of retrieval and organisation of specialised knowledge carried out in the DLM project are analysed in this study through the consideration of a sub-section of its terminological inventory, i.e. the metalinguistic units extracted from a text in which focal linguistic issues are discussed. Although this book was produced in the pre-scientific period of the history of linguistics, it was chosen because, in addition to providing

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interesting contributions to linguistics terminology – considered also from a historical viewpoint –, it yields a model for the arrangement of the conceptual relational network which is being implemented for the DLM. The bi-dimensional character of terminological records of the DLM is being integrated with graphic representations of conceptual relations, which provide a multidimensional outline to the defining section of this dictionary. The visual representation of relational networks provides further terminological information and it also makes available to the users an effective instrument for acquiring a more thorough understanding of the specialised knowledge which is transferred from LSP texts into this dictionary.

1 Introduction

The focus of this paper is on the LSP dictionary as a repository where knowledge drawn from specialised texts is organised. An essential aspect of this investigation is the way in which knowledge is distributed in the structure of the dictionary and can be accessed by its users. Indeed, the design and content of reference products depends on the purpose(s) they are intended to serve. The conceptual and linguistic information stored in specialised texts can be reorganised and presented in different ways when constructing LSP dictionaries, or terminologies.[1] Through the consideration of a case study this paper analyses the methods applied in the process of transposing information material from one text type to another, i.e. from the specialised text to the dictionary. In this framework the dictionary is interpreted as a type of text, of which different sub-types can be identified depending on their arrangement.[2] This implies that users can access information available in dictionaries according to different paths of knowledge retrieval and construction. The structural typology of specialised texts and dictionaries differs, hence a selection and reorganisation of conceptual and linguistic materials is necessary when the information contained in LSP texts is transferred into dictionaries.[3]

The specialised texts considered here belong to the field of linguistics and include essays and monographs produced by experts and intended primarily for experts or semi-experts. The present analysis focuses, in particular, on the way in which conceptual and terminological knowledge is dealt with in the blueprint and organising structure of the *Dizionario generale plurilingue del Lessico Metalinguistico* (DLM – General Multilingual Dictionary of the Metalinguistic Lexicon). The DLM is an ongoing project for the development of an on-line specialised dictionary of linguistics mainly addressed to specialists and advanced students (http://dlm.unipg.it/). The characteristics that distinguish this dictionary from other LSP reference works covering the same knowledge field will also be shown below through the analysis of a sub-section of the DLM (cf. § 4.1).

2 Features and structure of the DLM

[1] The terms 'LSP dictionary' and 'terminology' will be used as synonyms here; cf. Bergenholtz & Tarp (1995: 10-11, ff.) for a discussion on the relation between "specialised lexicography" and "terminology/ terminography". On this subject cf. also Brekke (2001).
[2] Dolezal (1989) and Wiegand (1990) highlight the textual dimension of general language dictionaries, but an analogous view can be drawn for those dealing with special languages. The specific organisation of an LSP dictionary is the outcome of different variables, such as intended users, purpose, dissemination medium, linguistic and domain knowledge provided or presupposed, etc. (Cf. Brekke 2001:181; Bergenholtz & Tarp 1995).
[3] The issues relating to the way in which the different aspects of specialised knowledge are represented in LSP reference works are analysed in depth in Schaeder & Bergenholtz (1994).

The elaboration of this LSP dictionary is based on a procedure of information retrieval from a corpus of specialised texts which differs from those generally used for dictionary production. In fact the DLM is intended to provide a lexicographic product entirely based on the terminological data available in the texts of the language sciences.[4] The starting point for term identification and analysis is the scrutiny of single works. Therefore, the overall corpus is not used by the compilers as a unique and comprehensive source of information, but is the final result of an assembly of distinct textual sources selected on the basis of their importance in the history of linguistics.[5] The final lexicographic product is a collection of the terminologies of outstanding authors, which are made available to the users of the DLM as integrated materials. In this way the outcome is a product in which the terminology of linguistics is represented both synchronically and diachronically, in a framework which takes account of the multifaceted reality of linguistics terms.

The compilers of the DLM are not terminographers but linguists, or occasionally students supervised by a specialist. In this project the interpretive role of the compilers is significant because it emerges through their direct intervention in different phases of the elaboration process. In the first place, compilers select the texts that will be analysed, then a textual analysis is carried out with the intent of identifying – through the application of the procedures explained below – the terms that are recognised as relevant for the theory discussed in that specific text. Terms and their corresponding original definitions are recorded in the DLM. In the working process the compiler extracts and analyses the terminology of one text at a time (including synonyms, variants, and translation equivalents). Definitions are pinpointed through a complete scrutiny of the work under examination and, particularly, of the passages where the selected terms are quoted (cf. § 3.1). The definitions recorded in the DLM are only those provided in a more or less explicit way by the author(s) who used or introduced the term. Hence they always consist of one or more quotations from the source text. As a result the defining sections contain quotations rather than definitions elaborated or re-elaborated by terminographers. This concise illustration of the compilation procedures of the DLM explains why, although it is called a *dictionary*, it should be interpreted as a *database of authors' terminology*.

Most terminological works are focused on a synchronic representation of the metalanguage of linguistics which is generally accepted by the community of specialists (e.g. cf. Crystal 1996). Whereas, the DLM was planned to make available to specialists and students a collection of the terminologies adopted throughout the history of linguistics by the most representative theorists. The decision to compile this type of dictionary can be explained by the need to develop a product that fills a gap in the panorama of the reference works available in this area of knowledge.[6] The peculiarity of the DLM consists in the fact that it combines the features of both a reference and a theoretical text, without displaying an encyclopaedic outline. A collection which provides the terms used or even created by single scholars gives a

[4] The model of the DLM was outlined by Cristina Vallini with the aim of providing a systematic gathering of the terminological heritage of the language sciences. The principal characterising feature of this lexicographic resource is that it is grounded on strong theoretical bases provided by the special typology of the materials that constitute it (cf. De Meo & Lorenzi 2006:§1). A comprehensive description of the DLM is given in Lorenzi (2002).

[5] The structure of the corpus cannot be described in full, but a basic outline is provided below (cf. §3).

[6] For example, as regards contemporary English-language dictionaries of linguistics, Crystal (1997:26) highlights the absence of research which could provide a "list of historical sources or corpus citations". On the other hand, a corpus of the principal linguistics texts is the aim of the project CTLF (*Corpus de Textes Linguistiques Fondamentaux*: http://ctlf.ens-lsh.fr/), but for the moment this resource does not have a lexicographic outline.

representation of the spectrum of the focal concepts of individual theories of language. In addition, it makes available information on the fundamental issues characterising the different periods in the history of linguistic thought.

The diachronic dimension – which is given prominence in the DLM – may play an important role in terminology, especially in the humanities.[7] Linguistic concepts and terms outline conceptual structures, i.e. theoretical networks, which are specific for authors and schools. Therefore, a terminology of linguistics needs to cope with variations and changes displayed by terms when used by different authors and/or in different periods of time. In the traditional lexicography of linguistics, the synchronic perspective is dominant. Nevertheless, it is often integrated with encyclopaedic notes which provide the end user with references to specific analytical frameworks and/or author's usage. These are features which may help in the definition of particular values acquired by terms within specific theories. The outline of the DLM favours the handling of terminological complexity, thus the ambiguity, variation, and redundancy that often characterise linguistics terms can be clarified.[8]

3 The distribution of conceptual knowledge in texts

In the following passages I will focus my attention on the importance of original texts in the production of the DLM and on the problem of the interpretation of concepts which has a particular character in this dictionary because it is basically related to the selection (and 'presentation') rather than to the 're-elaboration' of defining materials. A specialised dictionary is compiled in order to provide a representation of expert knowledge, and the corpus-driven dictionary under examination here makes available first-hand specialised knowledge in a direct way. The terms recorded in the DLM are identified in texts produced by outstanding authors throughout the history of linguistic speculation. Hence it also includes the works written in the 'pre-scientific period'; in fact, my attention will be focused on one of these. The DLM also contains data from dictionaries and encyclopaedias of linguistics, but limits them to the entries while leaving the definitions aside. This type of source is mainly used for making available information on multi-language terminological equivalences but cannot offer original data on concept definitions as these are produced by lexicographers (cf. De Meo 2002:43). Complete data on inter-linguistic concept equivalents are included in the entries of the DLM only when they can be drawn from official translations of the original works or from translations occasionally provided by the author within the text under analysis.
Antia – among others – underlines the close connection between designations and the conceptual knowledge they convey:

> As labels (linguistic and non-linguistic) for specialised concepts, terms are a means of acquiring, retrieving, creating, communicating, storing, representing and operationalising specialised knowledge (Antia 2000:xv).[9]

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[7] Nevertheless, the prominence of the diachronic dimension of terms also in hard sciences is underlined in terminology literature (cf. e.g. Temmerman 2000:107-115).

[8] Cf. Gotti (2003:46-65) for an analysis of the characteristics of specialised discourse which challenge the basic principles of terminology though being part and parcel of the actual nature of specialised lexica.

[9] Numerous definitions of the concept of 'term' have been given in the literature; these reflect the complexity of this notion and its various interpretations in different theories. A basic distinction can be made between those readings which interpret the term merely as a designation (e.g. a "lexical unit consisting of one or more than one word which represents a concept inside a domain", cf. *Glossary of terms used in terminology*, s.v. "term") or as a more complex entity which embodies the referential, linguistic, and conceptual facets of specialised knowledge (e.g. Cabré defines terms as "three-way units of meaning (thing-name-meaning) which refer to the specialized reality", 1996:19). Here 'term' is used with both meanings but, when it is necessary, distinguishing designations are adopted instead.

In the DLM the compilers identify as 'terms' all the lexemes which are attributed a metalinguistic value by the authors of the texts considered. Thus, it also records terms that are often excluded from traditional specialised dictionaries, such as similes and metaphors.[10] Therefore, in addition to the terminological and conceptual data which are usually represented in LSP dictionaries, the DLM also takes account of those that belong more directly to the communicative facets of knowledge stored in specialised texts, i.e. information which normally does not appear in the conventional outline of terminologies.

The specialised contents structured in texts are necessarily synthesised and rearranged in terminologies. This process serves to provide the end user with a satisfactory representation of specialised knowledge which makes it easily accessible and usable for specific purposes (e.g. related to the reception, production or translation of texts). In fact, the texture of specialised concepts displays a relative complexity within texts, where the units of knowledge are distributed and variously organised. Different degrees of informative density can be recognised throughout the textual passages. Jansen (2003) establishes three main parameters for detecting the density of information in LGP texts; but these can be applied to the analysis of LSP texts as well. The distinguishing criteria consist in the quantity of information, the quality of information, and the quantity of non-information contained in texts (Jansen 2003: 9-11; 212-213). The first parameter refers to the way in which content data are expressed in texts, that is to say it considers whether information in the surface structure is implicit, explicit or omitted. The second principle concerns the degree of compactness characterising the linguistic expression of relevant information throughout the text, i.e. the degree to which linguistic materials express informative contents in a distributed or concentrated way.[11] The third parameter pertains to the quantity of 'non-information' present in texts, namely linguistic materials which do not perform an informative function but rather discursive, structuring, evaluative, and interactional ones (Jansen 2003:9-11; 212-213).

Jansen applies these criteria to the analysis of narrative texts, while in this study the 'density of information' refers to linguistics texts. Hence as regards these principles, and particularly the third one, it needs to be highlighted that the importance of the functions of linguistic and non linguistic materials depends on the typology of texts. Since the present scrutiny is devoted to the organisation of specialised knowledge in terminologies, and specifically in the DLM, the identification and extraction of terminological and defining materials in LSP texts are focal issues. The analysis of texts is driven by the intent of identifying core concepts and reconstructing conceptual patterns, i.e. threads and networks of concepts. Thus the content (or conceptual) dimension of texts acquires a crucial role in this process, but a consideration of the cognitive, functional, and communicative components that contribute to shape LSP texts is also essential.

An analysis of LSP texts can be characterised by different but complementary methodological perspectives which give account of the complexity of specialised communication, so much so that Baumann (1992) introduced an integrated approach to the study of specialised text

[10] These points are discussed by De Meo (2002:35; 49-50) and De Meo & Lorenzi (2006:§3). As an example can be quoted the similes of the "jeu d'échecs" and the "feuille de papier" introduced by Saussure (1916:43; 157) when discussing the concept of *langue*. In the DLM a metalinguistic value is attributed to these similes, which are included as entries and connected to "*langue*".
[11] Jansen refers in particular to lexical and syntactic compactness, but for the purpose of the present study this criterion can be extended also to longer textual sections (i.e. paragraphs, chapters, etc.).

linguistics. His theory considers the various factors that combine to form the specialised knowledge contained in texts.[12] As Rothkegel synthesises (2005:84):

> A text is a communicative unit that converts general schematic knowledge into usable information in a sense that persons are involved into some communicative processes in which the application of knowledge plays a crucial role and which includes cognitive states, attitudes, goals, emotions. This is a new quality of 'information processing' because it is embedded into the physical, mental, social, and institutional life of human beings. As a consequence, a text is considered to be an organisational device for communicating knowledge according to some specified functions which are related to some specified situations of communication.

The articulation of specialised communication is also a central issue in terminology studies, as the recent currents of research attest (cf. e.g. Cabré 1999, Temmerman 2000). The standpoint of text analysis directed at terminological investigation takes into consideration the different communicative aspects that interact in specialised texts:

> A text is not just a linguistic unit but a mode of social and cultural expression allowing individuals to relate to one another. Therefore, many aspects besides those that are purely linguistic must be analyzed in order to characterize a text correctly. First, texts are complex linguistic units and conform to the rules of combination of each language system. Secondly, texts are complex pragmatic units, because they are produced by people who are neither psychologically transparent nor ideologically neutral. Thirdly, texts are complex sociolinguistic units because a language is a system for social communication that occupies a certain place in society that uses it and has a relationship to other languages and their societies with which it is in contact. Finally, texts are complex cultural and anthropological units which reflect and communicate a system of cultural and ideological values by means of discourse (Cabré 1999:57).

In the blueprint of the DLM, the communicative issues that coalesce in texts, and that contribute to outlining its knowledge architecture, are interpreted as effective components of specialised communication. For this reason they are seen as potential sources of relevant metalinguistic information. Nevertheless, in the textual passages where the metalinguistic function is not explicitly activated, specialised information usually appears as 'diluted' and its threads need to be drawn together by the compiler of the DLM who aims to select and record terminological data.

A complete scrutiny of this subject goes beyond the scope of this paper; the aim of this section is limited to highlighting the interpretive problems encountered by the receivers of texts and, in particular, the compilers of the DLM. The latter have to identify key concepts (and possibly their various designations) and their clear-cut definitions in linguistics texts. Hence their work is characterised by the particular attention they have to pay to the

[12] Baumann (1992) proposes an integration of the methods of different disciplinary fields (e.g. sociology of language, psychology, terminology, etc.) as these may explain the facets of specialised communication that can be identified at different levels through a structural and functional analysis of specialised texts. Cf. also Baumann (2001a, 2001b) for a discussion of the aspects which contribute to shaping knowledge systems in specialised texts, and which determine the necessary application of a combined perspective in textual analysis.

conceptual information structured in texts, but in order to do this, they also have to consider stylistic, communicative, and interactional components of the linguistic message.

3.1 Definitions in linguistics texts and in the DLM

The DLM was planned as a particular type of reference work: since its initial outline it has not been conceived as a dictionary of linguistics that would contain the product of the elaboration of specialised materials made by terminographers. It is rather intended as a repository of selected original data organised in a format which can make them easily accessible for students and specialists (De Meo 2002:35-38).

The various types of specialised reference works – ranging from the glossary, to the dictionary, the terminological database, and the terminological ontology – provide underlying structured representations of the conceptual relational system designated by the terminology of a specific discipline or field of knowledge. Different strategies are used for reorganising and presenting knowledge in the various models of specialised reference works. In any case, the identification of the conceptual system is a necessary working step even when it is not directly made available to the user.

As discussed above, the specialised knowledge that can be found in texts is often ‘distributed’ in discourse. The works which make up the corpus for the terminological research of the DLM mainly consist of monographs and, to a lesser extent, of articles; hence the corpus is basically made up of informative or argumentative texts. The communicative purpose, and the structural organisation of texts tend to enhance the fragmentation of relevant information in different prose passages. In our perspective this implies that the defining properties of a concept are often distributed in various parts of a text. In addition, a text – or particular passages of it – can be characterised by different degrees of ‘density’ of explicit specialised contents, depending on its typology and the readers it is addressed to.

In linguistic writings the use of terms made by specialists is not always accompanied by a gloss or an explicit definition; often long passages – or even whole chapters – are devoted to the discussion and the thorough analysis of a concept. Hence, in the flow of discourse conceptual information is provided, but the reader has to ‘reconstruct’ a concept definition by gathering and organising partial information distributed in different sections of the text.

The extraction of a single sentence or paragraph containing a complete and fully satisfactory definition is a difficult – sometimes impossible – task for the compilers of the DLM. For this reason, in many cases more than one quotation is provided for the same term. In this way the information relevant for identifying the concept is selected and extracted from the source text and made available to expert or semi-expert users. Hence the concept can be ‘reconstructed’ from the information given in the textual passages, with the ‘side benefit’ of also retrieving data on the usage of terms in context. Occasionally the dilution of information makes it impossible for the compiler to identify an informative quotation. In this case, the guidelines of the DLM establish that the term cannot be recorded, even though the concept might eventually be delineated through a close scrutiny of the text.

Quite rarely those collected in the DLM have the characteristics of satisfactory definitions, that is to say analytical ones, or anyway definitions that provide the necessary and sufficient properties of the concepts in question, as those obtained for example through the application of theoretical perspectives different from the logical and ontological ones. In fact, the type of definition depends also on the nature of the concepts that are defined.[13] An alternative approach is represented, for example, by conceptual analyses based on prototype structure, cognitive models, or a diachronic scrutiny.[14] The structural and communicative features of linguistics texts and the specific nature of at least a part of the concepts introduced there may account for the definitions which do not match the analytical model. The following definition of "meaning" in Simon Dik's *The theory of functional grammar* (1989) could be considered an example of a rather satisfactory term definition given in the DLM:

> […] I shall reserve the term "meaning" (or "semantic content") for the information which is in some way or other coded in the linguistic expression as such. Thus, semantic content is a feature determined by the language system, to be accounted for in the grammar of a language"
> (Dik, 1989:11; http://dlm.unipg.it/Consultazione/citazioni.asp?IDCitazione=14615).

Here the author also provides a clear synonymic correspondence – recorded in the dictionary – between "meaning" and "semantic content".

But in most cases, those provided in the DLM should be identified as 'defining comments' rather than proper definitions (cf. § 4.1). For example, the concept "meaning" as intended by Bloomfield in *Language* (1935) is illustrated by seven quotes which concurrently contribute to explaining the term under examination by providing its characterising features, but none of them if singled out can be considered a satisfactory definition. The DLM was given the particular outline shown above because it was designed to provide a valid source of metalinguistic information which is faithful to the original speculation of the linguists whose works are considered. And above all, it is proposed as a reference work that can take account of the multifarious reality of authors' usage of terms, also from the historical perspective.

Since the materials of the DLM make available first-hand knowledge drawn from specialised texts, its users can compare the different values attributed to the same term by various authors in different periods – that is to say, the use of the same designation for distinct concepts in one knowledge domain – or also the evolution of and change in concepts and designations over time. For example, in the text by Wilkins that I have analysed (cf. § 4.1), we find the term "semivowel" (Wilkins 1668:360), though it refers to a concept which does not correspond to that which we associate today with the same designation. Wilkins introduces this term when he signals that his contemporaries use it for referring to "breathed consonants".[15] Nevertheless, he also discusses the concept equivalent to the modern content of the designation 'semivowel', but the designation he uses is "Intermediate Vowels", or its

[13] Temmerman introduces the notion of "units of understanding", which overlap only in part with the traditional interpretation of the 'concept', as these include also 'categories' (Temmerman 2000:73; cf. also *ibid*.:43, 65). Concepts can be defined according to logical and ontological analysis, while 'categories' have a prototypical structure and the theoretical parameters that are suitable for their definition are different from those used to define concepts.

[14] Geentjens *et al*. (2006:10) underline that terminological analysis in the framework of the "sociocognitive approach" is based on the methods used in cognitive semantics, i.e. "prototype structure analysis, cognitive model analysis and diachronic analysis" as these theories can explain how human knowledge is acquired and organised.

[15] "SEMIVOWEL: All simple letters may be distinguished into such as are [...] Intercepted and shut according to degrees Lesser; which because they have something Vowelish [sic] in them, are therefore by some styled Semivowels, being spirituous and breathed [...]" (Wilkins 1668:360). These sounds would be designated in contemporary phonetics terminology as nasals, fricatives, retroflexes, and laterals.

synonyms "[Sounds having a] Middle nature / mediæ potestatis / middle power" (Wilkins 1668:360, 370).

This example gives an idea of the changes which characterise the terminology of a discipline from a historical perspective, and the DLM with its focus on the terminology of single authors can give account of such data. Linguistics is one of the disciplines in which the socio-cultural and historical dimensions play an important role in term formation. As shown in the example above, secondary term formation often consists in a reformulation of the concept which is made to correspond to an unvaried designation due to changes in the background theory. So, for instance, 'sign', which is obviously a basic notion in linguistics, corresponds to different concepts in this and in interrelated fields – also from a synchronic perspective – depending on the theoretical approach adopted (e.g. Saussure's 'sign' is not the same entity as that intended by Ogden & Richards, 1923).

4 The structural organisation of the DLM: consultation paths and conceptual relations

The DLM is a database which can be consulted following different paths as the search can be by lemma, author or text. The basic organising principle followed in its elaboration is the indexing of terms starting from the specialised text in which they are used. The search by text gives access to the comprehensive alphabetical list of the terms extracted from it; from the list the specific record where each of them is analysed can be consulted. If the search is by lemma, the result is a list of its occurrences in all the indexed works. From this overview users can consult the single records of the occurrences, and compare the definitions or the uses which characterise the various authors or, if it is the case, their uses in different texts by the same author. The search by author provides the corresponding indexed text(s), which can be accessed with the system illustrated above.

These types of searches are integrated by the possibility of retrieving data organised according to a chronological principle. This search can be by year or lemma. In the first case, the result is an overview of the terms recorded in the DLM according to the year of their appearance in specialised texts. The chronological search by lemma yields a scheme regarding a single term showing the year(s) of its occurrence in the indexed works; from the general graphic it is also possible to access each single record.

This overview of the DLM points out the peculiarities which distinguish it from the repertoire of electronic or printed dictionaries and encyclopaedias of linguistics which it sets out to complement. In fact, as underlined above, its principal aim is not so much that of satisfying a need for clear-cut definitions or translation equivalents, as these are provided by other types of reference works. Rather, it is focused on making available an organised repository of original and comparable data.

At this stage the DLM is not complete, hence we cannot consider its corpus as a satisfactory spectrum of linguistics knowledge. Indeed, my attention here is not focused on this aspect but on the potentialities that its structure displays, especially as regards the type of knowledge represented in this terminology. The DLM proves that the nature of the specialised knowledge provided by a reference work also depends on the materials selected and the way in which they can be accessed by the users. In fact, the type of knowledge contained in a terminological tool and the format of its presentation can affect the acquisition and structuring of specialised information in users' minds.

The functions of the DLM now available to the public do not yet include the possibility for end users to fully access terminological relations, apart from synonymy, generic cross-references, and translation equivalences. Since in this dictionary the single text is the starting point for terminological analysis the relations now displayed are established among the terms of each single text. The same principle will also apply to the future implementations aimed at providing a more complete overview of the conceptual relations existing among such terms. These will soon be available to the public on the DLM web-site.
The changes and new applications under development are directed at integrating the indexed materials with relational schemes which highlight the connections among the terms recorded for each text. As will be exemplified below, a relational conceptual scheme will complement the information that can be drawn from the 'defining quotations' in each entry. With this new component the bi-dimensional model of the DLM that provides terms and authors' definitions is projected in a multidimensional scheme where the user can retrieve more complete information concerning the indexed terms. The relations identified and outlined in the visual representation include those that can be directly drawn from the 'defining quotations' of the term under analysis, and those that do not appear in an explicit way in the quotations but can be elicited from the definitions of related terms. If it is necessary, the whole text becomes a source of further knowledge that can support the compiler in this interpretive task.

The graphic scheme now planned is probably not the best possible one as it displays an "associative system" (cf. Wright 1997:90). One drawback of this type of representation consists in the fact that all types of term relations – indicated by connection lines in the graph – are put on the same visual level. Still, this flaw is balanced by the presence of descriptive labels which make explicit the types of connection indicated by the lines, and different colours are used for each of them. In addition, the presence of directed arrows where appropriate in the graph also shows whether the relations are symmetric or asymmetric (cf. Figures 1-3 below). The relations that can be displayed on the same graph are both hierarchical (hyperonym-hyponym, part-whole) and non-hierarchical ones (opposition, derivation, synonymy, translational equivalence, etc.).

A comprehensive conceptual network for all the terms in the DLM has not been planned, as its use would be impractical and theoretically inappropriate. This is mainly due to the fact that the leading classificatory principle of the DLM is the analysis of the set of terms used by single authors over an extremely long period of time. Furthermore, an overarching graphic representation could not easily cope with the polysemy and variation that terms display, especially when they are analysed from a diachronic perspective. Hence for each text a graph is delineated as a result of the compiler's identification of specific conceptual relations. This phase of the work is an additional component of the compilation process illustrated above (cf. §2). The outline of a conceptual network is made possible by the close scrutiny of information gathered through the previous steps of textual and terminological analysis. Thus the relational graph is not limited to offering a schematic view of the data contained in the corresponding terminological record: it can also provide additional specialised knowledge. In this way it becomes, in all respects, an effective component of the defining section of the DLM.

Users can access the graph through a link that will be provided in each record; the result of his search will give a partial view of the complete chart, i.e. the section centred on the search term showing all the concepts it is directly related to. In fact, a complete view of the graph representing the entire terminology of a single text would be difficult to consult, especially when the number of terms indexed is very high. Yet, from the partial graph the user can continue the exploration: by clicking on the terms related to the search one the graphs devoted to each of them can be consulted.

4.1 The relational scheme of the *Essay* in the DLM

Through the consideration of text which I have analysed and indexed for the DLM, it is possible to illustrate more clearly two focal features related to knowledge retrieval and representation in this LSP dictionary. The first point concerns the ‘density’ of conceptual information contained in textual data and, particularly, the difference between the analytical definitions of terms directly given in LSP texts – which are relatively rare – and what might be called ‘prose’ (or ‘discursive’) ‘definitions’. The latter are discursive sections or even chunks of text containing relevant conceptual data which are therefore not available as a cohesive whole in a single passage, but rather dispersed throughout longer textual excerpts. The second issue relates to the role that the abovementioned data play, on the one hand, in making available the conceptual information conveyed by terms and, on the other hand, in the function they have in the visual representation of such data through a graphic relational system.

The text under examination here is *An Essay Towards a Real Character and a Philosophical Language*, published by John Wilkins in 1668 under the auspices of the Royal Society. Even if this work belongs to the pre-scientific period of the history of linguistic thought, it provides interesting data which are relevant both for the content and the organising principles of the DLM. Indeed, Wilkins’ text represents a contribution to the specialised language and concepts of linguistics of the end of the 17^{th} century (cf. Leonardi 2008). In addition, it displays remarkable features with regard to the principles of conceptual classification and definition; this is a basic issue in terminology science, and is also particularly important for the delineation of a relational conceptual model capable of organising the DLM terminology.

The *Essay* can be considered ‘anomalous’ if compared with the other texts indexed in the DLM. It is not possible here to go into the details of the structure of the *Essay*, but it is necessary to point out that its textual architecture is particularly complex as it includes different – and partly cross-referenced – types of texts. Each of them provides a distinct type of definition which have now all become ‘defining quotations’ in the DLM. ‘*Discursive definitions*’ can be found in the prose sections devoted to Wilkins’ consideration of various aspects of language which are significant in the history of linguistic thought. This section does not explicitly aim at providing concept definitions but is anyway extremely important for the DLM terminological analysis. In addition, this work contains an *Alphabetical Dictionary* where *glosses* are used for disambiguating polysemous words or homonyms. Yet, the primary defining section of Wilkins’ dictionary is arranged according to ‘philosophical’ principles, that is to say following a model which aims at reproducing the organisation of human knowledge. In this section *analytical definitions* are given because this part of the text is structured as an ontology, a hierarchical and network scheme, based on three main classificatory levels which display the properties of the “things and notions” categorised in Wilkins’ book. Hence the conceptual information contained in the defining section of the *Essay* is provided by an interplay of devices and types of text: it integrates the traditional structure of an alphabetical dictionary, a clear-cut ontological frame, and prose discussions containing relevant conceptual data.

From the overall inventory of concepts defined in the *Essay* I have extracted and analysed the terms related to linguistic issues. Some parts of the relational graph I elaborated for structuring Wilkinsian terms in the DLM are basically drawn from the author's own scheme; as explained below, also part of the terminology used for specifying the relations is borrowed from that used in the *Essay*. I integrated the relations explicitly established by the author with others that can be clearly identified in the text. An interesting point of this contribution to the DLM is that, in this case, the originality of the materials is not limited to the 'defining quotations' but also involves the relational graph, whose delineation otherwise is left entirely to the interpretation of the compiler. In fact, the terminology of the *Essay* is also used as test data for the implementation of the new cataloguing and consultation functions of the DLM: the peculiar textual typology of this work proposed, at the end of the 17th century, a relational defining structure similar to that planned for this contemporary terminology.[16]

The following examples show the importance of a relational scheme that integrates the conceptual data expressed in different sections of a text, the *Essay*, which in itself displays distinct types of textual structure and of density of information. In its relational graph coalesce conceptual data retrieved from explicit (and deliberate) term definitions, brief glosses, and 'prose definitions'. The term "language" is defined in the *Essay* as follows:

> Of DISCOURSE, Or the several notions belonging to *Grammar* or *Logick* […]. To which [i.e. Discourse] may be annexed that particular way of discourse, most in use, namely by articulate voice and words, called LANGUAGE. Tongue, speech, linguist, dialect (Wilkins 1668:44).

An outline of the conceptual relations of the term "language" which is based on the analytical definition given in the ontology provides only a limited view of this concept as it is intended by the author. In its corresponding graph only four types of relations would emerge (*is-part-of*, *has-adjoined*, *term-connected-with*, *is-affinis-to*), these connect the term "language" with eight concepts (discourse, grammar, articulate voice, tongue, speech, linguist, dialect), as Figure 1 shows.[17]

If the information on "language" presented above is integrated with the data resulting from the analysis of other terms in the text, additional relations can be identified, and the conceptual network becomes more complete: six relations connect twelve concepts (cf. Figure 2). Synonymy and hyponymy (*is-synonym-of*, *is-a*) are added to the relations identified in the initial definition. In fact, in the complete graph of the term "language" its synonym (tong) and hyponyms (mother tongue1, mother tongue2, dialect1, derivation1) also appear.[18]

The denomination of some relations might seem peculiar, my reference is in particular to "is-affinis-to" and "has-adjoined". This is due to the fact that five basic relations are indicated by Wilkins himself in his defining ontology. For the DLM the same designations used in the *Essay* – with slight reformulations – were maintained, as these can be basically understood also by users who are not familiar with Wilkins' work.

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[16] On the defining architecture of the *Essay* cf. Hüllen (1999, 2004:284-287, 290-291); Maat (2004:135-217).
[17] In particular, "language" *is-part-of* "grammar", *is-affinis-to* "discourse", is a *term-connected-with* "articulate voice", and *has-adjoined* terms, i.e. "tongue", "speech", "linguist", "dialect".
[18] Homonymic term designations are distinguished by a number; formal variants are considered as complete synonyms.

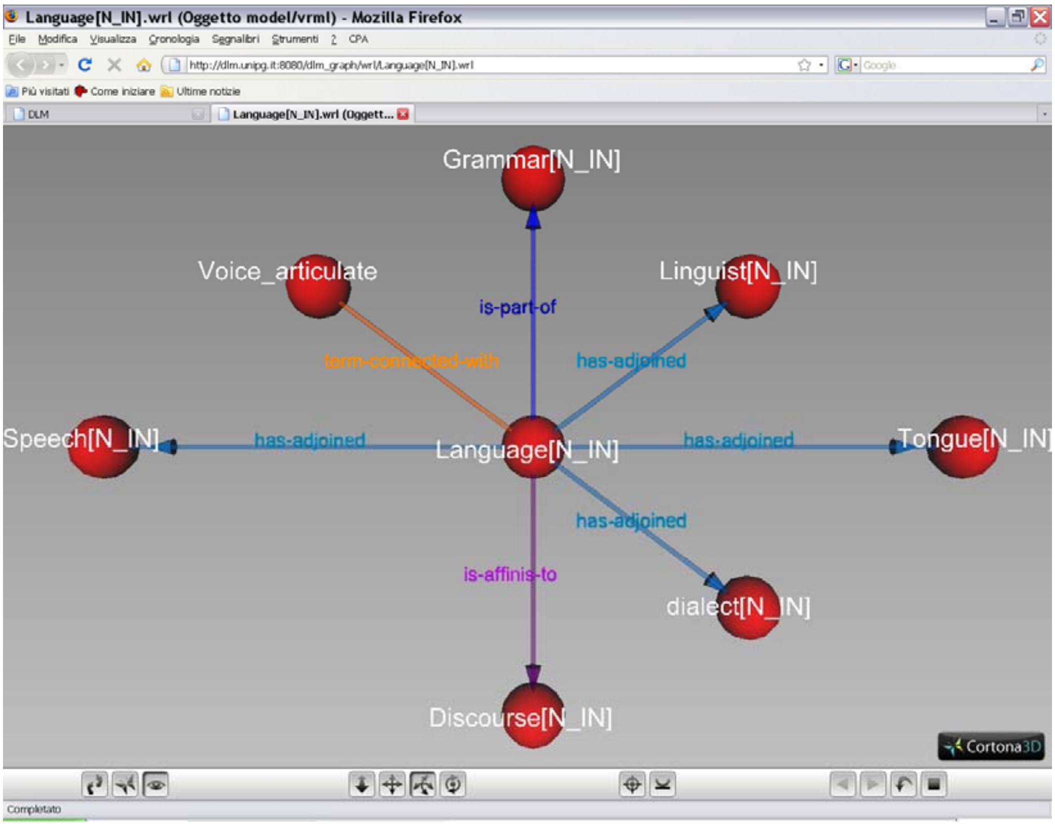

Figure 1: Graph of the basic relations of the term "language".

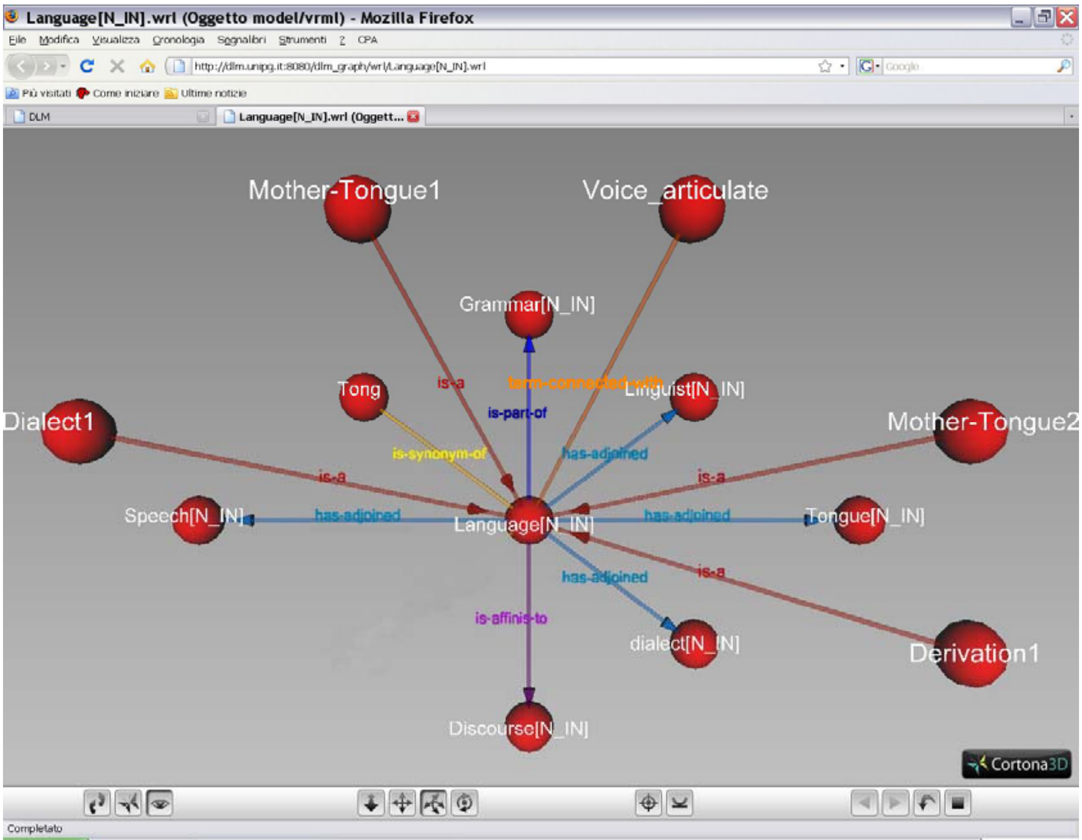

Figure 2: Graph of the complete relations of the term "language".

The relations identified by Wilkins are: *is-a* (alternating with *is-a-type-of*) and *is-part-of*, and the rather general ones of opposition (*has-opposite*) and affinity (*is-affinis-to*): *has-opposite* generalises in the *Essay* and in the DLM various types of opposition (complemenaries, antonyms, reversives, converses, etc.) and *is-affinis-to* indicates, in a general way, a privileged relation with a co-hyponymic concept.[19] A further type of association indicated by the author is called *adjoined* (by focusing on the core term I renamed it *has-adjoined*), this tag includes both complete synonyms and more often hyponyms of the head-term. An example of 'adjoined' terms is given in the definition of "Language" where "tongue, speech, linguist, dialect" are connected to the main term. The specific relation between a term and the 'adjoined' ones is usually made explicit in the *Alphabetical Dictionary* attached to the *Essay*.
The relations established by Wilkins were not sufficient for describing the connections between concepts in the network, for this reason I added nine more: *is-synonym-of* (which indicates complete synonymy or variation of graphic form), *has-property* (which serves to detect distinctive features, especially those of co-taxonyms), *derives-from*, *translation-of*, and *term-connected-with* (which signals a generic conceptual relation and also a cross-reference to other terms). In addition, the following relations have been added, even though they apply to a rather limited number of term relations: *is-cause-of*, *group-of*, *location*, and *people* (these are mainly used for the description of terms designating natural languages).

The following is an example of how the graphic representation of conceptual relations requires a knowledge which is often not made explicit in the 'defining comments' provided in specialised texts. Hence a graph can also occasionally show data which are not included in the 'defining quotations' of that specific term, either because this information comes from the definitions of other terms or because they are included in the original text, but are available only in sections or passages which do not match the typology of a 'defining quotation'.

The interpretation process that leads to the compilation of the record and the graph of the term "Synonym" (and its variant "Synonymous") takes into consideration different sections of the *Essay*. It is not defined in Wilkins' ontology but three 'defining quotations' were detected in the prose text and in the *Alphabetical Dictionary*:

> In respect of *Synonymous* words, which make Language tedious, and are generally *superfluities*, since the end and use of Speech is for humane [sic] utility and mutual converse; *magìs* [sic] *igitur refert ut brevis, & rectus, & simplex sit quàm* [sic] *lòngus* [sic] *& varius* […]. And yet there is no particular Language but what is very obnoxious in this kind" (Wilkins 1668:18).
>
> "Many of the Synonymous words put to the Radixes [in the *Philosophical Tables*], are referred to more heads then one, upon account of their various equivocal acceptions. And besides such words or phrases as are more plainly Synonymous […]" (Wilkins 1668:290).
>
> "Synonym [Of same meaning]" (*Alphabetical Dictionary*, s.p.).

These passages only reveal one relation of synonymy and three of the general type '*term*[s]-*connected-with*': such data are not adequate to provide a satisfactory definition. Yet, in the

[19] The formula commonly used by the author is '[term] x to which [term] y is affinis' or, more rarely 'is annexed', as in the citation above (Wilkins 1668: 44). A similar formula is used for the relation of opposition: '[term] x to which [term] y is/may be opposed'. Often formulas are not used at all, and the information is provided in the corresponding term entry of the *Alphabetical Dictionary*.

relational graph one distinguishing property of this term also emerges and, what is more relevant, it is identified as a "Defect of words" (cf. Figure 3). The recognition of its hyperonym is crucial for the definition of this term in Wilkins' linguistic theory. Such information, which does not appear in the 'defining quotations' recorded in the DLM, can be easily retrieved by the compiler. The problem is that the textual structure which contains it does not match the requirement of the DLM guidelines concerning 'defining quotations'. Indeed, it is contained in a passage which introduces the discussion on what are identified as "linguistic defects", which reads: "Besides these defects in the usual *Alphabets* or *Letters*, there are several others likewise in the *Words* of language, and their Accidents and Constructions" (Wilkins 1668:17). The second point in a list of defects is one of the passages cited above. Moreover, the discussion that Wilkins makes on two pages (Wilkins 1668:17-18) contribute to clarifying the nature of this concept as one of the defects of words. This term is also explicitly related to "meaning" in the gloss of the *Alphabetical Dictionary*. On the other hand, "synonym" is not mentioned at all in the definition of "meaning" provided in the ontology of the *Essay*.[20] Hence the cross-reference between these terms is made easily available to the users of the DLM by the implementation of a system of graphic representation. In fact, this relation clearly appears in the graphs of both terms, but it is evident only in the defining record of "synonym".

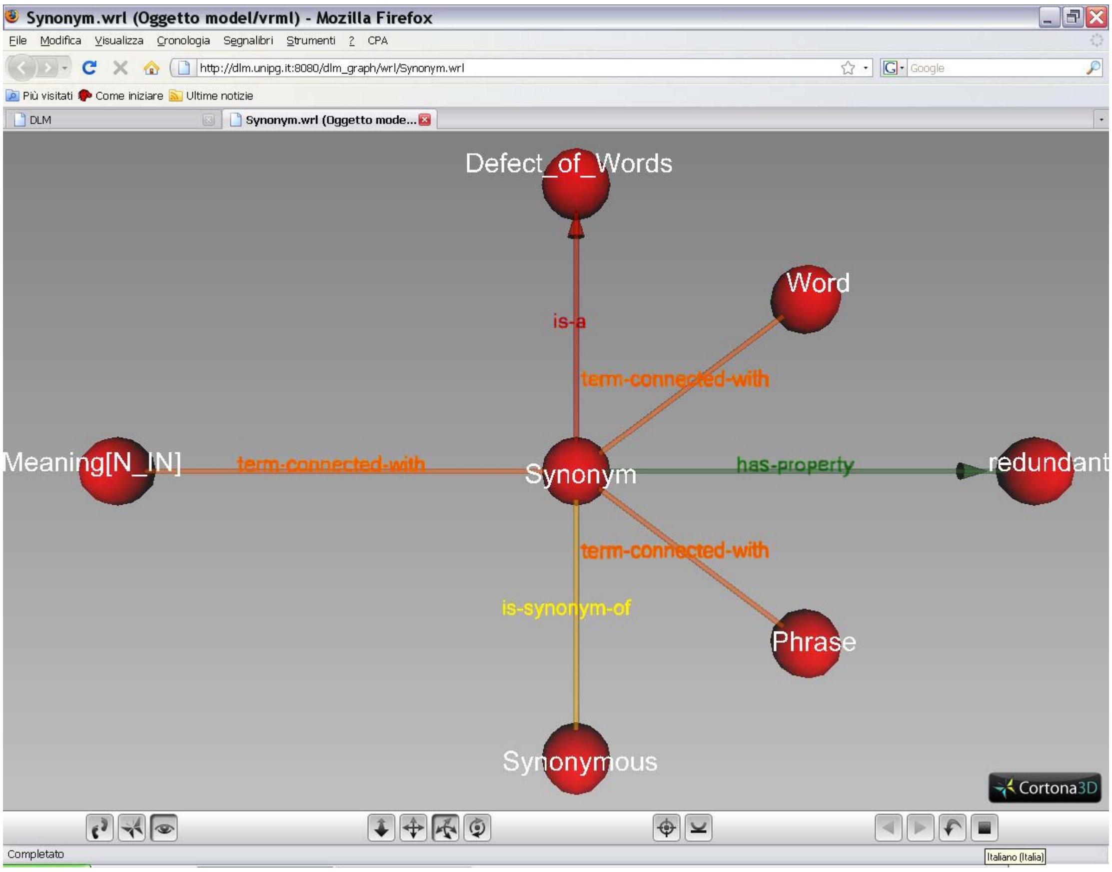

Figure 3: Graph of the of the term "synonym".

[20] "Of DISCOURSE, Or the several notions belonging to *Grammar* or *Logick* […]. THE most general name for those external expressions, whereby men do make known their thoughts to one another, is DISCOURSE The several things and notions belonging to discourse, may be distributed into such as do concern the *Parts of it*; or those primary ingredients of which it consists, *Less simple*; WORDS. II *That which is intended by any such sound or Character*, is called MEANING. Sense, signification, purport, acception, import, tenor, denote, moral" (Wilkins 1668:44, 46).

5 Conclusions

This survey has focused on the DLM as a case study for the consideration of the way in which the specialised knowledge that is organised in texts can be represented in LSP dictionaries. Concept defining properties are variously distributed in texts, and often remain implicit. In the DLM this problem is particularly evident because its definitions are directly drawn from author quotations. The initial model of the DLM provided terminological information in a bi-dimensional scheme but, in a more recent phase, it has been integrated with a relational chart which can point out the connections among the recorded terms. In this way the DLM is endowed with a multidimensional defining paradigm.

The examples drawn from the *Essay* that I have considered above suggest how the interrelation of the two sections planned for the DLM can help the user to have a more complete view of the concepts recorded in this on-line dictionary. In the blueprint of the reference work under examination a crucial role is attributed to the conceptual information as it is provided by the authors of outstanding linguistics texts. It is recorded in 'defining quotations', but these do not always give a clear-cut view of concepts – and we might also add that concepts do not always have a clear-cut outline within texts.

In the DLM entries the indication of synonyms and generic cross-references between terms is made available, but a more complete and detailed view of conceptual relations is guaranteed by their graphic representation. In the graph term relations are made explicit, also from a visual point of view. In the DLM, graphs simplify and, at the same time, also integrate the information that is provided both by the quotations and the sections of the text that are analysed by the compiler but cannot be included as explicit information in the records of the dictionary.

The complementary data contained in each single system are available to the user as a result of the interrelation between the two sections of the DLM: in these interrelating components the knowledge distributed in specialised texts is collected and organised while also maintaining its original format.

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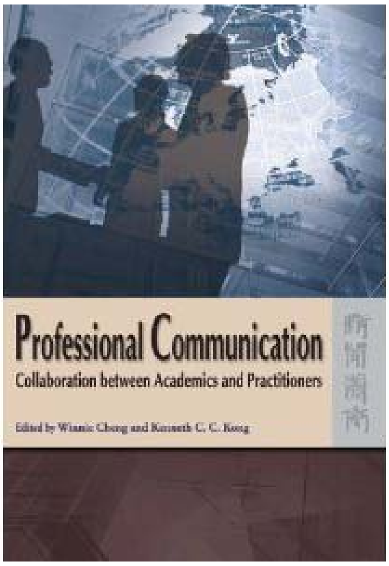
Book Review



Professional Communication: Collaboration between Academics and Practitioners

Winnie Cheng and Kenneth C.C. Kong (eds.)

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Winnie Cheng and Kenneth Kong's edited collection of essays, *Professional Communication: Collaboration between Academics and Practitioners* takes a discourse approach to professional communication with the emphasis on research-practitioner collaboration and authorship. Papers are solicited from both academics and researchers who are also practitioners in their own professions. They introduce readers to fascinating accounts of professional communication in different contexts across different regions, from Danish multicultural companies to Hong Kong academic institutions, from Dutch government to Chinese courtroom. Drawing on discourse analytic framework, the chapters provide insight for improving communication in the workplace and understanding the social construction of professional discourse. As such, the book will appeal to a variety of new researchers, students and educators in professional communication from different disciplines, as well as those already practicing their professions who would like to know to what extent intercultural professional communication studies are impacting their language use, policies and practices in professional settings.

Even more pertinent to the practitioner are the practical implications of how these research findings could be explored for use in curriculum design and material design informing professional communicative practices both locally and internationally.

The book is divided into three parts. The first part, consisting Chapters 1-3, serves to set the scene by considering the methodological and conceptual issues involved in studying professional communication. The second part, comprising Chapters 4-9, may well constitute the “core / heart” of the volume, as Cheng and Kong devote six chapters to present case studies of professional communication in the Asia-Pacific Region. Finally, the third part, Chapters 10-11, considers case studies of professional communication on the European continent.

In Chapter 1 (Intercultural Professional Communication: Approaches and Issues), Cheng and Kong first review the different approaches to intercultural professional communication and explain how a discourse approach can be informed by different fields of scholarship. They also highlight some of the major issues involved in intercultural professional communication, including how and to what extent intercultural professional communication studies have succeeded in making their way into the different levels of communication and language use in professional settings.

In Chapter 2 (Business Communication across Cultures: A Theoretical Perspectives), Bargiela-Chiappini argues that intercultural business discourse (IBD) should move on to richer notions of ‘culture’, ‘discourse’ and ‘context’ this being the conceptual cluster that stands at the heart of the notion of the meta-theoretical notion of ‘interculturality’. The latter is thus seen in a new light defined as the process and condition of cultures-in-contact, interaction based on a linguistic anthropological understanding of language. It also considers the steps in a tentative ‘priority list’ when prescribing the agenda for intercultural business discourse.

In Chapter 3 (Professional Communicative Competences: Four Key Industries in Hong Kong), Cheng reports the perceived attributes among professionals and practitioners in four key industries in Hong Kong economy: Financial Services, Tourism, Trade and Logistics, as well as Professional Services and Other Producers Services. The chapter constructs a descriptive Taxonomy of Professional Communicative Competences (TPCC) applicable to both professionals and organizations within Hong Kong and elsewhere. With respect to the practical implications for curriculum design and materials writing for ESP or LSP, and for informing professional communicative practices, it is valuable to have a comprehensive study which employs a diversified research methodology to investigate the notion of professional communicative competence, and how the notion is manifested in a range of business and professional communicative settings.

In Chapter 4, (A Genre Analysis of the Strategic Plans of Higher Education Institutions in Hong Kong and the United States of America), Chan examines the strategic plans of five universities in Hong Kong (HK) and five universities in the United States of America (US). It is found that their strategic plans require discursive practices and procedures when imparting information. For example, a promotional message may also be needed perhaps to the effect that the university is not just concerned with monetary gain, support for its various functions is also important. The implication being that a better understanding of the move patterns of university strategic plans as well as ways to adapt may contribute to better information-giving and effective promotion.

In Chapter 5, (Gender and Professional Communication: The Role of Feminine Style in Multilingual Workplaces), Itakura argues that consideration should be given to the questions that arise from this unusual phenomena: What explanation can be found for the use or non-use of a feminine style of Japanese in intercultural work contexts? A symbolic meaning resource was one of the reasons given as well as a way of constituting roles and relationships for professional communication in an Asian language.

In Chapter 6, (Indirect Requests in Korean Business Correspondence), Jung highlights the manner in which politeness paves the way for interpersonal harmony in the Korean business world. It is found that prosodic features which are mainly employed in spoken communication also occur in written business communication in Korea in realizing politeness strategies. Both in spoken and written communication, for example, polite requests work to create solidarity rather than serve as a threat. This idea constitutes a new concept other than positive and negative politeness.

In Chapter 7 (Interactions of Professional, Institutional and Business Discourses in Academic Settings), Kong discusses the overlapping that occurs in certain professional, institutional and business discourses. This fact can be seen from the terms employed such as ‘intertextuality’, ‘interdiscourse system’, and ‘hybridity’, etc. Also, models and examples are given to show how different discourse can converge and by analyzing texts from academic settings, boundaries are seen not to be closed or intact. In fact, sometimes, for specific communicative purposes these boundaries can be negotiated and crossed.

In Chapter 8 (Linguistic Features and Writer’s Stance in Investigation Reports), Leung investigates the role linguistic features play, such as modality, hedging, negation and nominalization, when expressing one’s stance. For example, when discussing one’s stance in words denoting certainty, commitment, distance or indirectness, however, are the readers a critical factor in the rhetoric, lexis or grammar employed? How to achieve a delicate balance between the needs of the readers and the writer’s expertise?

In Chapter 9 (Theoretical Interpretations of Questions and Power Relations), Wang aims to explore how questions with their expectation of an answer aids in the production of orderliness which signifies power and solidarity. While investigating questions and power relations from three theoretical orientations (social semiotics, social psychology and cognition, and systemic-functional linguistics), the chapter also shows how questions as a potentially powerful means can be discussed in a practical way.

As the results of governmental attempts at plain language have been more or less disappointing, in Chapter 10 (Improving the Quality of Governmental Documents: A Combined Academic and Professional Approach), Renkema provides a framework that can be used to help governments produce clear or plain documents. He explains how the CCC (Correspondence, Consistency, Correctness) model serves as a general framework for design and quality research and its application to researching tax forms and official letters. This collaborated academic and professional approach is a promising one for improving the quality of governmental documents.

The use of humour is undoubtedly complex and paradoxical as seen from the final chapter of the volume, Chapter 11 (Politeness, Power and Control: The Use of Humour in Cross-cultural Telecommunications), as Ladegaard analyses the use and various functions of humour in cross-cultural telecommunications. It becomes apparent that humour can be used constructively as for example when it is used as a face-saving strategy to deflect criticism or to play down status differences. However, it can also be used as a weapon both in a contestive way or when power is unevenly held, in a repressive way. The study concluded by noting humour has the power to include or to exclude and to form new ingroup-outgroup boundaries

From the foregoing it can be seen that in the field of different contexts in different regions many professional communication issues have arisen. Cheng and Kong’s volume provides a useful and practical collection of research whereby academics, researchers and practitioners have collaborated to improve professional communication while uncovering the methodological implications involved. The value of such a volume is seen from the fact that as Cheng and Kong states “the understanding of professional communication can be enhanced by the studies conducted by the professionals themselves, because they are the insiders in their professions” (p. vii). Thus, this book provides papers written by researchers who are also professionals in their field and who are able to reveal just how research-practitioner collaboration takes place. No doubt, new insights and directions for further research on professional communication are yet to come due in part to the valuable contribution of Cheng and Kong’s present book.

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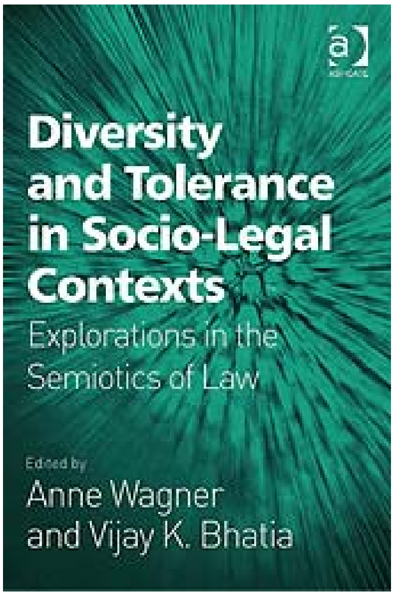
Book Review



Diversity and Tolerance in Socio-Legal Contexts Exploration in the Semiotics of Law

Anne Wagner and Vijay K. Bhatia (eds.)

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Anne Wagner is a specialist in the semiotics of law and Vijay K. Bhatia has published widely on legal discourse. As editors of this volume they bring together case studies on a wide variety of topics related to *diversity* and *tolerance*. Furnishing proof that alertness towards the dynamics of meaning, symbols and signs in socio-legal contexts is needed, the work offers multiple reflections on the concepts of tolerance and diversity in various legal systems and cultures as well as a variety of perspectives on how to analyze, apply and exploit laws.

In her foreword Sophie Caccaguidi observes that today tolerance is conceived as an ‘ethical virtue’ “based on the respect of an individual’s fundamental rights and freedoms expressed and protected by political and legal institutions” (p. xvii), whereas diversity prompts the idea of plurality of racial, ethnic, religious and linguistic minority groups. She points out that the twelve case studies dealt with in this book bear on *disadvantage* due to race, class, gender, religion, education, nationality, handicap, minority status and regional origin.

Wagner and Bhatia explain in the introduction that in Part I, entitled “The Semiotic Foundation of Diversity and Tolerance”, the relationship between the language of law and its power is addressed, whereas in Part II entitled “Case Analyses of Diversity and Tolerance” the interplay of tolerance and diversity under visual, legislative and interpretative perspectives is discussed.

In the conclusion to the volume Cristopher Candlin stresses that the exploration of discourse includes focusing on processes and products. It goes beyond exploring language per se and takes aboard interaction, context, location, co-construction and semiotically multimodal aspects of communication.

We first briefly summarize the six aspects of the semiotic foundations of diversity and tolerance as highlighted in part one.

In “Tolerance, Pluralism and 'Fighting Faiths': Seeking the Sources of US Constitutional Meaning” Frederick Lewis shows the implications of the use of the vague and extremely general words in the US Constitution. He arrives at the interesting conclusion that one of the central challenges for modern diversifying society is to create a new broader sense of ‘we’.
“'When the Law Speaks': Acts of Intolerance, Threats to Group-Identity, and Confidence in Law and Rights” by Ira Strauber shows how the law can speak in terms of the favored social construction approach to race and ethnicity rather than a generally disfavored essentialist or scientific approach. The focal point for her analysis is a 1987 USA Supreme Court case holding the decision that Jews and Arabs were eligible, despite their contemporary status as belonging to the Caucasian race, “to seek redress under nineteenth-century Federal civil rights provisions prohibiting racial discrimination” (p. 21)

Isabell Petrinic’s contribution “Mediated Semiosis in the Courtroom: Non-Verbal Communicators and the Usefulness of Audio Video Technology as a Tool by which to Oversee Justice” deals with audio-visual link technology in today’s courtrooms in Australia and is about how the inmate can appear in court without physically leaving the correctional centre. The interesting notion of *proxemics* is brought to the fore and it is stated that much more research is needed into the communicative properties of the audio-visual medium since at this point the benefits and risks of the emerging technologies cannot be accurately evaluated.

In “The Roma Way” Istvan H. Szilagyi reports on two empirical studies in the field of legal and cultural anthropology concerning the Roma people and attempts a semiotic interpretation of his two studies. He shows how Hungarian law, which formally meets the standards of the Rule of Law, becomes a means of rejection and stigmatization resulting in the segregation of Gypsy minorities in what has come to be known as the *Gypsy trial*. As was observed the Roma do not understand the specific legal terminology in court and the Gypsy trial can be interpreted as a rite, a sequence of acts lacking inherent meaning. The Gypsies have the conviction that they always lose anyway in a *gadjos* court. The rite is at the basis of the maintenance of a system of mutual prejudice. The author advocates the attempt to make real legal disputes out of these cases, instead of preserving them as empty, meaningless rites. What was observed by Szilagyi is that the Roma really are different and the majority of society and its institutions are incapable of doing anything else about this otherness but stigmatizing and rejecting. He believes the solution is in tolerance that can be reached through communication among the different members and groups of a society.

Pamela Hobbs' contribution "'Une Certaine Idée de l'Homme, une Certaine Idée de la France': The Rhetorical Construction of Tolerance in French Political Discourse » starts from the question: "what is a nation?" to which the French historian Ernest Renan replied in 1947 that the nation is a political unit characterized by affective ties. The importance of the role of public discourse is illustrated in promoting national unity. Different rhetorical strategies of French politicians are compared and the conviction of all of them that the real problem in contemporary France is not *the* republican model, but an insufficient mobilization of the French people to turn it into a reality.

In "Shifts in the Concept of War: New War Terminology and its Legal Consequences" Hanneke van Schooten shows that expressions like *a state is at war* and *declaration of war* (as e.g. contained in the Dutch Constitution) have fallen into disuse. Conflicts are now described as *police actions*, *peacekeeping operations*, *missions*, *armed conflicts*, a terminology often leading to confusion. The author makes reference to the Eric O. trial (2005) in the Netherlands to illustrate the effects of the unclear legal status of hostilities during the peacekeeping mission in Iraq and legal uncertainty about their status and the consequences for military personnel participating in international peacekeeping missions.

Part two consists of the following six case analyses of diversity and tolerance.

"Branding Barcelona: Semiotic Considerations in Contemporary Sovereignty" by John Brigham deals with the notion of semiotic sovereignty and applies it to the contemporary sovereignty of Barcelona, the city in Catalonia presenting itself to the world with *style* as the key to the brand that is Barcelona. He tries to understand the semiotic context for the nationalistic movement of Catalonia in its symbols.

In "Legality beyond the Scope of Policy" Sarah Marusek deals with the interaction of formal and informal law and questions to what extent law enforces or discourages tolerance. She uses the example of handicapped parking spaces that are overwhelmingly vacant and reflects on the power of legal regulations and its relation to tolerance through law and diversity.

Tracey Summerfield & Alec McHoul discuss how a canvas by 50 indigenous artists representing country south of Fitzroy Crossing in Western Australia served as a bridge between two cultural systems in "On sight/On Site: Visuality in Native Title Claims: Can We Even Speak?". The indigenous people map their lands in a visual medium to meet the requirements for establishing native title in an Australian legal system based on white knowledge systems. This case is used to illustrate that a basic rule of communication is to accept the other's *footing*, the basis on which any human communication can take place.

The profound effects of racial and class bias in the process towards the right to an education in the USA is dealt with by William Pencak in "Race, Class and the Supreme Court: Rodriguez v. San Antonio Independent School District (1973)" Several cases are used to illustrate "the limits of white America's toleration for its racially diverse population to achieve the full rights of citizenship as mandated by the Constitution" (p.167)

In "Legal Terms across Communities: Divergence behind Convergence in Law" Le Cheng and King Kui Sin claim that even though legal terms are generally considered to have self-referential meaning, most of them acquire their meaning in a given context. The authors argue that legal terms do not carry inherent meaning but only denote in a particular temporal and spatial context. Jurisprudence seeks how meaning was created. Using data from mainland China, Hong Kong, Macau and Taiwan, the authors demonstrate diversity and try to defend legal terms as signs while at the same time showing that it is necessary to tolerate terminological diversity.

In the final chapter entitled "Women as Legal Subjects and Objects in Contemporary China" Deborah Cao suggests that women are tolerated but not treated as real equals in contemporary China regardless of the fact that equality between the sexes has been part of the Chinese Communist Party from its early days and that under the Chinese constitution women enjoy equal rights to men in all spheres of life. The author believes that Chinese women are describable as both subjects and objects (women are still subject to trade) in the legal process with both positive and negative implications for women's rights. She argues that the rights of Chinese women and their liberation will not be achieved unless equality at home is first obtained. This will require a fundamental change involving all members of society and the Chinese culture as a whole.

This book will be of interest to specialists in different disciplines related to LSP and special language communication especially those taking an interest in (legal) intercultural or transcultural communication like specialists in translation and interpretation studies, cultural mediators, terminologists. Because of the broad perspective and the critical stance the contributing authors take in their case studies, this book will also inspire a wide audience of readers without a background in law.

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