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**Multilingualism in Specialized Communication:
Challenges and Opportunities
in the Digital Age**

Proceedings

Multilingualism in Specialized Communication: Challenges and Opportunities in the Digital Age

Proceedings of the 20th European Symposium on
Languages for Special Purposes

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Foreword

The 20th European Symposium on Languages for Special Purposes (LSP 2015) took place on 8-10 July 2015 in Vienna, Austria. The Centre for Translation Studies at the University of Vienna hosted this three-day international event. LSP 2015 continued the long tradition of bringing together LSP researchers and practitioners of various backgrounds, languages, research traditions, and regions.

We were honoured that the Symposium is being held in Vienna for the third time and that 40 years of the Symposium was being celebrated at the venue of the 10th and 19th Symposia.

The theme of LSP 2015 was “Multilingualism in Specialized Communication: Challenges and Opportunities in the Digital Age”. The timeliness and the topicality of this theme were illustrated by over 150 delegates from more than 40 countries in attendance. The programme of the 20th European Symposium on Languages for Special Purposes encompassed eight thematic tracks.

Almost 50 presentations in the thematic tracks covered the following themes:

- corpus-studies for LSP practice and research;
- domain-specific languages;
- LSP teaching and training;
- professional communication;
- science communication;
- specialized translation;
- terminologies in theory and practice;
- and multilingualism, language policies, and socio-cultural issues of LSPs.

Five workshops, five colloquia, and one panel rounded up the programme. In addition, the 2nd Forum for Early-Stage Researchers in LSP provided a valuable arena for graduate students and junior researchers to present their work and discuss their with distinguished senior researchers.

The papers submitted to appear in this volume were presented at the LSP 2015 in the thematic tracks. Our thanks are due to the authors for their hard work.

As a final word, we are very excited to see that the LSP community is vibrant and growing internationally. We hope that LSP 2015 fostered interactions and exchange amongst researchers and practitioners in the field of LSP.

Vesna Lušický and Gerhard Budin

Modeling of special knowledge in scientific translation

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Abstract. This research is an attempt to study the role of metaphor analysis in the modeling of scientific knowledge during translation process. Translation of metaphor in itself is an important part of cognitive translation studies, and different views can be adopted as to the translatability of metaphors from the idea that metaphors are untranslatable to the belief that they are fully translatable. In this research we do not try to answer the question of translatability, rather we study the translation process in its connection with conceptual structures of source and target texts on the whole which can be revealed by means of analyzing metaphor.

In this research using the Five Step Analysis we model conceptual structures of source and target scientific texts in English and Russian to study the differences between these structures and reveal changes that translators make to them. These changes are categorized according to whether some parts are changed in, omitted from or added to the conceptual structure of the target text in comparison to the source text with a perspective of studying how these changes influence perception of scientific concepts represented in the texts under analysis. In doing this we imitate the verification phase of the translation process, suggesting that the modeling of conceptual structures of texts on the basis of the Five Step Analysis can help minimize translators' misinterpretations related to understanding metaphor during the comprehension phase of the translation process as well.

Keywords. discourse, special knowledge, knowledge modeling, metaphor, translation

This research is an attempt to study the role of metaphor in translation process. Translation of metaphor in itself is an important part of cognitive translation studies, and different views can be adopted as to the translatability of metaphors from the assumption that metaphors are untranslatable to the belief that they are fully translatable (Fernandez, et al. 2003: 67). In this research we do not try to answer the question of translatability, rather we study the translation process analyzing conceptual structures of source and target texts, which can be revealed by means of analyzing metaphor.

The research is carried out within the framework of cognitive translation studies. One of the basic principles, which make this paradigm different from many other approaches studying translation, is anthropocentrism. Anthropocentrism has affected many branches of knowledge in various ways. The changes that were made to the translation studies, once this principle had been accepted, have made the translator as an individual the centre of scholars' attention (Alekseeva 2005; 2011; 2013; Pемxe 2015; Schaffner 2004; 2014; Schubert 2007). The translation in itself is now understood primarily as a cognitive process aimed at the extraction of knowledge presented in the source text and its translation in the target text (Alekseeva 2013; Alexeeva 2002; Samaniogo 2003).

The source text which for many decades has been considered as being the object of translation is now understood as its material, whereas the real object of translation is defined as the mental model of the source text (Alekseeva 2008).

Therefore, one of the key competencies of a translator is the modeling of special knowledge in the process of translation. The competency includes both creating models and being able to recreate them in texts in other languages (Alekseeva 2014; Alekseeva, Mishlanova 2015; Mishlanova 2011).

Creating mental models of texts involves working with concepts and relations between them. Such relations might often be metaphorical, since metaphor – in conceptual metaphor theory – is a universal mechanism of cognition which helps construct new knowledge on the basis of the already acquired one (Lakoff, Johnson 1980).

In this research we have studied modifications that translators apply to the metaphorical conceptual structures of the source text in the target texts and possible reasons for the modifications.

The object of the research is the metaphorical conceptual structures of the source and target texts, the subject – is the difference between these structures and their possible reasons.

The basis for the analysis is a famous play *Doctor's Dilemma* by Bernard Shaw and its two translations by A. Mayskaya and P. Melkova (Shaw 1975; Shaw 1986).

The play *Doctor's Dilemma* by Bernard Shaw was first staged in 1906. It is a story about moral dilemmas created by limited medical resources in which Doctor Sir Colenso Ridgeon must choose which patient he should save: an altruistic poor colleague, or an extremely gifted but amoral young artist.

Sir Colenso Ridgeon is Shaw's portrayal of Dr. Almroth Wright, a famous immunologist. There is evidence that Bernard Shaw had profound knowledge of the theory of the immune system proposed by Almroth Wright due to his friendship with the scientist. Shaw wrote: "It will be evident to all experts that my play could not have been written but for the work done by Sir Almroth Wright on the theory and practice of securing immunization from bacterial diseases by the inoculation of vaccines made of their own bacteria" (Shaw 1906; Broad, Broad 1929).

Wright's theory is presented in the play by Sir Ridgeon who describes it. Into Dr. Ridgeon's mouth B. Shaw puts a very neat metaphorical explanation of a real scientific theory. Thus, in the play the artistic discourse imitates the medical one. Shaw's good knowledge of Wright's theory is evident as it has just been shown by the quotation.

In his theory Dr. Wright tried to combine ideas of two famous immunologists of the time: Ilya Ilyich Mechnikov and Paul Ehrlich. Mechnikov's theory was based on the discovery of phagocytes (macrophages) in 1882, whereas Ehrlich's theory was a theory of antiserum.

Both I. Mechnikov and P. Ehrlich were awarded the 1908 Nobel Prize in Physiology or Medicine "in recognition of their work on immunity". And Dr. A. Wright was not awarded. However, it is Dr. Wright's theory that is presented in the play. Its description, as it has been mentioned, is given by Sir Ridgeon whose speech is that of a professional talking to non-professionals. Thus, there are two levels of abstraction: high and low. The high level of abstraction can be found in the non-metaphorical conceptual structure which underlies the metaphorical conceptual structure which is used to make the theory understandable for non-professionals. Thus, describing this structure we can talk about a low level of abstraction.

Also important is the fact that in the play medical knowledge communication is modeled. In recent years, medical knowledge communication constitutes an important problem. A lot of research in the sphere of medical communication is now devoted to doctor/patient communication and to metaphors in it in particular. It is believed that doctors and the community "should question [each other] about the consequences of the use of <...> metaphor for our understanding and for the public image of the discipline [immunology]" (Perié 2011). We have undertaken a research into what image of the opsonin theory can be formed by a common reader of Shaw's *Doctor's Dilemma* and two of its translations into Russian.

The main difficulty in translating the extract about Dr. Wright's theory from Shaw's *Doctor's Dilemma* is the necessity to create two mental models of the source text, i.e. a metaphorical conceptual structure and a non-metaphorical conceptual structure underlying it. The former is used by the author to give a somewhat simpler explanation of a theory represented by the latter.

Consider an extract from the play in which Dr. Wright's theory is described:

RIDGEON: Opsonin is what you butter the disease germs with to make your white blood corpuscles to eat them.

SIR PATRIC: That's not new. I've heard this notion that the white corpuscles – what is it that what's his name? – Metchnikoff – calls them?

RIDGEON: Phagocytes.

<...>

* * *

RIDGEON: What it comes to in practice is this. The phagocytes won't eat the microbes unless the microbes are nicely buttered for them. Well, the patient manufactures the butter for himself all right; but my discovery is that the manufacture of the butter, which I call opsonin, goes on in the system by ups and downs – Nature being always rhythmical, you know – and that what the inoculation does is to stimulate the ups and downs, as the case may be.

This is the extract translated by A. Mayskaya and its literal back translation.

Ridgeon: Opsonin is what you feed the disease germs with to make white blood corpuscles eat them.

Sir Patric: That's not new, too. I've already heard that white blood corpuscles ... what's his name? Yes, Mechnikov... How does he call them?

Ridgeon: Phagocytes.

<...>

* * *

Ridgeon: What it comes to in practice is this. Phagocytes won't eat the disease germs unless they are well fed. The patient manufactures the feeding – fine. But my discovery is that this feeding, which I call opsonin, is manufactured as a result of ups and downs – Nature being always rhythmical – and that what the inoculation does is to stimulate the ups and downs, as the case may be.

This is the extract translated by P. Melkova and its literal back translation.

Ridgeon: Opsonin is a substance which the disease germs must cover themselves with so that white blood corpuscles could destroy them.

Sir Patric: That's not new. I've already heard that white blood corpuscles ... what's his name? Yes, Mechnikov... How does he call them?

Ridgeon: Phagocytes.

<...>

* * *

Ridgeon: What it comes to in practice is this. Phagocytes don't eat the disease germs if they aren't prepared for it. The patient's body manufactures the substance necessary for preparation, and my discovery is that the manufacture of this substance – I call it opsonin – is cyclic – Nature being always rhythmical, you know. The inoculation should accelerate the cycle.

To recreate metaphorical conceptual structures of these texts we have analysed them with the help of MIPVU and the Five-step analysis developed by the group of researchers from the Free University of Amsterdam (Steen 2009; Steen et al., 2010).

Step 1. The identification of the metaphor-related words in the text:

“Opsonin is what you **butter** the disease germs with to make your white blood corpuscles eat them”

Step 2. Turning linguistic expressions into conceptual structures by transforming them into propositions:

P1 [BUTTER YOU THE DISEASE GERMS]

P2 [P1 WITH WHAT]

P3 [TO P1 MAKE WHITE BLOOD CORPUSCLES EAT THEM]

Step 3. Identification of open comparison:

SIM {
[f YOU THE DISEASE GERMS WITH] t
[BUTTER YOU b WITH] s}

SIM {
[TO MAKE WHITE BLOOD CORPUSCLES f THEM] t
[TO MAKE a EAT b]}

Step 4. Identification of analogical structure

SIM {
[COVER YOU THE DISEASE GERMS WITH] t
[BUTTER YOU BREAD WITH] s}

SIM {
[TO MAKE WHITE BLOOD CORPUSCLES DESTROY THEM] t
[TO MAKE HUMAN EAT BUTTERED-BREAD]}

Step 5. Identification of cross-domain mapping – conceptual metaphors that have been found:

BUTTER > COVER

BREAD > THE DISEASE GERMS

HUMAN > WHITE BLOOD CORPUSCLES

EAT > DESTROY

BUTTERED BREAD > THE DISEASE GERMS

These metaphors are used by Ridgeon to make his theory comprehensible to those outside medicine. A common reader is supposed to use them to understand how the immune system works, that is way it is of particular importance to transfer the non-metaphorical conceptual structure via exact rendering of the metaphorical one.

However, having analysed the source text and the target texts with the help of MIPVU and the Five-step analysis, we have drawn the conclusion that metaphorical conceptual structures of all the three are different. The figure shows conceptual metaphors found in the source text (Figure 1).

Source Domain	Target Domain
BUTTER	COVER
BREAD	THE DISEASE GERMS
HUMAN BEING	WHITE BLOOD CORPUSCLES
EAT	DESTROY
BUTTERED BREAD	COVERED DISEASE GERMS
BUTTER	OPSONIN
BUTTER FACTORY	PATIENT'S BODY

Figure 1. Conceptual metaphors of the source text

The metaphors used are very clear. One situation can easily be understood in terms of another: the same as a human being eats more bread if it is buttered, white blood corpuscles destroy more disease germs if they are covered with opsonin; the butter for the bread comes from a factory, as opsonin comes from the patient's body.

Let's compare this structure to that of the target text 1 (the names of the domains are translated back into English) (Figure 2).

Source Domain	Target Domain
FEED	COVER
ANIMALS/PLANTS (?)	THE DISEASE GERMS
PREDATORS/ANIMALS (?)	WHITE BLOOD CORPUSCLES
EAT	DESTROY
FED ANIMALS/PLANTS	COVERED DISEASE GERMS
FEEDING	OPSONIN
FEEDING FACTORY	PATIENT'S BODY

Figure 2. Conceptual metaphors of target text 1

The metaphors present in the target text 1 suggest that the process taking place in a human body when the phagocytes destroy the disease germs is similar to predators hunting some previously fed animals. The disease germs are covered with opsonin in the same way as animals are fed with some special feeding. Opsonin comes from a patient's body as feeding comes from a factory. Only the last part of the metaphorical structure is more or less the same as in the source text.

Another interpretation is also possible: 'подкармливать' (feed) can be used in reference to animals and plants. The verb 'поедать' (to eat) can also be used in reference to animals and plants. It makes the distinction difficult – whether the translator implied that bacteria are like plants that phagocytes eat or like animals that phagocytes hunt. But in either case a cognitive mistake is apparent – in Russian the verb is not usually used in reference to anything that should be killed.

Out of many comments that can possibly be made on the difference in the two structures we would choose here only one: in the source text the disease germs are compared to food (bread) whereas in the target text they are compared to animals/plants which means that 'to eat' in the target text implies killing.

Now let's compare the metaphorical structures of the source text and target text 2 (Figure 3).

Source Domain	Target Domain
COVER	COVER
THE DISEASE GERMS	THE DISEASE GERMS
WHITE BLOOD CORPUSCLES	WHITE BLOOD CORPUSCLES
EAT	DESTROY
COVERED DISEASE GERMS	COVERED DISEASE GERMS
OPSONIN	OPSONIN
PATIENT'S BODY	PATIENT'S BODY

Figure 3. Conceptual metaphors of target text 2

We see that the conceptual structure of the target text might have been called non-metaphorical, if it wasn't for a single metaphor DESTROY AS EAT.

This metaphor leads to an incorrect understanding of what is going on when the immune system is at work. Basically, in a non-metaphorical context this metaphor can easily be taken as a literal explanation of what phagocytes do, despite the fact that they can't actually eat anything, they can only capture and destroy. Moreover, it should be noted that if the metaphorical structure is reduced to one metaphor it changes the original intention of a comprehensible explanation of a scientific phenomenon which the author, undoubtedly, had.

To sum it up, we should point out that MIPVU and the Five-step analysis help to recreate metaphorical conceptual structures of texts which can be used for their comparison to identify modifications made by translators.

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Knowledge transfer modeling in health communication

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Abstract. This study is aimed to reveal the mechanisms of knowledge transfer in online health communication. Health communication is a process of knowledge transfer and knowledge acquisition between status- and competence-unequal participants who verbalize their knowledge in a different way. Within health communication context it is highly important to know that the processes of knowledge transfer and knowledge acquisition are successful.

Since we can learn what a person thinks by studying the way he talks about his experience, language models reflect an individual's knowledge about the world and his place in it, his attitudes, and perception. Hence, it can be assumed that the participants with asymmetric levels of knowledge represent information about the same event by using different language means. Studying the way a patient's narrative is decoding by a doctor and interpreting from an expert point of view seems to be of a great interest to us. This presupposes analyzing health communication discourse as a combination and/or interplay of two discourse subtypes: expert and non-expert, with paying special attention to the way a non-expert discourse is modified in an expert one, i.e. non-expert knowledge is transferred into expert.

This knowledge transfer modeling helps to optimize communication between experts and non-experts, learn more about the conceptualization and categorization mechanisms, prevent occurrence of ambiguity, or knowledge disagreement.

Keywords. discourse, health communication, special knowledge, knowledge transfer, language modeling

In the 70s, health communication became an exciting area to study, one which has continued to grow and diversify, due to a constantly increasing interest in attempts to improve the efficiency of doctor-patient communication, developing organizational and strategic procedures, studying intercultural features, and interpersonal perspectives (Daud et al. 2010). Moreover, health communication regarded as a process of an individual acquiring and converting event data into meaningful or consumable information contributes greatly to diagnosis, cooperation, council, and education (Thompson et al. 2008).

Despite the fact that health communication standards are improving every day, it has become almost automated and impersonal, and there are even special decision making systems that quite effectively help to provide medical aid (Ha, Longnecker 2010; Rimal, Lapinski 2009; Pleasant et al. 2015), verbal modeling of knowledge transfer is regarded to be a central issue in doctor-patient communication. It is the knowledge transfer modeling that is defined as a mechanism by which health messages are communicated from experts in the medical and public health fields to the people who can be helped by these messages.

A cognitive-discursive approach served as a methodological basis of this study. It allows to model the cognitive mechanism of verbalization of knowledge that is involved in the process of transfer and accumulation. Performing research in the cognitive-discursive paradigm of modern linguistics means to use complex methods to describe mental representations of special or

non-special knowledge through the study of its conceptual framework and verbal form (Alekseeva, Mishlanova 2002).

We also used methods of computational linguistics to carry out discourse analysis. Corpora analysis was accomplished on the basis of the platform 'Semograph' (<http://semograph.com>), which provides a set of variables describing the context including metadata, semantic component analysis, compiling semantic fields, and a set of tools to present the results in frequency tables, semantic maps, and semantic graphs (Belousov et al. 2013). Processing the received information provides us with material for building speech models, which allow us to talk about differences in the communication participants' knowledge, the differences in its verbalization and possible ways of its decoding and encoding.

Discourse is an object of quite a number of interpretations exploring it in diverse ways. In the current study it is presented as a unity of language activity and its result, that is the text. Discourse is viewed as a complex phenomenon, realized in semiotic, conceptual and pragmatic communicative aspects of verbally mediated special activities (Alekseeva, Mishlanova 2002).

Medical discourse is a speech-and-cognitive activity in a special field where different types of knowledge are formed, accumulated and represented. Specialized discourse is a complex communicative formation, one of the types of institutional discourse, by which we mean a specialized kind of communication between people who may not know each other, but need to communicate in accordance with the norms of the society (Dijk 2014). The core of the institutional discourse is communication base pairs of participants of communication, in this case, a doctor and a patient.

- Since health communication is a kind of institutional type of discourse, it is characterized by the following features:
- Status-role relationships between participants of communication (patient, doctor)
- The purpose of communication - medical assistance: the definition of the optimal way of solving medical problems
- Prototype place of communication - a medical institution
- Frame - Medical Reception (Communication is carried out within a virtual clinic, where the doctor and patient are in a relationship of communicative asymmetry: patients seek medical help, because doctors are more competent (they are experts), in advising a physician is guided by the standards of healthcare (Cambridge Calgary Guide, medical and economic standards, and others) (Kurtz, Silverman 1996).

It is common knowledge that a patient realizes his social role in personal and institutional spheres, speaking in the latter case as a client of an institutional discourse. Types of situations in institutional communication are determined by the tasks of relevant institutions and in most cases are specifically stipulated in various regulations, laws, regulations, guidelines and so on. Personal communication is characterized by a fundamental openness of its borders. Within its framework there are stereotyped discursive rules based on the practical experience of the participants to communicate which determine the specificity of the organization of a speech form. At the same time participants' experience of institutional communication is a polydiscursive experience including experience in institutional discursive activities (visiting clinics, reading literature on any medical problem, access to pharmacists and so on for the patient / health counseling, training for doctors). As a result in the texts of health communication there can be detected speech patterns, roughly produced by both institutional (institutional speech models) and non-institutional discourses (personal speech models) (Harvey, Koteyko 2013).

So, we have to determine speech and language models. A speech model is a communicative and situational language model in the implementation of a specific situation of communication.

Speech models differ from language models by lexical content, communication objectives and content of statements, logical stress and rhythmic intonation pattern determined by specific situation.

As communication is a two-way process which presupposes knowledge transfer and knowledge acquisition, knowledge transfer is carried out in the discourse, it is a system of concepts that are in categorical relations. Knowledge is generated in the neurological system of the brain by means of extracting information from everyday experience of the individual interaction with the surrounding reality. The particular relevance of sharing and learning occurs when communication between an expert and non-expert occurs.

Special knowledge is a system of categorized concepts in human's brain which are formed in professional activity. Special knowledge is mostly conscious, systemized, and shared by the members of an epistemic community; it is justified with the epistemic criteria or standards of the knowledge community, institutions or experts. Imparting special knowledge begins at the moment when an expert has to convey it to a non-expert in order to delegate his/her experience, skills, and insights effectively. It also emerges when a patient has to ask a doctor for this very special knowledge to get good advice and make his life better.

Knowledge asymmetry leads to ambiguity and this is exactly that problem which has to be resolved within the process of knowledge communication. Methods to study knowledge and experience verbalization deal with conceptualization and categorization processes. Since differences in experience lead to differences in knowledge and further to differences in its representation, the study of so-called translation mechanisms is of particular interest.

We can say that a representation of special/nonspecial knowledge in the discourse occurs in symbolic form at the surface level of the text and conceptual form at a deep level and it happens according to communicative-pragmatic purposes, which define solutions of the necessary communicative tasks.

The study is conducted on the material of interactive complexes that represent the communication between doctors and patients, taken from the American site of medical counseling. The total number of dialogues was 671. In order to mobilize the material processing, we used the information system of graphosemantic modeling "Semograf", which is designed to extract the domain knowledge of the information files, including text samples, metadata, semantic components and semantic fields, frequency, language and thesaurus dictionaries.

In the English language the concept of pain is represented by three conventional versions: pain (s), ache (s), headache.

The choice of language material was determined by the following factors. Pain as an existential concept of contradictory nature. On the one hand, pain is a universal object of human perception: any person at least once in his life has had this feeling. On the other hand, pain is highly a individual and introspective feeling inseparable from experiencing it and excluding any access to study it in a proper way. The only way to verify the pain for linguistics is its verbal description.

In our sample of the material there were 193 dialogs on pain description that is 1/3 of the total material. This phenomenon is explained by the fact that "a special place among the complaints takes the pain, as it is the most frequent complaint. Soreness disturbs the patient most of all and it is the direct cause for seeking medical attention right at the moment, it clearly characterizes the underlying disease and definitely belongs to his clinical picture" (Kurz, Silverman 1996; Calgary-Cambridge Guides 2013). So, pain as the main symptom or as the main reason for going to the doctor is presented in 55 interactive complexes.

This study is aimed to reveal the mechanisms of knowledge transfer in online health communication and to build models based on speech patterns of both communicants.

The discourse analysis reveals particular frameworks of the interactive complexes (Figure 1).

Patients	Doctors
greetings	formal greetings
background to the problem	agreement/disagreement
problem	possible options
guesses	additional questions
'please, help'	advice
	'consult with your GP'
	formal goodbye

Figure 1. Frameworks of patient-doctor interactive complexes

Usually the patients' discourse includes such fields as greetings, background to the problem, problem, guesses, recourse 'please, help'. Doctors' discourse is composed of more fields such as formal greeting, agreement/disagreement, possible options, additional questions, advice, compulsory recommendation 'consult with your GP', formal goodbye. The bold type fields are the fields where the description of the medical problem can be found.

Further analysis was carried out on the symptom descriptions of the given both by patients and the doctors. Language models of symptom representations of patients and doctors in interactive complexes as well as specialized knowledge transcoding models have been revealed in the study (Figure 2).

Patient's Discourse	Doctor's Discourse	Transcoding Model
Pain in neck Pain in chest	Neck pain Chest pain	noun/noun+prep -> noun adjunct + noun
My neck My chest	Your neck Your chest	1st PP + noun -> 2nd PP + noun
Chest pain	Gastro esophageal reflux/ Esophageal reflux + explanation	adjunct + noun -> term
chest pain	burning chest pain	adjunct + noun -> term
chest pain	Repeated attacks of chest pain, especially burning type	adjunct + noun -> participle + noun + specification
Neck pain	it	adjunct + noun -> demonstrative pronoun

Figure 2. Language models of symptom representations in patient-doctor interactive complexes

Among marked in the texts of the patient and doctor language patterns there were identified analogues, which we will consider the language patterns of the patient and doctor, respectively. This slide presents the text of the patient and the physician with the text selected in order to show their language patterns. According to the theory, the patient's words are regarded as a primary text, while text of the physician, in this case, is viewed as a secondary one (i.e., doctor, as an interpreter retells patient narrative, introducing some new logical sense and innovation). Thus, we deal with the semantic or grammatical shift, which results in the transcoding from one discourse to another within a single communicative situation.

As a result of the study we have identified six basic patterns of speech that have analogues in the speech of the patient and the doctor. Moreover, it should be noted that the shift can be

performed in one direction, and in reverse one, so the data patterns are interchangeable for this type of communication. The next step was to combine the data to analyze the patterns of their composition and the study of language shift to create multiple models of speech activity in medical communications. Models are schematically indicated in the last column of the table on the slide.

There are several applications of these models, we call them “Models in Use”. First of all, they project to develop natural language processing, multi-purpose speech recognition systems, machine translation, corpora annotation, etc. (Sheremetyeva, Osminin 2015). Disadvantages of traditional models (the language model based on the corpora data, for instance) lead to the need to develop alternatives, including statistical approaches to modeling languages, and, most importantly, speech, i.e. the main task is the ability to build models that simulate the communication, but not just recreate or decode standard language patterns. In modern English, in contrast, for example, from the Slavic languages, there are more opportunities to find and fix the analog speech patterns in communication, both manually and automatically. This is due, primarily, with a significantly smaller quantity of word forms for each word, as well as the presence of the correct word order. These features open new possibilities for researchers in creating, tracking and marking up language models based on statistical approaches, such as, for example, n-grams and their variations (Sheremetyeva, Osminin 2015).

As our study was carried out manually and on a small piece of material, we had a possibility to consider not only grammar model (which can be useful for learning systems for automatical recognition of them on huge language corpora), but also models based on semantics, which always requires the intervention of an expert in the process of their recognition or assisting machine learning systems.

N-gram model from a semantic point of view, is a sequence of sounds, syllables, words or letters. In practice, more commonly, N-gram as a series of words, including sustained phrases called collocation. Taking into account the existing data models in internet-mediated medical communication, it would be appropriate to use the n-gram model for the work of decision-making systems that could decode the speech of a patient and then generate a secondary text on its basis in order to optimize communication between doctors and patients.

In drawing up the language model of n-grams for this type of communication, several types of connections between objects, the subjects and their characteristics in the model should be taken into account. First, the unit should be morphologically consistent. So, in this example, it corresponds to the form of the verb and the form of the noun / pronoun (chest burns, it aches, arms ache). Thus, it is obvious that the morphological information should be a very important part of the language model. Of course, in such models the homonyms should consider: ache can be both a noun and a verb. Lexical aspect also has to be taken into account in the models: in spite of the fact that almost all the models can be interchanged on a bilateral basis (pain - it, and vice versa), the replacement of personal pronouns must occur due to the characteristics of the subject and object of communication (“my pain” may belong only for patient discourse while “your pain” only for doctor discourse).

Among all selected models we only have one, decoding / re-creation of which will be quite problematic. This applies to a model with a term. The fact that the appearance of the term in the discourse of the doctor / patient is connected not only with the language / speech factors, but, first of all, the peculiarities of conceptualization and categorization of reality. A doctor due to his professional experience and special knowledge, can bind non-specific information (burning type of pain in chest), which can be a complaint of a patient with any disease, i.e. medical problem, expressed in the language of the special vocabulary, which has, as a rule, the Greek or Latin origin (Gastro esophageal reflux).

To work with the model of the conversion of one discourse type to another, we must specify all the necessary information on the form and content of a model taking into account all the data gathered from the communicants' speech patterns. For example, some researchers introduced the concept of categorical language model to determine all the properties of the model. This is applied, in particular, to attributes. Each attribute can have one of several features (e.g., features for the attribute "part of speech" are "noun", "adjective", "verb" and so on). In case when an attribute is meaningless for a given word, for example, an attribute "tense" for a noun, it gets special sign "undefined." This classification makes it possible to reproduce the desired pattern in the model without any errors.

For a doctor as for a communicant, the choice of strategy of generating text in the framework of this activity is determined, on the one hand, by his individual experience, on the other – by his knowledge about the types of functioning in a given society at a given historical period, discourses, and a separate component of this knowledge is an idea of what kind of speech patterns in these discourses should be used, as well as possession of communicative norms which he must adhere to the standards when communicating with the patient.

Concluding, it can be said that different types of knowledge are explicated in discourse in a different way. As we have seen throughout this paper, specialized knowledge presents a higher level of abstraction, it presupposes taking into account the generic-specific relationships in the process of re-encoding the info and using the mechanisms of substitution naive data by scientific. While taking over the same events by different participants of medical communications there is dissimilitude in the representation of the concept "pain". Language modeling of knowledge transfer in medical communications can be carried out according to an n-gram model, where N corresponds to the number of language units in the model. Such a model should be built with taking into account the peculiarities that make the process more automated. We are confident that such knowledge transfer modeling will be enhanced in patient-centered health communication and that it is likely to prove its usefulness beyond the subject field of medicine.

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SMEs in historically bilingual regions facing multilingual communication: Best practice approaches or unexpected challenges?

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Abstract. Existing research in multilingual business communication and knowledge management has mainly focused on large international companies or on SMEs facing globalisation. Our research focuses instead on SMEs in historically multilingual regions currently expanding internationally, as we aim to assess whether the long-term habit of communicating in more than one language within the local market gives these SMEs a competitive advantage. The paper is based on a mixed-method study carried out in 2012-2013 in the Italian-German bilingual region of South Tyrol (*Alto Adige/Südtirol*). The dataset consists of three preliminary interviews with key informants, 23 qualitative interviews with local CEOs and 443 responses to an online questionnaire. We combined quantitative and qualitative research methods to study how South Tyrolean businesses cope with the challenges of multilingualism. In particular, the focus was on issues concerning multilingual communication, documentation, translation and terminology. The results illustrated in this paper paint a general picture of multilingual habits in South Tyrolean companies and identify common weaknesses. They clearly show that local businesses are not yet fully exploiting multilingualism as a competitive advantage.

Keywords. Multilingual business communication, multilingual knowledge management, language policies in SMEs, translation management, terminology management

1. Introduction

Existing research in multilingual business communication and knowledge management has mainly focused on large international companies or on SMEs facing globalisation. Our interests are centred instead on small and medium sized enterprises (SMEs) in historically multilingual regions currently expanding internationally. The present paper describes the practices used and challenges faced by companies located in the bilingual Province of Bolzano (South Tyrol) in northern Italy, known as *Alto Adige* in Italian and *Südtirol* in German. German is the second official language, after the national language, spoken in this geographical area bordering Austria. Today, about 70 % of the local population is German-speaking while about 26 % is Italian-speaking (ASTAT 2015: 119).

Against this bilingual background, we aimed to study how the language competences of the population and the bilingual environment of SMEs affect the strategies they adopt regarding their internal and external communication as well as their knowledge management practices. We were also interested in assessing whether the long-term habit of communicating in more than one language within the local market gives these SMEs a competitive advantage (Lechner & Moroder 2012: 25) in the era of globalisation.

2. Research background

In South Tyrol, due to the presence of two large official language communities and the strategic geographical position on an important north-south commercial route, the local SMEs must cope with staff, customers, suppliers and markets that have different native languages or languages of communication (cf. Vinatzer 2009: 19). As a consequence, language competences become essential for efficient management of all internal and external activities of a company. Language skills are needed not only to achieve a good market placement but also to fully exploit all available resources (cf. Grin 2010). Grin *et al.* (2010: 113 ff.) also estimated that language skills may account for a notable share - around 10 % - of the gross domestic product (GDP) of a county or region. This undoubtedly proves their relevance for the local economy.

3. Research data

Our research data were collected through a mixed-method study in 2012-2013. With the help of an online questionnaire distributed via CAWI (Computer Assisted Web Interviewing), we collected quantitative data from 443 South Tyrolean companies of all sizes, types and sectors of activity. This method was chosen because it allowed us to obtain a sufficient number of responses in a relatively short time and to contain costs. The qualitative data were gathered from three exploratory interviews with representatives of the local business associations as key informants (identified as INT A to INT C in the following sections) and from 23 interviews conducted with managers and owners of local SMEs (numbered INT 1 to INT 23). These two datasets complete and confirm each other. They give a general picture of the South Tyrolean business world and allow the identification of common strengths and weaknesses.

The survey respondents belong to all size categories (see Fig. 1). The size category employing 101 to 250 staff is the most numerous (130 respondents of 443), followed by the size category employing 31 to 50 staff (92 respondents) and then by the category employing 11 to 30 staff (86 respondents). Altogether, 40 % of the questionnaires (178) were completed in companies with 11 to 50 employees, and less than 30 % (130) in companies with 101 to 250 employees. This distribution is not fully representative of the local economic fabric, as we know that over 92 % of businesses in South Tyrol are micro-enterprises (ASTAT 2013a: 7) with an average number of four employees (Lechner & Moroder 2012: 12). Unfortunately, micro-enterprises are difficult to reach via CAWI and have generally low response rates, causing the smallest size category to be underrepresented in the sample. Nevertheless, we were interested in aspects that are more evident and easier to study in larger-sized companies, which means that the collected responses still allow relevant statements for the South Tyrolean business world to be made.

Most interviews were conducted in companies with more than 50 staff (17 of 23 interviews). About half of the companies (12 interviews) have more than 100 employees.

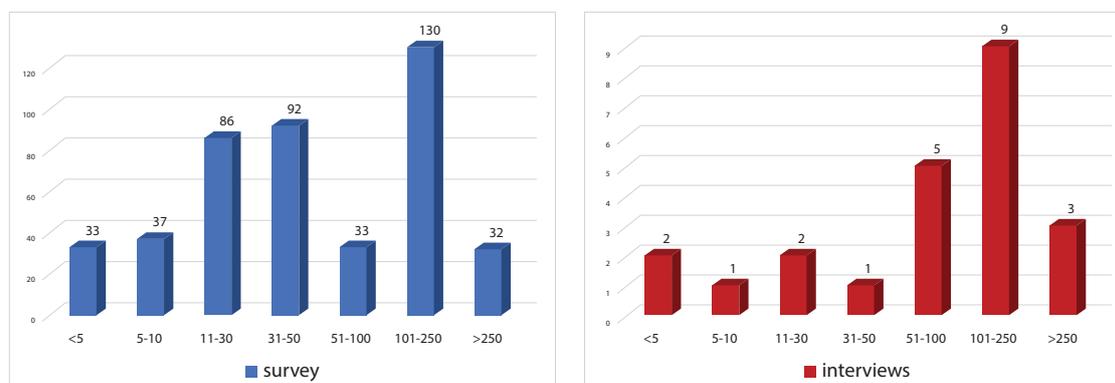


Figure 1: Survey respondents and interviewed companies per size

Fig. 2 shows the distribution of the 443 survey respondents according to the Italian ATECO 2007 classification of economic activities. The sectors in which we collected more responses to the survey are: manufacturing (92 of 443 respondents), wholesale and retail trade (74 respondents), construction (54 respondents), other service activities (51 respondents), accommodation and catering (46 respondents). In this distribution, agriculture is underrepresented, while manufacturing, information and communication services, health and social work as well as other service activities are slightly overrepresented. This is due to the fact that many small farming enterprises only possess private e-mail addresses and are sometimes impossible to reach via CAWI, while companies in other sectors, especially service activities, are used to handling most issues via e-mail and are generally more willing to communicate.

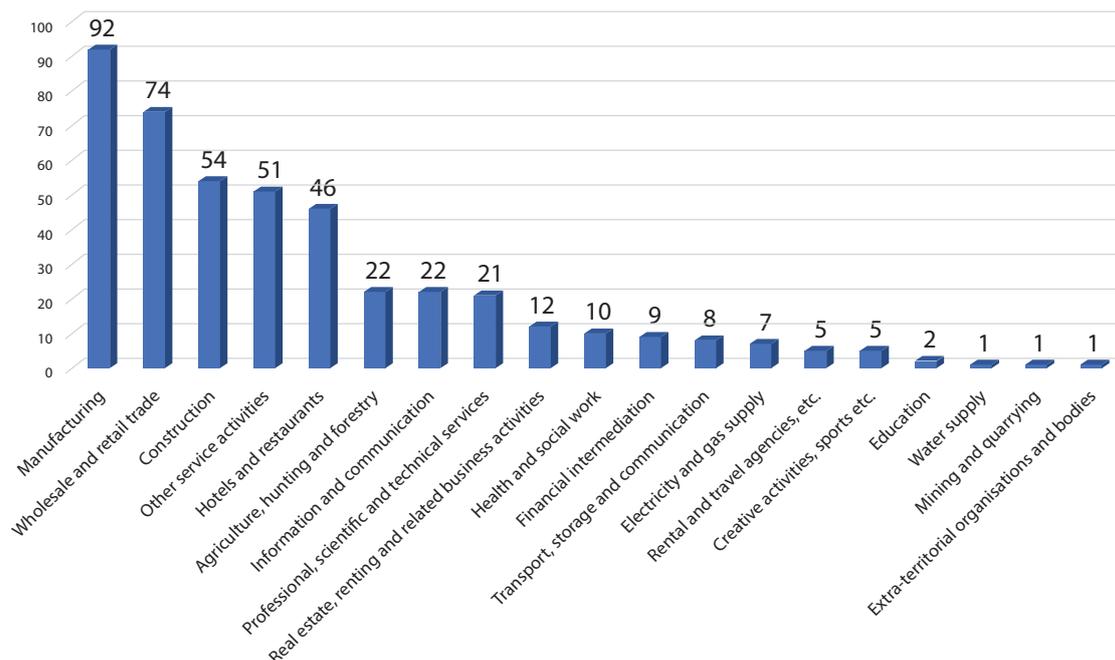


Figure 2: Survey respondents per economic activity sector

For similar reasons, the majority of interviews (17 of 23 interviews) took place in manufacturing companies.

4. Results

In mixed-method studies, quantitative and qualitative data are compared and/or analysed together. In our study, the results of the qualitative interviews explain and contextualise the results of the quantitative part of our research. The following sections summarise the main results relevant for multilingual communication and multilingual knowledge management from both datasets.

4.1. Knowledge management

Both quantitative and qualitative data show that hierarchical management structures negatively influence multilingual practices and multilingual knowledge management strategies in South Tyrolean companies. Over 90 % of service and industrial companies are owned by an individual or a family (ASTAT 2013a: 9). In agriculture, the percentage exceeds 96 % (ASTAT 2013b: 20). The predominance of family businesses is especially evident in the key sectors of commerce, tourism and agriculture (Pramstrahler 2009: 3). This contributes to maintaining strongly hierarchical management practices in South Tyrolean SMEs (INT A). In 80 % of SMEs, no matter what their

size, decisions are ultimately taken by the management: “Dann entscheide ich”¹ (INT 20). This also influences language choice, for example the language of meeting minutes, which are mostly drafted in the language of the management, independently from the language(s) actually spoken during the meeting.

Hierarchical management structures have an equally negative impact on knowledge sharing practices. Despite interviewees stressing the importance of widespread knowledge sharing (INT C, 12, 13, 14), knowledge is not widely and systematically circulated in South Tyrolean businesses. For example, only about one in three companies share their annual business goals (171 of 443 respondents) and the direction of future business development (144 respondents) with all their staff. Even signs and documents concerning safety at work are only available in more than one language in one out of three companies (respectively 161 and 166 of 428 respondents).

Structured written information is more frequent in larger SMEs, in domains regulated by the law (e.g. human resource management, safety at work) (INT B) and in companies with a certified system, such as national and international quality certifications (INT 1, 2, 7, 8). Informal and oral means of communication remain of paramount importance, even in larger SMEs. The interviewees stress that personal exchanges are often the only effective - albeit expensive - channel of information flow (INT A, C, 8, 12, 14): “Condividere le informazioni è effettivamente un problema. [...] Noi abbiamo tentato di fare la Wikipedia della ditta, di usare questi strumenti, devo dire proprio onestamente con scarso successo. [...] Diciamo che bisogna incontrarsi, fare meeting”² (INT 7).

4.2. Internationalisation of business

South Tyrolean companies show a clear preference for same-language markets. Most companies have a rather limited diversification of their markets: 61.4 % have one or two destination markets at most. The main markets addressed are those speaking German and/or Italian, i.e. the local South Tyrolean market (319 of 443 respondents), the Italian market (298 respondents), the German market (175 respondents), the Austrian market (120 respondents) and the Swiss market (90 respondents). Only a fifth of companies (91 respondents) consider non-German or non-Italian speaking countries as their main markets and export their goods and services to France, the Netherlands, China, the USA, the UK, Spain, Belgium and other countries. Pörnbacher (2009b: 35) suggests an even stronger polarisation, stating that companies managed by German speakers address the German language markets while companies with an Italian-speaking management target the Italian language areas.

Native speakers of languages other than German and Italian work in companies addressing foreign language markets. One in two respondents do not employ any staff with a foreign native language (238 of 432 respondents). However, companies addressing foreign language markets are more likely to do so: four in five companies that employ foreign language staff conduct business beyond the Italian and/or German speaking areas of Europe (159 of 194 respondents). This proves that foreign language competences, together with the relevant cultural knowledge, are essential to address foreign language markets and that there is a strong correlation between the presence of employees speaking foreign languages in a company and its ability to sell goods and services beyond the Italian and German-speaking markets.

4.3. Multilingual communication

In South Tyrolean SMEs, internal communication is monolingual whenever possible. Three in four internal meetings take place in one language only (257 of 334 respondents). There is no mixing and no alternating of languages, and no effort is made to exploit the mutual passive language competences so that all participants may speak their own native language: “In un

numero cospicuo di imprese la comunicazione è monolingue”³ (INT A). If internal multilingual communication is not particularly encouraged, the existing language skills largely lose their value for the company (cf. Grin *et al.* 2010: 120).

Language choice in South Tyrolean companies depends on various factors. As explained above (see section 4.1), the language of the management influences which language prevails within the company. Location is another important factor. As the Italian-speaking population mainly resides in the larger towns and in the capital city (ASTAT 2015: 123), the Italian-speaking companies are in those areas, while the German-speaking companies are predominantly located in the valleys and villages. Since commuting tends to be limited in South Tyrol (Pörnbacher 2009a: 24, 30), the main language of the workforce usually reflects the main language spoken in the immediate surroundings. Size is the third essential factor. Larger companies are more likely to use two or more languages, at least occasionally, as they usually employ both German and Italian native speakers. Finally, the language of the market(s) influences the language(s) used within South Tyrolean companies (INT A, INT B). If the market is monolingual, so is the company: if the market is multilingual or there are several markets with different languages, the company will adapt its language strategy: “Se la tua impresa si riferisce a un territorio multilingue, la tua impresa è multilingue”⁴ (INT B). Being able to speak the language of the client is called linguistic adaptation and is a recognised factor of success (cf. Lavric 2008: 159, Vandermeeren 1998: 41 ff.).

Four in five respondents (348 of 433 respondents) state that speaking the second language is very important/important. Only two in five (166 respondents) share the same opinion concerning other languages. Unfortunately, many employers and managers consider the language competences of their employees unsatisfactory. This applies to 48 % of younger employees and to 64 % of more mature employees (Partacini 2012: 19). Nevertheless, three in four employers (321 of 432 respondents) do not organise language courses, mainly because they see this as a task that should be carried out by the school system (INT A).

The few companies that offer language training generally bear the direct costs, but only half of them authorise their staff to attend classes during working hours (cf. also Lavric 2008: 159). Companies that employ a higher number of foreign language speakers are more likely to organise language courses.

4.4. Translation management

The need for translation is, naturally, high in a bilingual area. This does not necessarily mean that the number of professional translators employed in the local companies will be equally high. In fact, only one in ten respondents (20 of 242 respondents) employs professional translators. The alternative is working with external professionals (translation agencies, freelancers etc.). Translations sent to external professionals are either particularly urgent or highly domain-specific (e.g. balance sheets, contracts, technical documentation). However, our data show that two in five respondents (51 of 121 respondents) never hire external translators. So who drafts most translations in South Tyrolean companies?

According to our survey (285 of 400 respondents), translations are always/often/sometimes produced by internal staff. The percentages are very high both in micro-enterprises (85 %) and in large SMEs employing over 250 people (80 %). This means that two in three texts are translated by staff without specific competences, mainly employees with a high school degree (292 of 397 respondents) and no specific training in language mediation. The interviewees confirm the quantitative results by specifying that internal and unofficial texts, e.g. letters and e-mails, are predominantly translated in-house (INT B, INT 13, INT 14, INT 15). The most common occurrence is that everyone has their translations to do and copes by searching the Internet or asking friends for help (INT 15, 13, 22).

4.5. Terminology management

Terminology management strategies seem rather rare in South Tyrolean companies. Internal dictionaries and multilingual glossaries or word lists are uncommon. Less than one in five respondents (59 of 422 respondents) always/often produces glossaries or dictionaries. About one in five does it sometimes (76 of 422 respondents). One in two respondents (45 of 83 respondents) actually does not see any need for them. The two main reasons for this are the lack of time for one in ten respondents (8 of 83 respondents) and the bilingualism of the staff for two in ten respondents (15 of 83 respondents). The latter is a clearly contradictory statement if we consider the amount of managers who consider the language competences of their employees unsatisfactory (see section 4.3).

5. Conclusions

The qualitative and quantitative data collected from SMEs in the Italian-German bilingual region of South Tyrol have brought some insights into the specific issues concerning multilingual communication and multilingual knowledge management in a historically multilingual region. Since bilingual or multilingual areas are common in Europe, for example in the Brussels region or in Catalonia (cf. Grin *et al.* 2010: 46-48), our results might also be relevant for other regions.

In the previous section (see section 4), we have seen that the bilingual macro-environment in South Tyrol is turned into a monolingual micro-environment within South Tyrolean SMEs whenever possible. Bilingualism and translation competences are taken for granted, even though language competences are considered unsatisfactory. The number of foreign employees, who might fill the existing gap in language skills, is still small. Multilingualism is expected, but not particularly practised on a daily basis or encouraged in any way. This would suggest that the potential competitive advantage of mastering two or more languages is currently not (fully) exploited. Current competences might be sufficient to cope with current markets but do not offer promising perspectives for future expansion.

The limited activities of South Tyrolean enterprises beyond the German and Italian speaking markets suggest that the results of the ELAN study (CILT 2006) and other studies (cf. Grin *et al.* 2010: 52) probably apply also to South Tyrolean SMEs. Both studies show a direct relation between the lack of language skills and intercultural competences and the loss of business opportunities.

Knowledge sharing appears to be a widely recognised problem among South Tyrolean managers, as it currently relies heavily on oral communication and lacks systematic rules and procedures. This poses serious problems as soon as a company outgrows the size in which personal and informal contacts and communication still cover most needs. Multilingual knowledge sharing is even more challenging. Therefore, the strategies applied to translation and terminology management need to be sound, systematic and long-term in order to achieve the intended aim while keeping costs under control.

Consequently, to make South Tyrolean companies ready for a globalised and multilingual market, it seems that some changes are necessary. Based on the results briefly illustrated in this paper, we have drafted and disseminated a set of recommendations and practical suggestions for South Tyrolean SMEs (cf. Chiocchetti *et al.* forthcoming, Chiocchetti 2015: 148-154, Chiocchetti *et al.* 2013). The strategies we propose require limited financial investments as they build on better exploiting existing competences. They can easily be implemented by SMEs in bilingual areas to address current challenges but also by companies in monolingual regions, with due adjustments. Some recommendations reflect similar suggestions proposed by the Québec Chamber of Commerce for companies located in this French and English speaking Province of Canada (Québec Multilingual Committee 2010), which confirms their soundness for bilingual regions.

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7. Notes

¹ “Then it’s me who decides” (translation by the author).

² “Sharing information is indeed a problem. [...] We have tried to create the company Wikipedia, to use these tools, I have to say very honestly with little success. [...] Let’s say one has to meet, hold meetings” (translation by the author).

³ “In a large number of companies communication is monolingual” (translation by the author).

⁴ “If your company refers to a multilingual region, your company is multilingual” (translation by the author).

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LSP dictionaries of cultural terms: a case of Russian cultural terminology

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Abstract. This paper focuses on interaction of terminology and interculturality and presents the preliminary results of the revision project of The Dictionary of Russia, 2nd edition (DR2), a monolingual dictionary of Russian cultural terms in the English language. A few Russian words have become a part of the general English vocabulary. The majority of these culture-bound items remain rather specific, though may not be considered as full-fledged terms in the traditional notion of a term; however, they should rather be seen as a specific type of terminology which in most cases do not have exact equivalents in English. Thus, DR2, being an LSP dictionary, deals with a specialized vocabulary, which is restricted to a specialized domain of intercultural studies and communication. It is designed to meet the needs of different user types such as translators seeking translation correspondence in a language or specialists interested in the terminology of Russian culture.

Keywords. LSP dictionaries, Russian cultural terms, lexicography

1. Background of the project

The current revision project of the *Dictionary of Russia* is run together with K Dictionaries (Tel Aviv, Israel) and is aimed at producing a digital lexicographic resource - an LSP dictionary of Russian cultural terms. The first, print edition of the dictionary (DR1) was initiated by Viktor V. Kabakchi and published in 2002 by Soyuz Publishing House (Saint Petersburg, Russia). It had only a print version (576 pages), which is currently out of stock. The publication of DR1 was the result of Prof. Kabakchi's longstanding research based on vast linguistic resources (including various types of original English literature about Russia). DR1 contained 2,500 Russian cultural terms and combined lexicographic and encyclopedic information about geography, history, politics, religion and other aspects of Russian life. Its main target audience consisted of Russian scholars of the English language and other specialists who were interested in Russian studies.

As a result of ongoing research and accumulated experience in the area of Russian cultural terms, it was decided to undertake a thorough editorial revision of the dictionary. One of the DR1's drawbacks was the absence of an electronic version, since it had been compiled manually, without any dictionary writing software. The objectives of the revision project were to enhance the quality of the dictionary, eliminate the number of misprints, and increase its accessibility to the public. It was envisaged that the revision process would help improve the data and bring it up-to-date with existing corpora about Russian culture. Moreover, our new approach to the dictionary compilation and the XML-based data will serve for developing further editions of this dictionary in print and any digital media in future.

The first step of the project included producing a digital copy and converting the image into text by means of an OCR software. Secondly, the data was converted into XML using an XML-tagged editor. Along with this step, the entries were updated editorially and the dictionary corpus was expanded to provide users with more examples of usage. We also added approximately 500 new entries to the dictionary's wordlist.

The linguistic resources that are available as part of the corpus include fiction, English language newspapers and magazines (*Times*, *Newsweek*, *National Geographic*), expatriates' literature published in Russia (*Saint Petersburg Times*, *Moscow News*, etc.), and travel literature (tourist guidebooks and phrasebooks). Reference are also made to *The Cambridge Companion to Modern Russian Culture*, *Encyclopedia Britannica* and as well as the Third Edition of the *Oxford English Dictionary* (OED3). The Second Edition of the *Dictionary of Russia* (DR2) is also being compiled with evidence from the British National Corpus (BNC), which is a 100 million word collection of samples of written and spoken language from a wide range of sources, designed to represent a wide cross-section of British English, from the late twentieth century.

DR2 focuses on English-speaking users, mainly scholars and specialists in Russian studies, as well as those interested in Russian culture. However, the data is being compiled in such a way so it could eventually be used in a special version for Russian scholars of English. Specifically, its layout and macrostructure will be adaptable to the Russian-speaking audience, who could use DR2 in their studies and work (terminologists, translators, interpreters, tourist guides, etc.).

2. Theoretical framework

DR2 is based on the principles of *interlinguaculturology* (Kabakchi, 1998), which is a relatively new linguistic theory finding its followers in Russian academic circles. The term 'interlinguaculturology' is a derivation combined from the prefix *inter* (< lat. *inter* = under, between) and the noun *linguaculture* + *-logy* (< study of a linguaculture). Linguaculture is a widely regarded as a concept that focuses on culture in language or the cultural dimensions in language (see Risager, 2015). In other words, interlinguaculturology studies foreign-culture descriptions through the English language. It assumes that by means of English almost any foreign culture with an established writing system can be described and studied. In interlinguaculturology English is seen as a conduit for foreign cultures into the global society.

Interlinguaculturology is very similar in many ways to the concept of 'interculturality' that captures the complex phenomenon of intercultural contact, including intercultural communication (see Hess-Lüttich 1992; Schöne 1986). Interculturality studies interaction and relationship between things foreign and things peculiar to one's own culture in language, literature, and media. For example, in the works by Albrecht Schöne (1986) we find the evidence of how foreign cultures appeared in German literature (travel and exile literature). He was interested in adaptation of German culture in the texts of foreign authors ('Gastarbeiter' and migrant literature). Alongside with Schöne Viktor Kabakchi started his own research on adaptation of Russian culture in the texts of English writers, defending his doctoral dissertation on this subject in 1987. It was the time when perception of foreignness occupied the minds of researchers coming from various cultural backgrounds. However, the concept of 'interculturality' is seen as a broader category compared with the theory of interlinguaculturology, which studies how English is adapted to the description of foreign cultures.

Furthermore, Kabakchi (1998) speaks of a specialized variety of English - Foreign-Culture-Oriented English (FCOE), which is a variety of LSP used in applications to foreign cultures. Since a foreign culture is a specialized domain of knowledge, its description in English requires the use of the vocabulary restricted to specialist register. FCOE has a specialist target audience such as scholars interested in Cultural Studies, applied linguists, translators, terminologists, etc. The research in Spanish, Japanese-, Chinese-Culture-Oriented English has already been conducted by the Russian linguists (Mel'nichuk 2002; Siaka 2004 et al.). When applied to Russian culture, English gets to some extent Russian-Culture-Oriented (Kabakchi and Antonova 2013) and as variety of LSP inevitably deals with a specialized vocabulary of Russian cultural terms. Thus, *The Dictionary of Russia*, has become an output of the research conducted in the area of Russian-Culture-Oriented English.

3. Cultural terms

In order to understand a foreign culture, we need to understand its cultural terms. Cultural terms or culture-bound items form a specialized vocabulary of FCOE. By cultural terms we mean things of a foreign culture or foreign-culture-bound items, which are used in English to describe other cultures. To study cultural terms interlinguaculturology introduces a special term 'xenonym' (literally meaning 'foreign name', derived from Greek stems < ξένος (xenos) 'foreign' and < ὄνομα (onym) 'name')¹. Xenonyms are perceived by native speakers as foreign words, although many of foreign words may eventually become adapted in English and change their morphological and phonological form so it may be quite difficult for a non-specialist to see its foreign etymology.

However, if we look at xenonyms from the perspective of etymology, we may see that xenonyms in English are formed by loanwords from different foreign cultures (e.g., *sushi*, *kamikaze*, *karate* from Japanese culture; *politburo*, *rouble*, *intelligentsia* from Russian culture; *kindergarten*, *realpolitik*, *rucksack* from German culture). Xenonyms may not be only direct borrowings – interlinguaculturology is also interested in loan translations and semantic loans from foreign languages, but the distinction between these types does not form part of the main focus of this paper.

In the tradition of German lexicography a distinction is made between *Lehnwörter* ('loanwords') from *Fremdwörter* ('foreign words') (see Durkin 2009; Polenz 1967, Eisenberg 2011). As noted by Durkin,

a *Lehnwort* shows accommodation (where appropriate) to native phonology and morphology and may give rise to new derivatives within the borrowing language, while a *Fremdwort* retains (broadly) its foreign-language pronunciation and may show non-native morphology (especially plural inflections which are not found in native words), and does not give rise to new derivatives within the borrowing language (Durkin 2009:139)

Durkin also makes the point that in many cases a borderline between *Lehnwörter* and *Fremdwörter* is not quite clear and these two types are hardly distinguishable in practice. *Fremdwörter* are usually excluded from historical and etymological dictionaries of German and find their place instead in separate dictionaries of *Fremdwörter* (Durkin 2009:140).

In the meantime, a cultural approach to xenonyms allows interlinguaculturology to view them as a broader category embracing both *Lehnwörter* and *Fremdwörter*. A cultural approach also explains why interlinguaculturology attaches so much importance to proper names, both personal and geographical ones, which usually tend to be excluded from general-purpose and historical dictionaries. However, proper names are essential for understanding a foreign cultural history. Thus, in DR2 there is a significant number of xenonyms, which are proper names (ethnonyms, place names, works of literature, etc.). They are seen as key elements of Russian culture.

In fact, a few Russian words have become a part of the general English vocabulary (e.g., *Bolshevik*, *tsar*, *sputnik*, *vodka*). The majority of Russian cultural terms remain rather specific. However, many of specialized xenonyms, including proper names, though may not be considered as full-fledged terms in the traditional notion of a term. For example, ten Hacken (2010) differentiates between specialized vocabulary and terms, discussing the basic properties of both categories. However, it can be quite difficult to measure the degree of specialization as it depends on the user's profile. In a broader sense, xenonyms should rather be seen as a specific type of terminology, which in the majority of cases do not have exact equivalents in the English language.

4. Transliteration of Russian Cyrillic

Before we move to the dictionary microstructure and to some illustrative examples, it is worth looking at the transliteration system used in DR2. Transliteration is understood as ‘the process of converting characters from text presented in one script (the source script) into the corresponding characters in another script (the target script)’ (Lisbach and Meyer 2013:46). The choice of the transliteration standard is a crucial one for any research in Russian-Culture-Oriented English, as there are several transliteration systems widely used for converting Russian Cyrillic into Roman script. As a result of this diversity, there may be many Romanized versions of the same Russian words, and the difference between them may be considerable. One of the DR2’s objectives was to help its users choose a preferred term among a plethora of existing spelling variants.

In compiling the dictionary we relied on the letter-to-letter correspondence presented in Tab.1. This approach is based on the British Standard, but with some minor distinctions. This system was used as it seemed to combine the best features of other systems, such as the Library of Congress (ALA-LC) and Board of Geographical Names (BGN/PCGN). The absence of diacritical marks makes it easy to use in intercultural communication. For this reason, the standard ISO 9 which uses diacritics is not preferred in Russian-Culture-Oriented English.

А - a	Ё - e, yo	Л - l	С - s	Ч - ch	Э - e
Б - b	Ж - zh	М - m	Т - t	Ш - sh	Ю - yu
В - v	З - z	Н - n	У - u	Щ - shch	Яя - ya
Г - g	И - i	О - o	Ф - f	Ъ - ”	
Д - d	Й - y	П - p	Х - kh	Ы - y	
Е - e, ye	К - k	Р - r	Ц - ts	Ь - ’	

Table 1: Transliteration table of Russian Cyrillic

The research in interlinguaculturology showed that the Russian letters ‘Е’, ‘Ё’, ‘Й’, ‘Ъ’ and ‘Ь’ present major problem areas in Cyrillic to Roman transliteration (see Kabakchi 1998; Kabakchi and Yusefovich 2007). According to Tab.1, in DR2 Cyrillic letters ‘Е’ and ‘Ё’ are transliterated as ‘ye’ and ‘yo’ in their initial position and also after a vowel, letters ‘Й’, ‘Ъ’ (soft sign) and ‘Ь’ (hard sign). For example, if a user will look up for the Russian surname ‘Есенин’ spelled as ‘Esenin’, he or she will be redirected to the entry ‘**Yesenin, Sergey Aleksandrovich**’, starting with the digraph ‘Ye’, not ‘E’:

- (1) **Esenin, Sergey Aleksandrovich** see **Yesenin, Sergey Aleksandrovich**

However, it should be noted that when there was a so-called ‘traditional’ version of a transliterated word in English (how a word is more likely to be written), e.g. *Tchaikovsky*, *troika*, *boyar*, a headword was given in this traditional way (disregarding the fact that it did not look correct from the point of view of the letter-to-letter correspondence). If a xenonym was not adopted in English, then it was Romanized using the letter-to-letter transliteration (see Tab. 1).

However, in the examples taken from the corpora the original author’s/ publisher’s spelling was kept. Thus, transliteration used in examples may differ from that of a headword.

5. Microstructure of dictionary entries

In this section I will give an overview of DR2 microstructure and will have a closer look at some practical examples from the dictionary.

Most of the dictionary headwords are single-word entries. Some headwords consist of two, three or even four elements depending on the type of an entry (e.g., proper names, compositional phrases, etc.). As Fig. 1 presents, the headword ‘**boyar**’ (the main term) has a definition

(a member of medieval Russia's aristocracy) and an example showing the term's usage, followed by a citation source. Citations, which are displayed chronologically, are chosen to help understand the meaning or the usage of a xenonym. Therefore, there may be more than one citation in an entry. At the end of each citation comes a citation reference. All the citations in DR2 are taken from the English corpora, not invented by its editors.

Inside the headword, there are two subheadwords – '**Boyar Duma**', which is a boyar council in medieval Russia, and '*boyarynya*', which is a boyar's wife. Subheadwords are terms, which semantically or hierarchically related to the main term (headword '**boyar**'). There is also a cross-reference to the related term '**Boyarinya Morozova**', which is an example of an encyclopedic entry (see Fig. 2).

Depending on the degree of adaptation of a Russian term in English, its phonological and morphological form may differ from a source word. As seen in example 2, each entry is supplied with the original Russian form in Cyrillic ('боярин') and, if a traditional version of a headword ('boyar') differs from its letter-to-letter transliteration ('*boyarin*'), the latter is given in square brackets:

- (1) **boyar** *historical* [боярин / *boyarin*]

boyar *historical* [боярин / *boyarin*] a member of medieval Russia's aristocracy, before Peter the Great.

◇ Boris [Sheremetev] was the last of old boyars, the leading noblemen of Muscovy whose wealth and power derived from the favour of the Tsar (they had all but disappeared by the end of Peter's reign as newly titled nobles superseded them (Figes, 2002, p.15)

▪ **Boyar Duma** *historical* [Боярская дума / *Boyarskaya Duma*] a consultative body in Kievan Rus' and medieval Russia. ◇ The boyars formed a boyar council, or *duma*, which advised the prince in important matters of state (Encycl.Brit., 2005)

▪ *boyarynya* *historical* [боярыня] boyar's wife. ◇ [The Tsar's bride] was then turned over to the sisters and close female relatives of the tsar and to the noble ladies, the *boyarinas* (Massie, 1980, p.50) (see also **Boyarinya Morozova**)

Figure 1: Preview of the entry 'boyar'

In those cases when there is no a 'traditional' term in English, a transliterated variant gets a headword status, as in example 3. In this case only original word in Russian is provided in square brackets ('боярыня'):

- (2) *boyarynya* *historical* [боярыня]

In Russian-Culture-Oriented English both versions of a term ('traditional' and transliterated ones) may be used along with. Thus, the dictionary's aim is to supply the user with all possible variants, which its users are likely to come across in English descriptions of Russian culture.

Boyarynya Morozova [Боярыня Морозова] 1. (also known as Feodosiya Prokop'yevna Sokovnikova) one of the most prominent supporters of the Old Believer movement in the seventeenth century. In 1671 she was arrested and sent to the Pafnutief-Borovsky convent where died in exile.

◇ ... the Boyarina Morozova, widowed scion of the wealthy Morozov family (Billington, 1970, p. 148) ◇ [Of Ivan Neronov and Boyarina Morozova] the two latter being important leaders of the Old Believers (Zenkovsky, 1963, p. 33) (see also **Old Believer**)

2. painting by Vasily Ivanovich Surikov (1887), depicting Morozova's arrest by the Nikonians in 1667. She is transported in a sleigh through Moscow to the place of her captivity. She, with her hand thrown up, is blessing the crowd in the two-fingered manner of the Old Believers.

◇ All the faces in *The Boyar Wife's Morozova* were drawn from living people in Moscow. Morozova herself was modelled on a pilgrim from Siberia (Figes, 2002, p.190) (see also **Surikov, Vasily Ivanovich**)

Figure 2: Preview of the entry '**Boyarynya Morozova**'

However, in practice, we can find many examples when there are several 'traditional' variants of the same term in English and in the majority of cases it would be rather difficult to choose an appropriate term. In the meantime, DR2 aims at finding the right balance between *preferred* and *non-preferred terms* supplying the user with usage notes and providing additional meta-linguistic data (obsolete, historical, etc.). Its entry microstructure is organized in such a way that a preferred term is given first as a headword. Other variants of a term (if any) are listed after the modifier 'also' in brackets.

One important note to make is that different versions of a headword also appear in English due to the regional differences in spelling (for example, in British and American English). To take a practical example, there are several Romanized versions of the Russian term 'царь' - 'tsar', 'czar' and 'tzar' (see Fig. 3). The term 'tsar' is given as a headword in the dictionary entry for several reasons. First of all, this version is more correct from the point of view of the transliteration system we follow in DR2 (however, it does not convert the last letter 'ь' (soft sign)); therefore, we provided a letter-letter transliteration in square brackets as well - 'tsar'). Secondly, 'tsar' is more frequent in British English than 'tzar' and 'czar', the latter being generally used in American English. Furthermore, our data are underpinned by the frequency of the three terms in the BNC corpus. Namely, the word 'tsar' has got a normalized frequency of 5.29 instances per million words, 'czar' and 'tzar' - 0.41 and 0.09 respectively.

tsar (also czar, tzar) [царь/ tsar'] the official title of Russian monarchs since Ivan IV the Terrible and until Peter the Great who introduced the title of 'emperor' (1547-1721); however, even after that change the title was widely used unofficially.

◇ Failing to live up to its name, the Russian newspaper Pravda announced in February that the library and treasures of the sixteenth-century tsar Ivan the Terrible had been discovered in an underground city north of Moscow (BNC, CKV 189) ◇ Married to Princess Olga Romanoff, a great niece of the last Czar, he claims to have survived three attempts on his life (BNC, AAC 391)

Figure 3: Preview of the entry '**tsar**'

However, all the versions of a term are cross-referenced in the dictionary database. Any search, for instance, for 'czar' or 'tzar' in the dictionary will redirect the user to the preferred term's entry:

- (3) Czar see **Tsar**
- (4) Tzar see **Tsar**

In addition, on closer examination, we can see that many DR2's headwords (preferred terms) are given in italics (see Fig. 4).

kvas (also kvass) culin [квас] a traditional fermented, slightly sour drink, made from rye-flour or bread with malt.
◇ *Kvas*, that tasty beverage made from fermented bread, will soon be on sale again, as is the custom in springtime (Moscow Times, 1994) ◇ In towns state-owned stalls sell such items as kvass (a drink based on rye), ice-cream, and soft drinks (also available from vending machines) (CamEnc 1982, p.355)

Figure 4: Preview of the entry '*kvas*'

This is done intentionally in the cases when a transliterated version, still not quite common in English, becomes a headword. Italics are useful in flagging of foreign status. When a Russian term is more or less adopted by the vocabulary of modern English, it may not be necessarily flagged in a text. As shown in the citations on Fig.4, in descriptions of Russian culture we may come across two different spellings of the food term 'квас' (a fermented beverage made of bread) - '*kvas*' and 'kvass'. The headword '*kvas*' displayed in italics, since it is a letter-to-letter transliteration of a Russian term, not frequent in English. The second term 'kvass' made its way into the English lexicon in the period 1550 to 1600 during the first trading links between England and Muscovy. Since its long presence in the English lexicon, the term is not usually flagged by italics in print. However, it still keeps its sixteenth-century transliteration that nowadays is considered to be an obsolete one, thus, non-preferred in Russian-Culture-Oriented English.

6. Conclusion

Some generalizations about Russian cultural terms can be drawn from the topics discussed in this paper. We have seen that xenonyms from different cultures are in evidence of the modern English lexicon. English, being a global language, is often used as a conduit for foreign-culture terms into the global society. The research in interlinguaculturology focuses on different varieties of English oriented to foreign cultures. *The Dictionary of Russia* was specially designed to summarize the results of longstanding research conducted in the area of Russian-Culture-Oriented English.

Although the current project is still in progress and there is much to be done, we hope that the new, updated edition of DR2 will fill the gap in lexicographic resources available for linguists interested in Russian cultural terms. While designing the structure of the dictionary, we attached much importance to the original source words in Russian and to their transliterated versions in English. Our objective was to produce a new electronic resource, which would help its users to find the right balance among the variety of existing cultural terms, and at the same time, which would be easy to use. We hope this look at the preliminary results of the project has been interesting for lexicographers, terminologists and other linguists.

7. Notes

¹ Additional comments should be made here regarding the use of a term 'xenonym' as it implies some disambiguation of meaning. As generally known, Greek and Latin stems and affixes are highly productive when deriving new terms in science and research. Apart from interlinguaculturology the term 'xenonym' is also used in semantic theory. In semantics, two words are considered to be xenonyms if they create semantic dissonance, e.g. fat water, the sadness of pencils. However, the distinction between term's other meanings is not used in this article.

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Abstract. Academic writing in a foreign language, sometimes in the mother tongue, is a major problem for students. To address the range of challenges of their students, writing centres offer a variety of solutions. One such solution, text corpora, helps students to search for words in context. However, there are hardly any text corpora for specific academic disciplines. As a result, corpus linguistics is an increasingly important research field for scholars and language instructors. This paper will look at a corpus designed to help engineering students and a query tool which is intended to serve both students and researchers. This tool allows searching for up to five items consisting of words, lexemes and part-of-speech tags without the need to learn any query language. A simple search may return simple Key Words in Context and verbalised advanced results. These may include an automatic absolute frequency interpretation based on the position of the searched word or lexeme on the frequency/rank list (Zipf-Mandelbrot law). On the other hand, an advance search may return raw figures of corpus and computational linguistics such as N-grams and collocations. Recent techniques like latent semantic analysis based associations, statistics and readings can also be produced.

Keywords. Linguistics, Text-Mining, Writing Centre, Open Source, LSP Corpora

1. Einleitung

Schreibberater_innen werden vielfach nicht nur mit Fragen bezüglich des Schreibprozesses sondern auch mit sprachlichen Problemen von Seiten der Studierenden konfrontiert. Besonders in Studiengängen mit vorgegebenen Schreibvorlagen¹ treten diese Probleme in den Vordergrund und strukturelle Probleme in den Hintergrund. Zumindest im Multilingualen Schreibzentrum der Universität Hannover ist es aufgrund der Vielzahl an zu betreuenden Studiengängen selten möglich, Mitarbeitende zur Verfügung zu stellen, die sich mit den Inhalten und der Lexik der einzelnen Fachgebiete auskennen. Während Probleme etwa bei der Textorganisation oder der Literaturverwaltung vielfach mit Hilfe der oben genannten Schreibvorlagen behandelt werden können, bedürfen beispielsweise Fragen zur korrekten Verwendung von bestimmten Substantiv/Verb-Kombinationen eines tieferen Textverständnisses. So ist es auch für viele Erstsprecher_innen nicht auf den ersten Blick ersichtlich, ob ein statistisches Regressionsmodell berechnet, aufgestellt oder geschätzt wird. In der geplanten Doktorarbeit soll eine Möglichkeit aufgezeigt werden, wie sich Studierende und Schreibberater_innen mit Hilfe von deutsch-, englisch- und russischsprachigen Spezialkorpora und entsprechender Software autonom und fundiert mit der Sprache einzelner Disziplinen auseinandersetzen können und hierdurch etwa die oben genannte Frage nach dem richtigen Verb zum Regressionsmodell selbstständig beantworten können.

Sprachliche Schreibberatung hat mit zwei Arten von Problemen zu kämpfen: Einerseits gibt es Probleme, die auf der sprachlichen Performanz des Schreibenden basieren (Chomsky 1965). Hierzu gehören alle Arten von Fehlern, die mit einem allgemeinen Wörterbuch gelöst werden können. Andererseits bestehen jedoch Probleme, die fachspezifisch sind und deren Ursprung

auf die sprachliche Kompetenz des Schreibenden zurückzuführen ist. Als Beispiel soll erneut das Wort “Regressionsmodell” dienen. Auch ohne genau zu wissen, worum es sich bei einem Regressionsmodell handelt, kann jede Schreibberatung sofort das korrekte grammatikalische Genus bestimmen und den entsprechenden Artikel vorschlagen. Problematisch hingegen wird es, ein korrektes Verb für dieses Substantiv zu finden. Sofern die Schreibberater_in nicht selbst statistische Kenntnisse besitzt, endet die Hilfe der Schreibberatung an dieser Stelle. Speziell auf einzelne Fachbereiche ausgerichtete Wörterbücher sind meist nicht vorhanden, weshalb keine Hilfe zur Selbsthilfe gegeben werden kann. Als pragmatische Lösung kann im Rahmen der Schreibberatung daher nur jemand mit muttersprachlicher Kompetenz und Expertise in der entsprechenden Fachrichtung befragt werden. Es kann natürlich immer auch auf die entsprechende Fachliteratur verwiesen werden. Mehrere Artikel nach einer Konstruktion (etwa Regressionsmodell plus Verb) zu durchsuchen und aufgrund der konkreten Verwendung zu entscheiden, wie sie idiomatisch verwendet werden kann, entspricht der Grundidee der Korpuslinguistik. Die Doktorarbeit soll aufzeigen, wie dieses Durchsuchen automatisiert werden kann, um den Suchprozess schneller und effizienter zu gestalten. Die Korpus- und Computerlinguistik und das Text Mining sollen als Hilfswissenschaft herangezogen werden, um die Verwendungen genauer zu beschreiben und zu analysieren, um mehr und bessere linguistische Erkenntnisse für die Studierenden zu generieren.

Es muss an dieser Stelle auf ein fundamentales Problem jeder Software, die in einem didaktischen Kontext verwendet werden soll, hingewiesen werden.

2. Korpuslinguistik als Hilfswissenschaft

Aus offensichtlichen Gründen ist es nicht jederzeit möglich, auf entsprechende Expertise zurückzugreifen. Allerdings gibt es die Möglichkeit, dieses Problem zu umgehen. Entsprechend aufgearbeitete Textsammlungen, sogenannte Korpora, ermöglichen durch entsprechende Analysemethoden eine gleichzeitige Befragung hunderter Expert_innen. Die Korpuslinguistik beschäftigt sich seit langem mit der Frage, wie diese Textsammlungen didaktisch eingesetzt werden können (Mukherjee & Rohrbach 2006, Granger 2003a, Granger 2003b, Heift 2010). Leider sind die Ergebnisse dieser Forschung etwa in der Schreibberatung bisher kaum einsetzbar.

Da sich Korpus-Programme wie etwa AntConc, WordSmith Tools oder COSMAS vor allem an Linguisten und weniger an Studierende richten, entsteht ein Dilemma: Studierende brauchen linguistische ad hoc Antworten, die, falls überhaupt ein Eintrag vorhanden ist, über die Informationen eines Wörterbuchs hinausgehen, den tatsächlichen Gebrauch in der Wissenschaft widerspiegeln und vor allem so einfach zu bedienen sind, dass die Studierenden sie unabhängig von einer Schreibberater_in verwenden können. Jedes der oben genannten Programme ist in der Lage bei einem entsprechend aufgearbeiteten Korpus die Frage nach dem korrekten Verb zu “Regressionsmodell” zu beantworten. Allerdings sind sie wegen ihrer Zielgruppe so kompliziert, dass ein korpuslinguistischer Laie kaum selbstständig zu diesem Ergebnis kommen kann. Es entsteht folglich eine Diskrepanz aus linguistischen Antworten auf linguistische Fragen für nicht primär linguistisch interessierte Studierende. Viele Schreibberater_innen, die nicht aus der Linguistik kommen, werden mit einem ähnlichen Problem konfrontiert. Obwohl die Erkenntnisse der Korpuslinguistik hilfreich sind, um sprachliche Probleme zu überwinden, müssen sie dennoch aufgearbeitet werden, um ihre volle Wirkung zu entfalten.

Das Fachsprachenzentrum, bzw. das Multilinguale Schreibzentrum der Leibniz Universität Hannover umgeht dieses Dilemma, indem für den pädagogischen Gebrauch eine eigene Korpussoftware entwickelt wird. Nach unserem Wissensstand ist der Hannover Concordancer (HanConc) die erste korpuslinguistische Software, die speziell für die Schreibberatung programmiert wurde. Sie wurde und wird im Rahmen eines Forschungsprojektes am Fachsprachenzentrum der Leibniz Universität Hannover in Zusammenarbeit mit der Technischen Informationsbibliothek und Universitätsbibliothek Hannover (TIB/UB) sowie

der Peter the Great St. Petersburg Polytechnic University (Russland) entwickelt. Im Rahmen dieses Forschungsprojekts wird ein Korpus aus deutsch-, englisch und russischsprachigen ingenieurwissenschaftlichen Dissertationen zusammengestellt. Obwohl HanConc vornehmlich für dieses Deutsch, English and Russki - Corpus of Civil Engineering (DEaR - Corpus) entwickelt wurde, lassen sich alle Arten von Texten implementieren. DEaR ist Teil eines größeren Corpus, der gleichzeitig zusammengestellt wird. Der Gesamtkorpus umfasst alle digital zur Verfügung stehenden Dissertationen der Leibniz Universität Hannover mit insgesamt mehr als 100.000.000 Tokens².

HanConc basiert auf der Idee, die Suchmaske und die Ergebnisse nutzerspezifisch zu skalieren, sodass sowohl linguistische Laien als auch Korpuslinguisten zielführende Suchanfragen formulieren und aussagekräftige Ergebnisse erhalten können. Auf der niedrigsten Skalierungsstufe kann ein Wort in einem Fachkorpus, etwa ein Korpus bestehend aus Maschinenbaudissertationen, gesucht werden. Als Ergebnisse werden maximal 10 Sätze mit entsprechendem Suchwort angezeigt und die aufgearbeiteten Ergebnisse weiterführender Funktionen. Auf der höchsten Skalierungsstufe richtet sich HanConc an linguistisch interessierte Studierende, Mitarbeitende der Schreibberatungen und Linguist_innen. Auf dieser Stufe werden sowohl die Rohwerte als auch die linguistische Fachlexik angezeigt. HanConc soll somit sowohl in der Schreibberatung als auch in der linguistischen Forschung einsetzbar sein³.

Entsprechend der grundsätzlichen didaktischen Ausrichtung von HanConc sollen alle Funktionen nach ersten Feldversuchen noch einmal überarbeitet werden⁴. So sollen N-Grams und Kollokationen⁵ dazu benutzt werden, idiomatische Mehrwortkombinationen zu bestimmen. Als idiomatisch soll eine Konstruktion angesehen werden, wenn eine bestimmte Kombination (Type), die aus dem Suchwort und ihrem unmittelbaren Kontext besteht, einen Großteil der gesamten Mehrwortkombinationen (Tokens) auf sich vereint (Römer & Arbor 2009, Gilquin 2004, Evert 2005, Gärtner 2013). Linguistische Laien sollen vom Mutual-Information Score⁶, dem Zipf-Mandelbrot Gesetz und anderen linguistischen Kennziffern profitieren können, ohne dass sich die Benutzer_innen mit den zugrunde liegenden Details auseinandersetzen und sich erst in entsprechende Literatur einlesen müssen.

3. Informatik als Hilfswissenschaft

Die Informatik bietet für die Schreibberatung drei neue interessante Herangehensweisen. Text-Mining, als Analysedisziplin von Texten in der Informatik, ist bisher nicht in pädagogischen Kontexten in Erscheinung getreten. Jedoch bietet das Text-Mining Methoden zur tiefer greifenden Textanalyse. Während Kollokationen und N-Grams auf dem tatsächlichen Vorkommen benachbarter Wörter basieren, ist die Assoziationsanalyse der Latent Semantic Analysis in der Lage, semantisch verwandte, d.h. in ähnlichen Kontexten gebrauchte Wörter über große Distanzen zu erkennen⁷ (Baroni, Dinu & Kruszewski 2014, Grün & Hornik 2011, McCarthy, Briner, Rus & McNamara 2007, Turney 1992). Studierenden werden so Hinweise auf ähnliche Wörter gegeben, auf die sie vorher nicht gestoßen wären. In einer späteren Version ist es geplant, die Suchbegriffe thematischen Schwerpunkten mittels der Support Vector Machine⁸ (Tsvetkov & Winter 2011, Bouckaert, Frank, Hall, Kirkby, Reutemann, Seewald & Scuse 2013, Seaghdha 2014) und der Topic Models⁹ (Grün & Hornik 2011) zuzuordnen. Einer Studierenden kann so deutlich gemacht werden, dass beispielsweise der Begriff "Rotorblätter" innerhalb des Maschinenbaukorpus vor allem in Texten, die sich mit Windenergie befassen, verwendet wird.

Bisherige Programme wurden größtenteils als geschlossene Systeme ausgelegt. So ist es nicht möglich, Anpassungen entsprechend der eigenen Bedürfnisse vorzunehmen. HanConc hingegen basiert auf der einfach zu lernenden und auf Open Source Software ausgelegten Programmiersprache R. Der Quellcode ist stark modularisiert und mit weniger als 10.000 Zeilen auf eine gemeinsame Weiterentwicklung mit anderen Schreibzentren ausgelegt. Computersoftware hat vielfach den Makel, dass sie nur auf einem Betriebssystem eingesetzt

werden kann, bzw. nur lokal oder online. HanConc hingegen ist bereits auf Windows, Apple und Linux Computern getestet worden und kann ebenso auf einem Apache Server installiert werden. Schreibberater_innen und ihre Studierende sollen so nicht nur als passive Konsumenten gesehen werden, sondern aktiv in die Weiterentwicklung eingebunden werden¹⁰.

Auf den Rechnern der Studierenden oder der Universität lokal installierte Konkordanzprogramme haben den massiven Nachteil, dass das computergestützte Durchsuchen mit ansteigender Größe des Korpus' länger dauert. Weil jedoch die Qualität der Suchergebnisse ebenfalls mit der Größe des Korpus' steigt, muss entweder ein Kompromiss zwischen Geschwindigkeit und Qualität gefunden oder das Programm verändert werden. Auch HanConc bildet hier zunächst keine Ausnahme. Pro Sekunde können nur ungefähr 100.000 Wörter durchsucht werden, was bei ungefähr 100 Dissertationen mit je 50.000 Wörtern zu einer Reaktionszeit von etwa einer Minute führt. Um die gleiche Menge an Texten in weniger als zwei Sekunden zu durchsuchen, wurden Techniken der Suchmaschinenprogrammierung angewendet (Page, Brin, Motwani & Winograd 1998, Brin & Page 1998).

4. Zusammenfassung

Korpuslinguistik und Text-Mining bieten der Schreibberatung einige Vorteile. Durch sie kann linguistische Hilfestellung geleistet werden, wo Wörterbücher und akademische Schreibhilfen die Studierenden nicht weiter unterstützen können. Fragen der Studierenden nach der Fachlexik ihres Fachgebiets können mit HanConc beantwortet werden und somit müssen die Studierenden nicht mehr an ihre Betreuenden oder ihre Literatur verwiesen werden. Nach einer kurzen Einarbeitungsphase können Studierende autonom Vorgehen und bereits selbstständig Fragen bezüglich Later-Order Problems beantworten, die sonst erst mit den Schreibberater_innen hätten besprochen werden müssten (Smagorinsky 2007, Gillen 2000, Wood & Wood 1996).

Bei sprachlichen Fragestellungen werden die Mitarbeiter_innen der Schreibberatungen befähigt, den Studierenden sicherer, schneller und effizienter zu helfen. Während in der Realität die entsprechende fachwissenschaftliche Expertise nicht verfügbar ist, können durch Korpora dutzende -wenn nicht hunderte- wissenschaftliche Texte, die von Promotionskommissionen und Verlagen begutachtet wurden, durchsucht werden. Es kann letztendlich festgestellt werden, dass ein Korpus und entsprechende Software sowohl die Schreiberberatung als auch die Studierenden unterstützen kann.

5. Anmerkungen

¹ Bei diesen Schreibvorlagen handelt es sich meist um Word Dokumente, die schon entsprechend vorformatiert sind. Zusätzlich enthalten sie zumeist schon eine Grobstruktur.

² Die Algorithmen und regulären Ausdrücke, um die Dissertationen in HanConc einzupflegen, werden in einem eigenen Publikation behandelt.

³ Entsprechend der Skalierungsidee muss nicht jede Nutzer_in alle Funktionen verstehen. Für Nicht-Linguisten werden die benötigten Informationen in der Darstellung so reduziert, dass sie, z.B. in Form von Wortwolken, einfach zu verstehen sind und dennoch das vorhandene Problem der Studentierenden erfolgreich löst.

⁴ Diese Feldversuche finden am Fachsprachenzentrum der Leibniz Universität Hannover statt. HanConc hat eine eigene Protokollfunktion, die in Verbindung mit einem Fragebogen zur pädagogischen Evaluation eingesetzt werden soll.

⁵ N-Grams sind tatsächlich auftretende Mehrwortkombinationen. Kollokationen hingegen beschreiben die Frequenz des Auftretens verschiedener benachbarter Items.

⁶ „Regressionsmodell“ und das Verb „schätzen“ als Kollokation kann nicht über seine Frequenz gefunden werden, da viele Hochfrequenzverben das Ergebnis verzerren. Der Mutual-Information Score hingegen vergleicht die Wahrscheinlichkeit, dass beide Wörter einzeln vorkommen, mit der Wahrscheinlichkeit, dass sie zusammen auftreten. Obwohl in der Schreibberatung nur die Kollokation interessiert, soll hier dennoch auf die zugrunde liegende Technik hingewiesen werden.

⁷ Eine LSA für den Suchbegriff Schule ermittelt, unter Voraussetzung eines entsprechend großen Corpus, Begriffe wie Lehrer, Schüler oder Unterricht. Die Idee hinter der LSA ist, Texte als Vektoren zu codieren und diese entsprechend ihrer Ähnlichkeit zu gruppieren.

⁸ Während eine LSA ein lineares Verfahren einsetzt, um Vektoren zu gruppieren, basiert eine Support Vector Maschine auf nicht-linearen Abgrenzungen.

⁹ Topic Models versuchen die relevantesten Begriffe eines Textes zu finden, um damit Hinweise auf dessen Thema zu geben.

¹⁰ Genausogut können allerdings auch Bestandteile von HanConc für andere linguistische Fragestellungen benutzt werden. Soll etwa das Vokabular einzelner Sub-Korpora miteinander verglichen werden, bedarf es hierzu nur etwa 50 Zeilen Quellcode.

6. Literatur

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Gewürze, Flüssigkeiten, zählbares Silber und warnendes Vertrauen

Synchronische französische Bargeldmetaphern aus diachroner Perspektive

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Abstract. In recent linguistic research, scholars have variously emphasized the important and often underestimated role of metaphors in languages for special purposes. In the highly complex and abstract domain of economics metaphorical projections abound as a means to communicate and process information. The paper focuses in this context on the French equivalents of German *Bargeld* ('cash'). Metaphorical expressions are, above all, discussed in terms of their etymology, as diachronic meaning is often necessary to identify dead or entrenched metaphors. French has a variety of metaphorical expressions that correspond to *Bargeld*: *argent liquide* ((*en*) *liquide*), *argent comptant* (*au comptant*), (*en*) *numéraire*, (*en*) *espèces* and *monnaie fiduciaire*. We can identify four source domains: 'cash as liquid' (Flüssigkeitsmetapher), 'cash as countable' (Zählbarkeitsmetapher), 'cash as a spice' and 'cash as trustworthy' (Vertrauensmetapher). The principle objective of the paper is to demonstrate the compatibility of synchronic and diachronic approaches in the field of metaphors. The results strongly underscore the importance of language history and etymology in optimizing the use and comprehension of metaphors in languages for special purposes.

Keywords. Languages for special purposes, economics, metaphors, diachronic linguistics, French, cash, semantics, lexicology

1. Einleitung

Die Metaphernforschung hat im vergangenen Jahrzehnt viele neue Forschungsergebnisse und Blickwinkel generiert. Metaphern werden in der aktuellen Forschung als sprachliches und geistiges Phänomen gesehen. Ihre systematische Analyse gestaltet sich auf den Ebenen: Wort, Satz, Text und Kontext. In der Linguistik werden neben kreativen (innovativen) in zunehmendem Maß lexikalisierte Metaphern untersucht. Dabei stehen die kognitive Verarbeitung und pragmatische Funktion metaphorischer Äußerungen ebenso im Zentrum des Interesses wie deren Einbettung in den Textverstehensprozess.

Von besonderem Interesse für unsere Untersuchungen sind *Metaphern im Lexikon*, die sich als problematischer Punkt in der gegenwärtigen Metaphernforschung erweisen. Bei Untersuchungen zum Verhältnis zwischen Lexikon und Metapher erhebt sich die Frage, inwieweit Metaphern das Lexikon bereichern (vgl. Skirl & Schwarz-Friesel 2013: 34-36) und bei Entdeckungen und Erfindungen entsprechende Bezeichnungen hervorbringen. Um lexikalische Lücken zu schließen, ist gerade die Metapher ein geeignetes Instrument, wobei auch lexikalische Polysemie zuweilen auf Metaphorik zurückzuführen ist (vgl. Skirl & Schwarz-Friesel 2013: 35 f.).

Wir gehen von der Beobachtung aus, dass viele lexikalisierte Metaphern heute zum allgemeinen (und fachsprachlichen) Wortschatz gehören und Laien den metaphorischen "Ausdruck nicht

mehr als Metapher wahr[nehmen], das heißt sie lösen ihn nicht mehr in seine Bestandteile auf, denn die metaphorische Bedeutung ist *eine* oder die *übliche* Bedeutung des Ausdruckes geworden.”¹ (Koch 2010: 36)

In diesen Fällen ist es hilfreich, um die ursprüngliche Metaphorizität eines Lexems sichtbar zu machen, auf seine diachrone Entwicklung zurückgreifen. Wir gehen zu einem sprachgeschichtlichen Punkt, an dem die Metapher noch innovativ war bzw. die Anomalie des Wortes noch als solche wahrnehmbar. Die konkreten Lexeme, die den Gegenstand unserer Untersuchungen bilden, sind die französischen Äquivalenzmetaphern² für deutsch *Bargeld*: (*argent*) *liquide*, (*en*) *numéraire*, (*argent*) *comptant*, (*en*) *espèces* und *monnaie fiduciaire*.

2. Lexikalisierte Metaphern

Sowohl in der Alltagssprache³ als auch in den Fachsprachen treffen wir auf konventionelle⁴/lexikalisierte⁵ Metaphern, deren ursprünglicher Bildlichkeit wir uns im aktuellen Sprachgebrauch nicht mehr bewusst sind. Wir bemerken erst durch Zufall oder näheres Studium, dass sich hinter gängigen Wörtern Sprachbilder verbergen (vgl. Knowles & Moon 2006: 26). Häufig liegt der Schlüssel zur Sichtbarmachung und Wahrnehmung der verborgenen Metaphorik in der Wortgeschichte:

Historical aspects of metaphor are sometimes thought less interesting and relevant than textual aspects [...]. However, historical aspects help explain what metaphor is, how metaphors develop, and how they produce the effects and meanings that they do. (Knowles & Moon 2006: 13)

Diesem Standpunkt von Knowles & Moon (2006) bezüglich der fundamentalen Rolle der Etymologie im Metaphernverständnis schließen wir uns an. Die Sprachgeschichte erhellt uns Anomalien⁶, die wir synchron nicht mehr bewusst realisieren, da die originären Semantiken bzw. die Grundbedeutung nicht im Vordergrund stehen oder polysemisch verdeckt sind. Zudem erklärt die Etymologie bisweilen, wie verschiedene Bedeutungen entstanden sind.

Skirl & Schwarz-Friesel (2013: 34) definieren lexikalisierte⁷ Metaphern als “Lexeme, die zusätzlich zur wörtlichen Bedeutung metaphorisch motivierte Bedeutungsvarianten aufweisen”. Dieser Definition stimmen wir nicht uneingeschränkt zu, da e.g. *Bargeld* synchron keine wörtliche Bedeutung mehr besitzt, sondern nur noch eine metaphorische. Wir schließen uns vielmehr Koch (2010) an, die die (vollständige) Lexikalisierung eines Sprachbildes ab dem Zeitpunkt vollzogen sieht, wo die Metapher als lexikalisierte Sprachbaustein in den normalen Wortschatz einer Sprache integriert ist und ihn selbst Muttersprachler nicht mehr als (ursprünglich) metaphorisch wahrnehmen: “[...] das heißt sie lösen ihn nicht mehr in seine Bestandteile auf, denn die metaphorische Bedeutung ist *eine* oder *die* übliche Bedeutung des Ausdruckes geworden [...]” (Koch 2010: 36). Der Erkenntnis von Skirl & Schwarz-Friesel (2013), dass “[d]urch [solche] metaphorische Bezeichnungen lexikalische Lücken gefüllt werden” (Skirl & Schwarz-Friesel 2013: 34), pflichten wir bei, da besonders in den Fachsprachen⁸ der Bedarf an neuen Benennungen im Rahmen von Erfindungen, Entdeckungen und (neuen) Theorien gegeben ist.

Bezüglich der Darlegungen von Skirl & Schwarz-Friesel (2013) zur *Katachrese* erheben wir ebenfalls Einwände, da diese von ihnen noch immer als in der Rhetorik verankert definiert wird: “Eine metaphorische Bezeichnung, durch die eine lexikalische Lücke gefüllt wurde, heißt in der Rhetorik [...] auch Katachrese.” (Skirl & Schwarz-Friesel 2013: 34) Die Katachrese hat zwar ihre Ursprünge in der Rhetorik (Quintilian, Aristoteles, Cicero) (vgl. Posselt 2005: 128), wird aber heute vielfach zur Bezeichnung konventionalisierter/verblasster Metaphern, die eben eine sprachliche/lexikalische Lücke füllen, verwendet. Wir können als Charakteristika der Katachrese, die bereits von Ricoeur (1975: 65; 85) als solche erkannt und benannt wurde, feststellen: Es gibt keine “unmetaphorische” Alternative (keine Substitution eines eigentlichen Ausdrucks, da sie eine

lexikalische Supplementierungsfunktion erfüllt), sie ist kontextunabhängig, hat Mitteilungswert, ist lexikalisiert und häufig mit dem Attribut Fachsprachlichkeit zu versehen. Zudem sind Katachresen weniger durch Analogie als synchron durch Bildbruch, Unvereinbarkeit, Anomalie bzw. Widersprüchlichkeit gekennzeichnet.⁹

Warum sind nun lexikalisierte Metaphern für unsere Darlegungen so essentiell? Wir sind der Überzeugung, dass (synchron) undurchsichtige Bild-Lexeme gerade beim Zweitsprachenerwerb, in der Translatologie und den Fachsprachen Schwierigkeiten bereiten können, aber auch Chancen in sich bergen. Die den Gegenstand unserer Untersuchungen bildenden französischen Äquivalenzmetaphern für deutsch *Bargeld* offenbaren eine interlinguale (Bild-)Divergenz, die wir in der Teil-Synonymie und der daraus resultierenden kontextuellen Anwendungsspezifität der Lexeme verorten: Wir teilen daher vielmehr die Auffassung von Osthus (1998), der von Weinrich (1976: 287) für Europa postulierten allgemeingültigen “Bildfeldgemeinschaft” widerspricht: “Vermessen wäre es, [...] für sämtliche europäische Kulturen¹⁰ völlige Identität zu postulieren.” (Osthus 1998, zitiert nach Koch 2010: 38). Wir erkennen zwar auch ähnliche Bildfelder in den verschiedenen Sprachen, schließen uns jedoch Koch (2010: 38) an, die die Meinung vertritt, dass “sich selbst ähnliche Bildfelder in ihrer Ausdifferenzierung in sprachliche Einzelmetaphern, ihrer Produktivität, ihrer Frequenz [...] und den spezifischen Kontexten, in denen sie gebraucht werden [...]”, unterscheiden (Koch 2010: 38).

Wir sehen in der Etymologie und dem diachronen Studium heute lexikalisierte Metaphern einen nützlichen Bewusstmachungsprozess und eine Vertiefung des Sprachverständnisses. Wir fokussieren daher die etymologische Entwicklung der zur Diskussion stehenden Termini, da wir aktuelle semantische Vergleiche, die bisweilen möglich sind, nicht für ausreichend erachten, um einen produktiven Umgang mit den Herausforderungen und Chancen lexikalisierte Metaphern zu gewährleisten.

3. Argent liquide, liquide, (en) liquide, avoir liquide

Das Adjektiv *liquide* hat seine finanztechnische Bedeutung im 16. Jahrhundert unter dem Einfluss der italienischen Finanzwirtschaft erhalten: “libre de dettes, disponible (en parlant du bien de qn) (seit 16. jh.)” (FEW 1950: 371). Detaillierte Auskunft über den frühen finanztechnischen Gebrauch von *liquide* gibt uns Rey (2012: 1914):

Sa spécialisation dans le domaine de la finance (1539) est un emprunt à l’italien *liquido* (XIV^e s.) qui avait pris ce sens dès le XV^e siècle. D’abord strictement juridique, en parlant de biens qui ne sont pas sujets à contestation, sont libres de dettes (*biens liquides*), cette spécialisation s’est répandue dans l’usage courant par l’intermédiaire d’emplois classiques plaisants.

In seiner substantivierten Form finden wir *liquide* zunächst in der Phonetik *la liquide* (1392)¹¹, wobei es zur Bezeichnung der Konsonanten *l* und *r* bereits im Latein üblich war (vgl. FEW 1950: 371). Das Nomen in seiner männlichen Form *le, du liquide* “désignant une substance liquide” (Rey 2012: 1914) erhält seine finanztechnische Bedeutung im 17. Jahrhundert “[...] puis familièrement de l’argent en espèces disponible immédiatement (1651)” (Rey 2012: 1914). Ebenfalls in finanztechnischer Bedeutung – unter dem (vermutlichen) Einfluss von italienisch *liquidazione* – finden wir im Französischen *liquidation*: “action de liquider des biens (seit 1416)” (FEW 1950: 371). Wir verweisen auf den anfänglich ausschließlich juristischen Gebrauch und die Rezeption vor dem Adjektiv *liquide*. In der weiteren Folge finden wir mit ökonomischer Semantik “[...] il concerne également (1671) l’estimation du passif et de l’actif d’un compte [...] et aussi vendre des marchandises à bas prix (1893).” (Rey 2012: 1914/1915)

Die *liquidités* (lat. *liquiditas*), “caractère de ce qui est liquide” (FEW 1950: 371), erfuhren zusätzlich zu ihrer finanztechnische Spezialisierung eine rechtssprachliche Rezeption “[u]ltérieurement,

sous l'influence de la spécialisation financière de *liquide*, le mot a désigné en droit l'état d'un bien liquide (1873) et s'est répandu au pluriel *des liquidités* avec le sens concret de «sommes d'argent disponibles» (Rey 2012: 1914).

Zuallererst wurde *liquide* (lat. *liquidus*) jedoch in der Sprache der Medizin¹² rezipiert (vgl. FEW 1950: 371). Laut FEW (1950: 371) erfolgte dies bereits im 13. Jahrhundert. Die für uns relevante finanztechnische Bedeutung finden wir für das Adjektiv nicht vor dem 16. Jahrhundert, während *liquidation* in ökonomischem Sinn früher belegt ist. Das FEW (1950: 371) sieht darin einen Beweis für den ebenfalls früheren Gebrauch des Adjektivs in wirtschaftlicher Semantik, da das Substantiv *liquidation liquide* in seiner adjektivischen Form präsupponiere. Das gesamte Wortfeld um *liquide* ist Ausdruck des Einflusses der italienischen Finanzwirtschaft auf das Französische. Da die Rechtssprache ursprünglich die Sprache der Ökonomie einschloss, findet sich wiederum zuerst die Aufnahme durch das Rechtsfranzösisch. Das Liquiditätsbild ist originär eine Anomalie (Metapher), die heute lexikalisiert ist. Dieses Phänomen hat zur semantischen Erweiterung von *liquide* im Sinne von (*immédiatement*) *disponible* (*dur, concret, solide*) geführt. Ohne diachronisches Wissen ist die (monetäre) Liquiditätsmetapher nicht verständlich, obwohl wir uns dessen bewusst sind, dass die diachronische Erklärung synchronischer Phänomene nicht unumstritten ist. Im aktuellen Sprachgebrauch ist das Flüssigkeitsbild¹³ äußerst produktiv, wobei Reihenbildungen mit *en liquide* zu verorten sind.

4. (Argent) comptant, (en) numéraire

“Geld ist zählbar, dauerhaft bzw. haltbar und es kann leicht transportiert und gelagert werden.” (Haidacher 2015: 268). Dieses monetäre Zählbarkeitskriterium finden wir nicht nur bei Münzen¹⁴, sondern auch bei(m) Papiergeld: “Dies Papier wird als Zahlungsmittel anerkannt, wiederum in genormten, zählbaren Stücken, den Banknoten.” (Haidacher 2015: 269). Die Lexeme, die wir unter der Zählbarkeitsmetapher zusammenfassen, sind (*argent*) *comptant* und (*en*) *numéraire*.

4.1. Argent comptant, comptant, (au) comptant

Comptant bzw. *argent comptant*, das erstarrte und adjektivierte Partizip Präsens von *compter*, leitet sich von lateinisch *computare* bzw. dem Simplex *putare* ab. Die engere Semantik des Verbums umfasst dabei nicht nur (*be*)*rechnen*, sondern auch *zählen*, *zahlen*, *sammeln*, *bewerten*, *abschätzen*, etc. (vgl. Haidacher 2015: 284). Im Sinne von *calculer*¹⁵ ist *compter* laut FEW (1946: 992) seit dem 11. Jahrhundert belegt. In den Verbindungen *deniers comptants* (“de l'argent qu'on paye sur l'heure”; ca. 1265) bzw. *argent comptant* (ca. 1469) (vgl. FEW 1946: 993) kommt es bereits relativ früh in finanztechnischer Bedeutung vor. Die im heutigen Französisch¹⁶ noch immer gebräuchliche metonymische Verwendung in *prendre (qqch) pour argent comptant* ist seit dem 16. Jahrhundert belegt, während der Ausdruck *deniers comptants* im aktuellen Sprachgebrauch veraltet¹⁷ ist.

Das (*argent*) *comptant* zugrundeliegende Etymon *computare* ist in allen romanischen Sprachen mit Ausnahme des Rumänischen heute noch präsent. Im Galloromanischen und vielen anderen Sprachen ist aus der Bedeutung *rechnen*, *zählen* vermutlich über *aufzählen* die Semantik *erzählen* entstanden. Das Verbum wird im Altfranzösischen zunächst in beiden Bedeutungen (*erzählen*, *zählen*) gleich geschrieben (*conter*), um dann am Ende des 13. Jahrhunderts in den orthographischen Varianten *compter* oder *conter* vorzukommen. Eine konsequente orthographische Unterscheidung nach der Semantik setzt sich erst im 16. Jahrhundert durch: *compter* (*zählen*) und *conter* (*erzählen*). Viele Entlehnungen, wie e.g. *Konto*, *Skonto*, *Diskont* (*sconto*, *scontare*, *discontare*) zeugen auch im Deutschen eindeutig vom Einfluss des italienischen Bankwesens bzw. seiner Terminologie (vgl. FEW 1946: 995-996) und gründen auf *computare*. Weitere Spuren lassen sich im Englischen, e.g. (*to*) *discount* und *account*, und in vielen europäischen Sprachen finden.

Synchronisch betrachtet kommt (*argent*) *comptant* im frankokanadischen Französisch in der Finanz- und Börsensprache vor, während im Standardfranzösischen seine (monetäre) Verwendung auf *payer comptant*, *au comptant* bzw. *marché au comptant* beschränkt ist. Bei *payer comptant* steht aber die pragmatische Konnotation des Sofort-Zahlens im Vordergrund (vgl. Haidacher 2015: 287-289).

4.2. (En) numéraire

Bereits das Klassische Latein kennt die *pecunia numerata* im Sinne von *Bargeld*, wobei sich in der Bedeutung *bar* neben *numeratus* folgende Lexeme finden: *numeratum* (“Bargeld”), *numerato* (“bar”) und *numeratio* (“Barzahlung, Auszahlung”) (vgl. Haidacher 2015: 267). Das französische *numéraire*, zunächst nur als Adjektiv gebräuchlich¹⁸, ist eine Bildung zu spätlateinisch¹⁹ *numerarius*²⁰. Mittelfranzösisch *numéraire* (“concernant les nombres”) (vgl. FEW 1955: 239) wird zunächst nicht nur für *zählbares Geld*, sondern auch für das Messen von Entfernungen (*pierres numéraires*²¹) verwendet. Der Terminus *espèces numéraires* ist synonymisch zu *espèces monnayées*, was wir als Hinweis auf den ursprünglichen Münzcharakter interpretieren. Folglich sind die *espèces numéraires* Münzgeld (*monnaie métallique*) im Gegensatz zur *monnaie scripturale*²², die Buchgeld ist. Als häufige, aber veraltete Verwendung des Adjektivs erheben wir den Cluster *calcul numéraire*: “[...] Le mot français [numéraire], emprunté comme adjectif pour «concernant les nombres», spécialement dans *calcul numéraire* (1738) «qui se fait par des nombres», a vieilli dans cet emploi.” (Rey 2012: 2278)

Am Beginn des 18. Jahrhunderts ist *numéraire* erstmals als Nomen bezeugt: “Le mot est substantivé (1720) pour désigner une espèce courante en or et en argent qui circule dans un État (la locution *en numéraire* équivalent à «en espèces», 1790)” (Rey 2012: 2278/2279). Auch in seiner substantivierten Form deckt *numéraire* zunächst nur die Bedeutung von Münzgeld²³ ab. Erst später kommt es zu einer semantischen Erweiterung, als *numéraire* zur Bezeichnung aller Geldformen Verwendung findet: “PAR EXT. [pour] toute monnaie ayant cours légal” (Petit Robert 2014: 1714). Die Etymologie²⁴ (*numerarius*, *numerare*) legt für (*en*) *numéraire* das Bild der Zählbarkeit nahe: *Bargeld* ist im Französischen *zählbar*²⁵. Es handelt sich jedoch um ein Teil-Synonym, das diesen Aspekt des Bargeldes fokussiert.

Für den aktuellen Sprachgebrauch stellen wir zu (*en*) *numéraire* fest: *En numéraire* wird im heutigen Französisch mit *en espèces* gleichgesetzt²⁶. Dennoch weist es divergierende Konnotationen auf, die wir nicht zuletzt auf seine diachrone Bedeutungsentwicklung zurückführen. Einerseits ist es “Parade-Antonym” zu *Buchgeld* und andererseits weist es bis heute die alltagssprachliche Konnotation *petite monnaie*²⁷ auf. Als weitere Verwendungs-Besonderheit erachten wir seine zahlreiche Belegung in lexikalisierten Lokutionen: “Loc. *En numéraire*, en espèces. *Fournir une caution en numéraire. Apport, paiement en numéraire.*”²⁸ Dies fügt sich in das Bild unserer eigenen Untersuchungen (vgl. Haidacher 2015: 273-282), bei denen wir synchronisch eine hohe Vorkommensfrequenz für den Cluster *en numéraire* ermittelt haben, wobei wir vor allem Reihenbildungen mit Währungseinheiten verorten konnten.

5. (En) espèces

“Im Anfang war das Gewürz” (Zweig 2014: 7), so beginnt Stefan Zweig sein Buch *Magellan: Der Mann und seine Tat*. Kaum prägnanter und aussagekräftiger könnte der einstige Wert von Gewürzen veranschaulicht werden. Tatsächlich waren Gewürze lange Zeit als Zahlungsmittel (Pfeffer Rom, Salzscheine China, Muskatnuss und Ingwer Deutschland) in Gebrauch. Wie kann nun eine Verbindung zwischen synchronisch (*en*) *espèces* (“Bargeld”) und *épice* (“Gewürz”) hergestellt werden? Die Antwort darauf liegt in der Etymologie (etimologia remota): So haben *épice* und *espèce(s)* ursprünglich als gemeinsames Etymon lateinisch *species*. Bereits im Latein deckte *species* eine Vielzahl von Bedeutungen ab, wozu unter anderem *Stück*, *Ware* gehörten, die

wir in einem frühen monetären Kontext sehen, da *Waren Tauschfunktion* hatten. Dies wird auch durch das FEW (1966: 156) bestätigt:

Lt. *species*²⁹ bezeichnet im juristenlatein des 2. Jh. das aus einem Rohstoff gewonnene oder erschaffene Produkt und entsprach dem aristotelischen Begriff εἶδος (Form) im Gegensatz zu ὕλη (Rohstoff). Da die drei lebenswichtigen Produkte Wein, Öl und Getreide waren, wurden diese mit dem Begriff *species* bezeichnet. Seit Marcian erfolgte die Übertragung auf zollpflichtige Handelswaren aus dem Orient und seit dem 4. Jh. auf Handelsartikel und Wertgegenstände im Allgemeinen.

Im Vulgärlatein wurde *species* bereits in der Bedeutung *denrée, aromata* und *potio medica* häufig verwendet (vgl. FEW 1966: 156), wie dies auch aus dem *Glossarium mediae et infimae Latinitatis* von Du Cange (1954: 547/548) hervorgeht. Aus der gemeinsamen Wurzel *species* haben sich sowohl *espèce(s)* als auch *épice* herausgebildet “[species] a donné au 12ème siècle mot «espice», devenu ensuite «épice», pour désigner les aromates, produits exotiques et précieux utilisés pour assaisonner les mets. Il en résulte les mots actuels «épices», «épicer», «épicier» und «épicerie».” (Haidacher 2015: 298)³⁰

Wir erkennen unzweideutig, dass das heutige *espèces* (etimologia remota) mit der französischen Benennung für Gewürze *épices* zusammenhängt³¹, auch wenn die finanztechnische Semantik ihrerseits direkt auf *species* zurückzuführen ist und nicht auf *épice*. Die monetäre Semantik ist auf das 15./16. Jahrhundert³² zu datieren:

Mais le mot «species» devenu «espèces» a pris un sens financier et a été utilisé (au pluriel, à partir du 16ème siècle) pour désigner d’abord la monnaie métallique puis, plus récemment, toute monnaie ayant cours légal (billets et pièces divisionnaires), par opposition aux chèques, aux titres et aux paiements [!] en nature. Payer «en espèces», c’est payer en numéraire, en argent liquide. (Haidacher 2015: 298)

Außer diesem originären Bezug zu *épice* über *species* zeigt die sprachgeschichtliche Entwicklung von *espèce(s)* folgende Besonderheit, die für die Wirtschaftssprache von Relevanz ist: Laut dem *Dictionnaire de l’Académie française*³³ bedeutete *espèces* über einen gewissen Zeitraum³⁴ nicht *Bargeld* (im Sinne von Scheinen und Münzen), sondern bezeichnete ausschließlich *Münzgeld* (*monnaie métallique*³⁵). Zwischenzeitlich zieht auch der *Trésor de la Langue Française informatisé* die Möglichkeit einer Einflussnahme von *species* im Sinne von *Nahrung, Ware* auf die finanztechnische Semantik von *espèces* in Erwägung. Unter FINANCES findet sich “Spécialisation de espèce*, peut-être d’apr.[ès] le sens « objet, denrée » de *species* attesté dès le lat. impérial.”³⁶

Im heutigen Französisch steht *espèces* bei monetärer Verwendung immer im Plural und hat die Bedeutung *Bargeld* (in Scheinen und Münzen). *Espèces* kommt dabei fast ausschließlich im Cluster *en espèces* vor und dient der Reihenbildung. Lexikalisiert wird *en espèces* in verschiedenen Phraseologismen rezipiert, e.g.: “Payer en espèces. Réglez-vous en espèces, par chèque ou par carte bancaire? Des dons en nature et en espèces.”³⁷

6. Monnaie fiduciaire

Que la monnaie soit fiduciaire. Bargeld soll vertrauenswürdig sein. Hier handelt es sich um eine grundlegende Geldeigenschaft, deren Versprachlichung die Frage suggeriert: Warum sollte Geld nicht vertrauenswürdig sein? Denn “Geld ist Vertrauen – Vertrauen entweder in seine stoffliche Qualität oder, davon teilweise oder völlig losgelöst, in das reine Geldversprechen der geldausgebenden Autorität”³⁸ Wir verorten einen Widerspruch, den wir mit dem mangelnden Vertrauen in das “heutige” Geld erklären.

Diachron betrachtet leitet sich *fiduciaire* vom klassisch-lateinischen Adjektiv *fiduciarus* ab, das seinerseits auf das Substantiv *fiducia* (“Vertrauen”) zurückzuführen ist: “Dieses subst. [fiducia]

und das davon abgeleitete adj. *Fiduciarius* „auf treu und glauben eingegangen“ sind als ausdrücke der rechtssprache vom fr. übernommen worden“ (FEW 1949: 505). Diese ursprüngliche juristische Rezeption wird durch „*héritier fiduciaire* (1596)“ (Rey 2012: 1342) erstmals für das 16. Jahrhundert belegt. Im *Französischen Etymologischen Wörterbuch* (1949: 505) ist das Adjektiv ebenfalls zunächst mit ausschließlich rechtssprachlicher Bedeutung verzeichnet: „*fiduciaire* „chargé d’un fidéicomis“ [“Treuhandler”]“. Die relativ späte ökonomische Verwendung (erst gegen Ende des 19. Jahrhunderts) erklärt sich sicherlich auch dadurch, dass zwischen Rechts- und Wirtschaftssprache lange Zeit nicht unterschieden wurde: „übertragen *monnaie fiduciaire* „monnaie fictive, fondée sur la confiance accordée à celui qui les émet, billets de banque““ (FEW 1949: 505).

Da es sich bei *monnaie fiduciaire* sehr wohl um „reales“ Geld handelt (*fictive*) und darüberhinaus nicht nur Geldscheine (*billets de banque*) darunter verstanden werden, bevorzugen wir mit Rey (2012: 1342) „valeurs fondées sur la confiance“.

Synchronisch konnten wir für (*monnaie*) *fiduciaire* lediglich in der Zeit der Euro-Einführung eine relativ hohe Frequenz erheben³⁹, die jedoch heute wieder völlig abgeebbt ist. Die Blüte des Terminus bei der Währungsumstellung unterstreicht unsere These, dass sprachlich (*fiduciaire*) der Skepsis gegenüber dem Euro-Geld entgegengewirkt werden sollte.

7. Fazit

Nicht nur vom Zweitsprachenlerner, sondern auch vom Muttersprachler werden lexikalisierte Metaphern meistens nicht als bildlich wahrgenommen, weil gerade Letzterer diese wie ursprüngliche Wörter als Ganzes mit ihrer lexikalisierten Semantik gelernt hat. Wir bezweifeln, dass viele Franzosen sich des gemeinsamen Etymons und des Konnexes zwischen (*en*) *espèces* und *épices* bewusst sind, sind aber von der Sinnhaftigkeit und dem Nutzen solcher sprachlicher und gedanklicher Quervernetzungen überzeugt.

Wir schließen uns daher der Meinung von Knowles&Moon (2006: 14) an: „The etymological roots may conjure up visual images, and suggest reasons why the words have their current meanings.“ So können auch Übersetzer und Dolmetscher aus Bildfeldern Gemeinsamkeiten ableiten, die ihnen ein effektiveres und schnelleres Arbeiten ermöglichen. Vor allem in den Fällen, in denen wir eine interlinguale Divergenz (die französischen Äquivalenzmetaphern für *Bargeld* sind durch ein Mehr und vor allem eine andere Bildlichkeit im Französischen gekennzeichnet) vorfinden, sind wortgeschichtliche Kenntnisse nicht nur von didaktischem, sondern auch von translatorischem und lexikologischem Vorteil. Jeder, der die semantischen Wurzeln eines Lexems kennt und rückverfolgen kann, kann daraus Schlüsse für den synchronischen Sprachgebrauch ziehen. Zudem ist die synchrone Bildlichkeit bisweilen gegenüber der diachronen verändert und so ermöglicht nur die Sprachgeschichte einen Einblick in und eine Rückverfolgung von Bedeutungserweiterungen oder -verengungen.

Auch kulturelle Einflüsse (italienische Finanzwirtschaft), die in der Wortgeschichte wurzeln, helfen aktuelle Semantiken und deren Entstehung besser und profunder zu erfassen. Wir finden die Spuren der italienischen Sprache der Finanz nicht nur in den romanischen Sprachen, sondern auch im Deutschen und Englischen. Dies ist nicht nur für den Fachmann, sondern auch für den Laien von Relevanz, da zum einen die Grenzen zwischen beiden Registern fließend sind und sich zum anderen die Dichotomie Fach- und Gemeinsprache wechselseitig speist.

8. Anmerkungen

¹ So denkt z.B. kaum ein deutscher Muttersprachler mehr daran, dass *Bargeld* ursprünglich mit *nackt* in Verbindung zu bringen ist, „denn er hat die lexikalisierten Metaphern seiner Sprache wie die Bedeutung ursprünglicher Wörter als Ganzes mit ihrer lexikalisierten Bedeutung gelernt.“ (Koch 2010: 37)

² Wir sprechen von Äquivalenzmetaphern, da es sich im Französischen um teilsynonymische Entsprechungen handelt, die nicht deckungsgleich mit dem Deutschen sind.

³ Wir verstehen unter dem Terminus die Gemeinsprache, aber auch die aus der Fachsprache in die Alltagssprache eingedrungenen Termini, die teilweise beiden Registern angehören.

⁴ Laut Koch (2010: 36) unterscheidet Kövecses (2002) anhand der Konventionalitätsskala zwischen innovativ und lexikalisiert.

⁵ Wir gebrauchen die Termini indifferent.

⁶ Lexikalisierte Metaphern basieren häufig auf Anomalien und keinen Analogien.

⁷ Skirl & Schwarz-Friesel (2013) werten die Rezeption durch ein oder mehrere Wörterbücher als Indiz für die Lexikalisierung eines Wortes, wobei die Akzeptanz durch die Sprachgemeinschaft und die damit verbundene Konventionalisierung Voraussetzungen für die lexikalische Aufnahme eines Wortes sind (vgl. Skirl & Schwarz-Friesel 2013: 34/35).

⁸ Wir gebrauchen den Terminus Fachsprachen insofern distanziert, als sich Gemein- und Fachsprache wechselseitig speisen und die Grenzen zwischen beiden Registern fließend sind.

⁹ *Katachrēsis* bedeutet ursprünglich "exzessiven, übermäßigen Gebrauch" und sein lateinisches Pendant *abusio* "Missbrauch" (vgl. Posselt 2005: 9). Man könnte mit Weinrichs (1976) Worten auch von *kühnen Metaphern* sprechen (vgl. Weinrich 1996: 316-339).

¹⁰ Wir sehen das Phänomen interlingual divergierender Metaphorik zuallererst in der (jeweiligen) Sprachentwicklung begründet und führen es erst sekundär auf kulturelle Unterschiede zurück.

¹¹ "Le substantif, d'abord attesté en phonétique au féminin (1392) par emprunt savant au latin [...]" (Rey 2012: 1914)

¹² Eine medizinische Belegstelle findet sich bei Henri de Mondeville im 14. Jahrhundert "*Faire incision pour traire humours liquides ou boe [pus], [...]*" (<http://www.littre.org/definition/liquide>, Stand: 17.12. 2015)

¹³ Wir insistieren auf der *Flüssigkeitsmetapher*, denn *Geld ist flüssig*, aber Geld ist KEIN Wasser. Dieser Irrtum wird von Liebert (1992), Pielenz (1993), Baldauf (1997), Sánchez (2009) und von Skirl & Schwarz-Friesel (2013) *unreflektiert* übernommen (vgl. Haidacher 2015: 233).

¹⁴ "Ursprünglich hatte Bargeld auch einen realen Wert, zum Beispiel als Edelmetall, das durch Prägung als Geld erkennbar in genormten Stücken *zählbar* gemacht wurde." (Haidacher 2015: 269)

¹⁵ "calculer (une quantité); évaluer à un certain prix; régler avec qn ce qu'il doit ou ce qu'on lui doit." (FEW 1946: 992)

¹⁶ Wir beziehen uns auf das Standardfranzösische, während in der frankokanadischen Varietät *argent comptant* sehr wohl auch heute noch in finanztechnischer Verwendung steht (vgl. Haidacher 2015: 292).

¹⁷ Im Italienischen hingegen sind *i contanti*, *denaro contante*, *contante*, etc. die Standardbezeichnung(en).

¹⁸ "NUMÉRAIRE adj. et n.m. est emprunté (1561) au latin tardif numerarius «relatif au nombre», «calculateur», substantivé au sens de «officier comptable», et dérivé du verbe *numerare* «compter», de *numerus* ([...] nombre)." (Rey 2012: 2278)

¹⁹ "NUMÉRAIRE adj. et n.m. [...] 1561 [...] bas latin numerarius." (Petit Robert 2014: 1714)

²⁰ "*Pierres numéraires*. Pierres qui servaient à évaluer les distances sur les routes." (<http://www.cnrtl.fr/definition/numéraire>, Stand: 27.12. 2015).

²¹ "[M]onnaie scripturale [:] monnaie circulant par jeux d'écritures entre comptes, le support pouvant être le chèque, le virement, le prélèvement ou une carte de paiement." (<http://www.banque-info.com/lexique-bancaire/m/monnaie-scripturale>, Stand: 28.12. 2015).

²² "[M]onnaie scripturale [:] monnaie circulant par jeux d'écritures entre comptes, le support pouvant être le chèque, le virement, le prélèvement ou une carte de paiement." (<http://www.banque-info.com/lexique-bancaire/m/monnaie-scripturale>, Stand: 28.12. 2015).

²³ Dies ist darauf zurückzuführen, dass Münzen zum Zählen sehr geeignet sind und lange Zeit die einzige Geldform repräsentierten.

²⁴ Es könnte eingewendet werden, dass es sich um eine "etimologia remota" handelt, auf die wir uns beziehen. Wir unterscheiden in unserem gesamten Aufsatz nicht zwischen "etimologia remota" und "etimologia prossima", wie es zuweilen hauptsächlich in der diachronen italienischen Sprachwissenschaft geschieht.

²⁵ Mancher Forscher wird entgegenhalten, dass auch ein synchronischer Vergleich mit dem französischen Paradigma *numéro, numéral, numéroté*, etc. einen Schluss auf *zählbar* nahelegen könnte. Dem halten wir entgegen, dass wir hier nur zur Bedeutung *Zahl* kommen. Zudem sind wir überzeugt, dass es von Relevanz und hilfreich ist, Semantiken eines Wortes auch sprachhistorisch zu beleuchten und dass wir daraus Rückschlüsse auf aktuelle Verwendungen ziehen können.

²⁶ <http://www.cnrtl.fr/definition/numeraire>, Stand: 28.12. 2015.

²⁷ “L’usage de la monnaie papier pour les sommes importantes explique que dans le lang. cour. en *numéraire(s)* ait souvent l’accept. de en petite monnaie [...]” (<http://www.cnrtl.fr/definition/numeraire>, Stand: 28.12. 2015).

²⁸ <http://www.cnrtl.fr/definition/academie9/numeraire>, Stand: 28.12. 2015.

²⁹ Das FEW (1966: 157) nennt sogar eine monetäre Semantik für *species* im Juristen-Latein des 2. Jahrhunderts: “Auch die bedeutungen [Einzelnes Geldstück] und [...] sind bereits im juristenlatein des 2. jh. belegt, wobei sowohl das einzelne geldstück als auch der einzelne juristische fall einen einordnenden unterbegriff bezeichnen wie εἶδος gegenüber γένος.”

³⁰ Wir beziehen uns auf die *Actions pour promouvoir le français des affaires* in ihrer Version vom 05.03. 2014. Auf der aktualisierten Homepage ist dieser Eintrag nicht mehr auffindbar.

³¹ Zur Stützung unserer Behauptung verweisen wir darauf, dass im FEW (1966: 153) als erster Eintrag unter *species* “Gewürze, Spezereien” steht.

³² Die finanztechnische Semantik wird je nach Quelle für das 15. oder 16. Jahrhundert datiert. Im FEW (1966: 156) wird ca. 1496 als erste Belegstelle angeführt.

³³ Wir beziehen uns auf die 9. Auflage in ihrer Computerversion.

³⁴ Es fehlt uns eine genaue Spezifizierung von “longtemps”, wobei wir auch in anderen konsultierten Quellen nicht fündig wurden.

³⁵ vgl. “N’a longtemps désigné que la monnaie métallique. *Des espèces d’or et d’argent. Espèces sonnantes et trébuchantes, monnaie métallique ayant le poids légal. Payer en espèces sonnantes et trébuchantes.*” (<http://www.cnrtl.fr/definition/academie9/espèces>, Stand: 03.01. 2016).

³⁶ <http://www.cnrtl.fr/definition/espèces>, Stand 03.01. 2015.

³⁷ <http://www.cnrtl.fr/definition/academie9/espèces>, Stand 07.01. 2015.

³⁸ https://www.bundesbank.de/Redaktion/DE/Downloads/Bundesbank/Geld_Kunstsammlung/geld_und_vertrauen_im_antiken_rom.pdf?__blob=publicationFile, Stand: 06.01. 2016.

³⁹ Wir beziehen uns auf die von uns durchgeführten Studien (vgl. Haidacher 2015: 315-318).

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Rhetoric of science: Strategic use of language

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Abstract. At present, scientific texts apart from their traditional structure, formal style, and the presence of technical terms are also characterized by the application of rhetorical strategies typical of other genres. The increasing use of multimedia and development of IT determine the changing character of the texts in question, promoting intertextuality and expressivity of professional communication.

Special texts fulfil not only informative and persuasive functions, but also expressive function in an attempt to attract attention to the information presented and, if necessary, provide a commercial success of the publications. To interpret adequately the information encoded in special texts, a reader should be able to decode additional information communicated by various rhetorical strategies, including metaphors, similes, allusions and other figures of speech.

The pragmatic analysis and genre analysis are integrated in the article in order to analyze how rhetorical strategies contribute to meaning representation in the context of scientific texts.

Keywords. Communication, expressivity, genre analysis, interestingness, intertextuality, rhetorical strategies and functions

1. Introduction

Contemporary scientific and technical texts are characterized by complexity of their information structure, information density and intertextuality, i.e. reliance on prior knowledge. A majority of special texts are organized according to a definite set of conventions that facilitate the interpretation and communication of the information presented.

But, apart from traditional rhetorical strategies used for the organization of scientific texts, the contemporary special texts are also characterized by the application of rhetorical strategies typical of other literary genres, it means that they include rhetorical devices, such as metaphors, metonymies and allusions, as well as other expressive means. The changes in the traditional conventions of genres of professional communication are initiated by the tendency of text authors to make the process of knowledge exchange more expressive and persuasive in such a way expanding a range of functions performed by special texts. The use of multimedia and development of information technologies determine the changing character of the texts in question, promoting intertextuality and expressivity of professional communication.

The article investigates rhetorical strategies which recently get more frequently used in the production of special texts. Integrating the approaches of genre analysis and pragmatic analysis, the article also studies how these rhetorical strategies contribute to new meaning creation in the context of professional interaction.

At present, the use of rhetorical strategies includes both pragmatic aspects (the effects achieved through verbal communication) and cognition (mental processes involved in conveying and interpreting a message).

2. Rhetoric of contemporary scientific texts

Traditionally, the study of rhetoric is concerned with oral and written communication; namely, the use of rhetorical strategies and techniques that set and govern the conventions for successful communication. Jasper (1993: 16) describes rhetoric as “a universal phenomenon, a universal facet of human experience”. Kennedy (1991: 7), in turn, defines rhetoric as “... the energy inherent in emotion and thought, transmitted through a system of signs, including language, to others to influence their decisions or actions”.

Logan and Fischer-Wright (2006: 2) consider rhetoric to be “the means through which one creates and populates worlds of meaning (language-based realities).” Martin (2013: 12) argues that “rhetoric describes the construction of meanings through language”. Various forms of communicating (arguing, reasoning, persuading etc.) can be achieved through various language means (symbols). Therefore, rhetorical studies are concerned with how language and other symbolic forms influence the way a particular audience thinks, feels or acts.

The main focus of rhetoric is a focus on persuasion, and implicitly in any definition of rhetoric there is the notion of power (Brummett 2000 in Higgins & Walker 2012), the power of words, the power of personality, the power of knowledge. Recently, a discussion on the rhetoric of science has become a focus of numerous studies (Prelli 1989; Swales 1990; Gross 2006; Ornatowski 2007). Rhetoric is understood by the authors as a textual norm system in a specific text. It can also be described as the author’s means of controlling the perception and decoding of information by a reader.

Rhetoric is sometimes seen as synonymous with discourse. Rhetorical discourse has five distinguishing features: normally it is planned, adapted to an audience, shaped by human motives, responsive to a situation, and persuasion-seeking (cf. Herrick 2000). The successful application of rhetorical strategies is based on three assumptions: (1) the basic rhetorical functions found in the scientific and technical discourse are fundamental parts of its organization and structuring; (2) each rhetorical function provides readers with “different kinds and different amounts of information”; (3) the rhetorical functions and their related elements are capable of being isolated and studied separately. Rhetoric is the process a writer uses “to produce a desired text”. This process is basically one of “selecting and organizing information for a specific set of purposes and a specific set of readers” (cf. Trimble 1985: 10).

The main primary objective of the rhetorical discourse is *argumentation* / persuasion. Rhetoric seeks to persuade the audience by means of an argument, i.e. convincing others through reasoning if one tries to explain aspects of a particular subject, or advocates a specific opinion on this subject. The next symbolic strategy connected with argumentation is an *appeal* that aims either to elicit an emotion or to engage the audience’s loyalties or commitments. *Arrangement*, in turn, refers to the planned ordering of a message to achieve the greatest effect, whether of persuasion, clarity, or beauty. The aesthetics of such rhetorical strategies adds form, beauty, and force to symbolic expression (cf. Herrick 2000). Rhetorical strategies, also referred to as the modes of persuasion, are techniques that classify the author’s appeal to the audience.

In the framework of this article, we will follow the classification proposed by Trimble (1985) as it was elaborated as referred to scientific and technical texts (EST). According to the author (ibid.: 11), common rhetorical strategies used in the EST are *orders* (*time order, space order, casualty and result, order of importance*), as well as *comparison / contrast, metaphor / analogy*, and *illustration*.

To ensure that the scientific knowledge is shared by the author and the intended audience, the following strategies have become of particular importance:

- *Comparison / contrast* are strategies of developing ideas that are primary rhetorical strategies. Comparisons examine similarities; contrasts analyze differences. Comparisons such as metaphor and simile help create descriptions (narration) using

figurative language. Contrasts on specific criteria often assist in supporting evaluative judgements in the scientific text.

- *Metaphor / analogy* refers to an extended comparison between two objects and may be defined as a subcategory of definition. Metaphors carry out the conceptual transfer between two different conceptual domains (cf. Lakoff, 1993). Vast amount of information can be encoded in the text representing extremely different and sometimes remote aspects of scientific knowledge based on inspiration, intuition and imagination. According to cognitive linguistics, metaphors are mediators between the real world and its image in the human brain.
- *Illustration* is the use of examples to explain an idea, which may be developed within a paragraph. The examples are used in all rhetorical situations regardless whether their purposes are to express, clarify meaning, to describe or persuade. According to Anderson (2011: 178), rhetorical strategies are “methods of communicating the details of a message”. Just illustrations and examples can help authors to communicate the details by the explanation of definitions, comparisons, processes, classifications, etc.

General and specific functions of rhetoric of science as discussed by Trimble (1985: 11) include *description, definition, classification, instruction* as well as *visual and verbal relationship*. Each of them may be divided into numerous detailed descriptions, for example, *definition* may be formal, semi-formal, informal or expanded. *Classification* can be described as complete or partial. *Instruction* may be given as direct or indirect, etc. Depending on the purpose of communication, connotations are usually negative or positive (not neutral). Rhetorical functions are often used as a set of rules to guide the author in creating an effective text to influence the audience:

- *Description* is present in all types of writing because it provides the significant details which explain scientific ideas. These definite and precise details also facilitate the decoding of the abstract ideas and implicit information. Careful word choice and sentence structure are important elements of descriptive writing. Descriptions often rely on sensory details – what is seen, heard and felt.
- *Narration* is usually defined as a process of story-telling. This strategy is not typical of special texts, except an introductory paragraph written to attract the reader’s interest, which may be considered a descriptive narrative.
- *Process analysis / instruction* is also a form of description, which explores how a phenomenon works. Descriptions of technical procedures or laboratory reports as well as the reports on scientific research are also examples of process analysis. Historical information is often presented as a process in chronological order. Such records are very important for researchers who must use analytical skills to examine why each stage is important to the process.
- *Definition* is necessary to clarify meaning, explain unfamiliar terms belonging to different domains, or distinguish one from another similar idea. A short essay may be an extended definition using other rhetorical strategies to develop the main concept. Such rhetorical strategies as exemplification and comparison are necessary when creating a detailed definition.
- *Classification* is an important rhetorical strategy when the author’s intention is to analyze and then group similar items or divide one item into parts. Critical thinking relies on the power of classification during the analysis of complex information. A description or explanation may be divided into useful categories so that the information is well-organized and meaningful. These categories depend on the discipline and the purpose of the analysis.

- *Visual and verbal relationship* is information transfer that deals with illustrative (graphical) material and the verbal text, which explains it (cf. Widdowson 1978). The application of visual modes has become extremely popular and widespread in the contemporary special text as new meanings are often obtained from the interaction of different semiotic systems (cf. Ruthrof 1997). The combination of different modes is very important for effective communication in the EST. The ability to integrate different fragments of knowledge as well as the objective logic of scientific development is at present successfully studied by cognitive semiotics.

In modern literature, there is no consistency in the definition of what a strategy is and what a function is. Very often these concepts are used as synonyms. Some authors also list such functions as *finding and presenting the argument, giving introductions, drawing conclusions, reporting, categorizing, generalizing, discussing, expressing* etc. (Close 1965; Werlich 1976). It should be noted that some years ago the scientific and technical discourse had only a limited number of rhetorical functions. Such functions as *non-logical argumentation, poetic images or functions creating emotions* were not used in this type of discourse. Later, the number of functions was extended due to the multiple sources of multimedia and development of information technologies, promoting an increasing degree of expressivity of professional communication.

3. Rhetoric of scientific discourse

The rhetorical approach makes English scientific and technical discourse different from other forms of written English discourse. Scientific discourse, as stated by Prelli (1989), is discussion-oriented, reasonable, addressed and invented discourse. In discourse analysis, the hierarchical principles of text organization are in the focus of investigation. In general, “discourse analysis is concerned with how language communicates meaning, considering pragmatic and semiotic dimensions, as well as the socio-linguistic and semiotic implications of discourse” (Munday 2001: 90). The rhetoric of a text organizes the message by establishing relations between textual units.

Ornatowski (2007: 4) states: “Rhetorical approaches to science thus begin with different assumptions about the relationship between practice, discourse, and knowledge”. The author determines science as “a specific domain of discourse... privileged, objective, neutral, and “true” knowledge of the world” (ibid.). The author also considers that “more recently rhetoric of science has become part of a larger philosophical effort to rethink the nature of human knowledge” (ibid.).

Swales (1990: 141), in his famous structural model, proposes five common types of structure used for research article introductions: (1) *generalization*, i.e. the extension or clarification of main ideas through explanations or examples; (2) *enumeration*, i.e. listing of facts; (3) *sequence*, i.e. arrangement of the material; (4) *classification*, i.e. grouping items into classes; (5) *comparison / contrast*, i.e. examining the relationships between two or more things. It is obvious that all the items described by the author in this classification are at the same time the names of rhetorical strategies.

According to Herrick (2000), the art of rhetoric has six social functions, namely ideas are tested, advocacy is assisted, power is distributed, facts are discovered, knowledge is shaped, and communities are built. Five canons of rhetoric are the discovery of argument, arrangement of information, style, delivery, and memory. According to Gross (2006: 5), “rhetoric is constitutive of scientific knowledge”.

The authors of scientific and technical texts use rhetorical strategies to share and disseminate their knowledge to the audience, to promote audience’s awareness, understanding and acceptance of inventions and discoveries, to shape public opinion, to teach people seeing behind the words. There is a point of view that people can be easily manipulated by such strategies and often are unaware of the way they have been persuaded.

As the interpretation of a text depends on the existence of codes or conventions (cf. Jakobson 1971), the following textual codes can be distinguished in the discourse under discussion: scientific codes, aesthetic codes, genre, rhetorical and stylistic codes (narrative, exposition, argument etc.) (Chandler 1994). Analysis of scientific discourse has revealed that its conventions are not static and serve persuasive purposes (Bazerman 1988).

To communicate a certain idea in a scientific and technical text, it is necessary to use definite codes, which govern the discourse of a certain field of knowledge, scientific or technical discipline and even professional communication at large. One of the main codes greatly influenced by the changing nature of the contemporary text is genre.

The term *genre* has been traditionally used to denote various types of writing (article, report, manual, book, etc.). Today in functional linguistics the term *genre* is used to denote different types of communicative events (Swales 1990; Bhatia 1993). For example, Bhatia (1993: 18) maintains that “genre analysis adapts a more sociological orientation than stylistic or register analysis as a text is seen as a process influenced by such issues as social roles, group purposes, and cultural constraints”. Thus, genres are discussed not only in terms of their form, but also in terms of purpose and function of the text. If several texts share the same communicative purpose, they can be classified as belonging to the same genre.

Hyland (2002) also defines genre as a linguistic realization of structured communicative events in specific discourse communities. The members of the communities share and activate communicative purposes and have common understanding of structural conventions of genres. The genres used in particular professional environments should have definite characteristics. However, at present the characteristics of genres defined by the rules and conventions of the scientific and technical discourse are not so strict due to the hybridization caused by the increasing use of multimedia and development of information technologies. Contemporary special texts, apart from their traditional rules and conventions, are also characterized by the rhetorical strategies typical of different genres, for example, the application of rhetorical devices and other expressive means. As a result, the high formal (academic) style shifts a little toward informality. New mixed genres are created giving the impression of “natural” speech, the informal, the personal, typical of media communication.

Thus, the analysis of a contemporary special text should be conducted taking into account the ways the information is realized in the text (pragmatic aspect) and interpreted (cognitive aspect) by participants of the professional communication in order to identify the manifestations of other literary genres and to demonstrate how they contribute to the additional meaning representation in the context of professional interaction.

4. Rhetorical aspects of meaning representation in special texts

Information encoded in a special text may be interpreted at multiple levels simultaneously, especially if certain levels are foregrounded. The authors often bring some additional (sometimes implicit) information into focus using various rhetorical techniques associated with other genres such as, for example, application of metaphoric terms, similes, allusions, idioms etc. that can be used to activate different layers of information ensuring that it is not missed.

The empirical material is analyzed in the article to illustrate the manifestation of expressive function of the rhetorical discourse. The examples are taken from special texts in the fields of economics and telecommunications.

The following example demonstrates that to decode the intended information, the recipient should have a certain degree of background knowledge. Thus, the use of allusions can give more additional (explicit and hidden) meanings to the common ideas, objects or events.

- (1) If the enabling services to the user organization who gets ready for cloud computing apply Monet's principles, then they may be *worth its salt* (Chorafas 2011).

In this case, the allusion to Monet may be quite misleading as some readers may associate it with Claude Monet, a famous French painter and one of the founders of the Impressionism movement, while in the present text the reference is made to Jean Monet, an investment banker, father of the European Union, who proposed the best concept of project management. The cause and effect strategy is used by the author to convey the desired information to the reader. To explain the effect of the solution proposed in a few words, the author uses an idiom also for the purposes of comparison.

In the next example, in an attempt to define a term of service-oriented architecture, the author applies simile, which helps establish the relation of analogy with a black box.

- (2) SOA naturally fits the definition of loose coupling because it treats services as *black boxes* of functionality with a simple internet standards-based interface between these service components. (Rosenberg, and Mateos 2011).

The metaphorical term "black box" is used in many fields, for example, electronics, computer programming, finance, physics, aviation, psychology, etc. As it is commonly accepted, a black box is used to refer to anything that operates without its inner structure being accessible for understanding, i.e. its implementation is obscure. Scientific discourse depends largely on analogy and metaphor and standard tropes of scientific thinking (cf. Ornatowski 2007: 11).

- (3) The *eye-catcher* of 1973–74 was the microprocessor by Intel and Texas Instruments. (Chorafas 2011).

In Example (3), to attract attention to the information communicated and to emphasize the significance of the advances in the field of computer science, a metaphor is used. It seizes the reader's attention and helps memorize the information communicated.

- (4) The *Janus face* of finance (Pringle 2014).

In Example (4), contrast is achieved through the application of an allusive reference to the Roman god Janus, the god with two faces one face looking into the future and the second looking into the past. The allusion successfully communicates the message of two sharply contrasting aspects. The author implies that the potential reader will be able to decode the meaning, and hence the intended associations will be triggered.

- (5) As efforts to stabilize and reform the banking system in Britain, the United States, Europe and across the world have been relentlessly pursued by policymaker and regulators, past skeletons *have tumbled out of the cupboard*. (Brummer 2014).

In Example (5), to describe the situation and show the extent of measures taken, the author uses a vivid idiomatic expression that helps establish the relationship between two ideas communicated though creating a desired image.

- (6) Only government can take perfectly good paper, cover it with perfectly good ink and make the combination worthless. (Coggan 2013).

Example (6) demonstrates that rhetorical choices are functional. The most important element of style is tone, i.e. the atmosphere or attitude the words convey. Tone in writing is not created as unconsciously or automatically as tone in speech. In writing, you have to change what you to say. Choice of words, length of sentence, rhythm, and punctuation – all contribute to the atmosphere in which the idea exists. To create the tone of the message and express the author's ironic attitude towards the situation communicated, parallel constructions are used to create effect of misbalance or failed expectations as preconditions are quite satisfactory, but the result turns out to be worthless.

The examples presented above demonstrate that rhetorical strategies can change the emphasis of the message highlighting some ideas and hiding others. The proper arrangement of the components is also of importance as it helps set the intended connotation, establish hierarchical relations and create the necessary effect. For instance, Burke (1969: 72 in Higgins and Walker 2012) explains the relationship between rhetoric, persuasion and meaning as “wherever there is persuasion, there is rhetoric. And wherever there is meaning, there is persuasion”.

Rhetorical effect of a text depends on the reader’s background knowledge. According to Palmer (1975), mental ‘schemata’ organize our knowledge on the things we perceive, creating a cognitive framework that engenders ‘expectations’ that help us interpret information. The use of rhetorical elements is the author’s deliberate choice mainly governed by the purpose, function of the text and the effect intended to achieve.

5. Conclusion

In the contemporary scientific text, there are many modes to communicate information and to ensure that it is perceived in the way intended by the author. Rhetorical elements should transfer information in such a way that it would coincide or at least partially coincide with the conceptual inventory and world knowledge of the readers.

Interpretation of the information encoded in modern scientific texts may potentially pose a challenge due to several reasons such as constantly changing nature of contemporary texts, complicated information structure, vague boundaries between the genres, and culture specific intertextual references. Intertextuality creates additional meanings to communicate the intended information and facilitate the decoding of this information by the reader in case of his relevant background.

The use of numerous sources of media and development of information technologies make scientific texts more expressive by extending the number of rhetorical functions and promoting the increasing interaction between academic community and non-professionals.

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Terminology in nature documentaries

Visuals and avoidance

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Abstract. There is a variety of ways terminology is introduced, used and avoided in nature documentaries on TV. In this article, four typical TV documentaries (two in English, two in German) are analysed in respect to the kind of terms used and the way these terms are presented and explained to the audience.

Keywords. Terminology, nature TV documentaries, “Hard words” and transparent terms, terminology avoidance

1. Introduction

Terminology forms an integral part of knowledge transfer in every field. If you start familiarizing yourself with a new topic from whatever field, you will familiarize yourself with the terminology used on the way (cf. Arntz et al. 2004, *passim*).

This seems a banal observation. Jargon is part of in-group speech, and terminology is part of this. Dinosaur fans know dinosaur names (and can pronounce and spell them). Plant aficionados know not just the everyday names of their darlings, but also their Latin Linné-system names. Terminology is a tool of clarification and of knowledge management much needed by those interested in a certain topic.

However, TV documentaries float by quickly. Difficult terms may be difficult to understand and even more difficult to retain in mind. If special terms are used, they are used in speech and not normally underlined by print in any form.

It is interesting to see that handbooks either dealing with the making of TV documentaries or with their analysis tend to avoid the term “terminology” completely and never concern themselves with the ways special terms might or might not be introduced (e.g. Zimmermann & Hoffmann: 2006). Aufderheide (2007) and Saunders (2010), both viable introductions into history, genres and styles of documentary film, mention scripts and narrative styles but do not deal with matters of terminology as part of the information transfer process. Special terms only seem to concern those filmmakers who work for a young audience:

Erzähl doch mal was von Otto von Guericke, ohne das Wort “Vakuum” zu benutzen, irgendwas vom Computer ohne das Wort “software” [...] usw. usw. Jedes Fremdwort, jeder Fachbegriff muß [sic!] übersetzt, vereinfacht werden, darf trotzdem nicht falsch sein. [Tell a story about Otto von Guericke without using the term “vacuum”, tell a story about computers without using the term “software” [...] etc. etc. Every term from another language, every special term must be translated or simplified, but must remain correct.]¹ (Maiwald 1998: 290)

Such considerations should also play a part when making documentaries for a grown-up audience, but it seems that they are neglected.

2. Language-specific terminology problems

Before we look at the choices made in regard to terminology, we have to consider that languages differ in their use of terminology and in the way terminology is constructed. The examples of documentaries analysed here are in English and in German. This means that we deal with a language which prefers “hard words” as a terminology source (English) versus a language that uses self-explaining terms (German).

So-called “hard words” of Greek or Latin origin are typical of English. English speakers consequently are used to them and probably have less problems when encountering new ones than native speakers of other languages.

German terminology, on the other hand, is often based on everyday German terms. Even if the term as such is completely new to the viewer, it is transparent and its meaning can be derived from its components. There are frequent cases of double terminology: a hard word exists alongside the transparent version. When speaking to non-specialists, the transparent version will be preferred.

However, the typical hard words may remain in documentaries translated from English into German, of which there are many on German TV. Native speakers of German might need more help with them than native speakers of English, but there is no time and space for extra explanations.

The examples analysed here are no translations, but two documentaries in their original English shape and two in their original German version. However, the difference between terminology in these two languages can be perceived in the original versions, too.

3. Possibilities of introducing terminology

The special terminology used in a field is precise, should provide a sober and neutral look at the subject and is a good introduction into the way researchers in a particular field think. In non-fiction books, special terms are normally explained in footnotes or glossaries.² Subtitles might provide a space for glossaries in TV documentaries. Some anime fansubs contain glossaries dealing with highly culture-specific Japanese terms, normally in surtitles, as the film text itself is subtitled. And in fact, there used to be a German TV series on cooking (featuring the cook Tim Mälzer) where a glossary entry popped up now and then in the left-hand low corner of the picture.

However, it must be admitted that this kind of show is not very exciting as far as the visual side is concerned and that, consequently, the pop-up glossary does not disturb the effect of the film. This is different with a well-made nature documentary. The pictures are notoriously difficult to shoot; they are carefully edited and arranged into a film. Subtitles referring to terminology might distract from these pictures or might even destroy their aesthetic impact completely.

This means that the use of printed terms in nature documentaries is not advisable. The following strategies are more likely and can be found in a variety of documentaries:

- Explanation of a term using any typical language-only strategy from terminology and lexicography, normally with reference to the visual side of the film
- Use and / or explanation of terminology without obvious reference to the picture
- Picture as only explanation of the term used
- Use of terminology without explanation
- Terminology avoidance

All these strategies have their advantages and disadvantages and may be used in different degrees depending on the audience envisaged for the respective documentary and the kind of terminology needed.

Interestingly, much of the terminology we encounter in nature documentaries has to do with technology, not with nature. The contraptions used for filming wild animals are often extremely interesting and consequently are presented and explained to the audience (see below).

The double role of the nature documentary as “educational” as well as “fun to watch” must also be taken into account. If we refer to “nature documentary” as one genre, it is at best a heterogeneous genre. Narration and suspense play an important part, particularly where charismatic megafauna such as elephants or polar bears is concerned. Affective and scientific explanations alternate.

4. Examples analysed

The films chosen for analysis for this paper represent a variety of natural documentaries as we find it on TV today. There are certain house styles, and we can expect different kinds of documentary depending on which channel we switch on. The films chosen are one National Geographic documentary (Anamalai – The Elephant Mountain, 2006), one NHK film shown at several festivals (Legends of the Deep – The Giant Squid, 2013) and two films primarily produced for German cinema, but later also shown on TV (More than Honey, 2013, and Die Nordsee [The North Sea], 2013).

4.1. Anamalai – The Elephant Mountain

This film is one of the cheaper National Geographic animal documentaries produced for TV use. It lasts 45 minutes; there is planned space for two commercial breaks. The information content concentrates on animal behavior, as the audience follows a little elephant through his first year. The use of terminology is scarce.

The documentary offers a few special terms with explanation:

1. Reptiles and amphibians begin to go underground and sleep – it’s known as aestivation ... (30:04)
2. The bull elephant is in musth – a state of sexual arousal which can make him violent and unpredictable. (37:34)

In both cases, terminology used and picture combine to form an explanation. However, the reptiles mentioned in the first quotation never turn up again and neither does the matter of aestivation. Moreover, this special term has nothing to do with the topic of the film – elephants do not aestivate. Consequently, there is no need to touch upon the matter at all and face the audience with a special term and its explanation. Probably the footage stems from another film and is recycled here, a frequent practice with animal documentaries.

“Musth”, on the other hand, is quite an interesting term. It refers uniquely to elephants and is of Persian origin. The behaviour elephant bulls show during musth and the word itself are interesting in the context of the film.

Other than that, there is little use of special terms, and they are never repeated.

4.2. Legends of the Deep – The Giant Squid

The text of this film is a typical Attenborough-style text, familiar to all nature documentary aficionados. In this documentary, we follow a group of scientists who try to film the elusive giant squid.

3. American Dr Edith Widder is a world expert on bioluminescence. She plans to use this almost magical living glow to attract a Giant Squid. (7:02 – 7:12)

“Bioluminescence” is a core term in this documentary. It is necessary that the audience understand and remember it, else they will find it difficult to follow the story. It does not make sense to replace the term by explanations every time it turns up. However, as the term is so important, this emotional-affective explanation is later followed up by a more sober explanation:

4. At these depths – beyond the reach of the sun – most creatures generate their own light. (10:56) Bioluminescence. (11:10)

The repetition of the term serves as a kind of reinforcement. Actually, this is a good structure where learning is concerned. Light plays an important part in the world where this documentary takes place, and this information is also connected to a special term:

5. Now they [the sub] are entering a strange part of the sea, between two hundred and a thousand meters, known to marine biologists as the Twilight Zone. (10:33)

“Twilight Zone” is the rare case of a self-explaining, transparent special term in English. Even if the audience have never heard it before, they will be able to form a concept of it in their minds. The definition adds knowledge, but profits from the audience’s previous knowledge of what twilight is.

Although the film deals primarily with the giant squid, sperm whales also play a role. The scientists try to attach cameras to their backs in order to make them film squids. The sperm whales are not really delighted by this idea. As the clicking sound they make can be heard in the film, the clicks’ function as echo-locators is explained (34:47). Moreover, there is much text dealing with the subs and other instruments used for filming, so that we do find some special terms referring to the technical side of documentary making.

Thus, this film offers an interesting mix of explanation strategies for terms. Term avoidance is not a preferred strategy, but the number of special terms used and explained is limited, and all of them are needed in order to fully grasp the topic. Moreover, we see scientists act and know that they would use these terms – it is only natural to present them to the audience as well.

4.3. More than Honey

The film *More than Honey* by Marcus Imhoof is in German, despite its English title. It deals with the problems beekeepers face today and with certain diseases which afflict bees. The use of special terminology as used by beekeepers is abundant. Most of these terms are explained in words and pictures. The voice of the narrator is clear, with a tiny Swiss accent. The speed of the narration is low, so that the audience can follow the text easily.

Terms used in the documentary include “blütentreu” (faithful to a certain kind of blossom, 12:00), “Schwänzeltanz”³ (waggle dance, 14:00), “Pflegevolk” (explained in the following narrative, 29:00), “Zelldecke” (cell cover, explained in the picture, 31:00), “migratory beekeeper” (36:42, in a part of the film which takes place in the USA), as well as several kinds of parasites and what they do. In all cases, the film sequences support the text and the verbal explanations.

This film is clearly very ambitious. Moreover, as with many old and traditional professions, beekeeping has its own complex but transparent terminology, which is reflected in the film. The interested filmgoer is provided with an extensive overview of the field and its terminology.

4.4. Die Nordsee – unser Meer

The film concentrates on the beauty of the North Sea; the narrator is a popular actor from Northern Germany (Axel Prahl). The comment is sometimes funny and tongue-in-cheek, but contains a surprisingly large number of special terms. However, these special terms have a very specific status. They are not necessarily used by specialists only, but may very well be everyday vocabulary for those Germans who live on the coast. Some of them refer to the tides, others to the need to build fortresses against the flood, others to specific animals.

Consequently, the authors of the film seem to have found it difficult to decide on whether to explain or not to explain certain terms. An example of that is the picture of a letterbox with the information “Leerung tidenabhängig”. This means that letters posted will be collected (or not collected) depending on the tides. However, the term “Tide” (pronounced Tee-de) is not used outside the very North of Germany. The normal High German term is “Gezeiten”. This means that southerners need an explanation, but do not get it. The same is true of the “Lahnung”, a special kind of breakwater structure. The structure is shown in the picture, but its function is not clear to viewers who are not familiar with the everyday problems coast dwellers face (4:07).

A better example of terminology use comes when the little brown crab is introduced with its Northern German nickname:

6. Der Taschenkrebs, auch Knieper genannt ... (9:44)

The meaning of the term “Knieper” (“pincher”) can be guessed by non-Northern native speakers, as it is quite close to the High German “kneifen”. It would have been nice, though, to actually see the little pincher pinch someone as an extra explanation.

The use of Northern German special terms is carried on throughout the film; apart from giving extra information and presenting certain problems, it contributes considerably to the film’s local atmosphere.

5. Conclusion

Not surprisingly, TV nature documentaries differ in style and ambition. Terminology plays a surprisingly small role in some TV nature documentaries, but if we look closer at these examples, they are not the best of their kind in many other respects, too. More ambitious and more thoughtfully edited nature documentaries choose terminology carefully and offer helpful explanations and examples. Where special terms are used, they do in fact contribute to the viewer’s knowledge, broaden his horizon and help to understand the way the specialists think about their field.

6. Notes

¹ All translations, unless stated otherwise, are mine.

² Analyses of terminology as presented in non-fiction books for children can be found in Jüngst 2010 and Jüngst 2013.

³ All German schoolchildren know this term, as there is a very popular educational film about it, normally shown in grade 5.

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English for environmental sciences at tertiary level: Challenges of a CLIL approach

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Abstract. There is a widespread opinion among educators and language instructors that language courses at tertiary level should not be taught as general language courses but as discipline-oriented ones. Language instruction for specific purposes enhances students' linguistic skills and competences indispensable for successful communication in both academic and professional contexts. University students need to get familiar with various stylistic and linguistic features of a foreign language at different levels of linguistic complexity and in diverse professional settings. Therefore, university foreign language curricula should provide opportunities for students to learn and practice specialized foreign languages in the most efficient way.

Research has shown that students who participate in content and language integrated learning (CLIL) often outperform their peers who attend regular foreign language classes in reading, writing and listening because CLIL presents the most natural way of developing foreign language skills and resembles the process of mother tongue acquisition. A foreign language, which functions as a vehicular language, is taught simultaneously with content of a curricular subject. However, foreign language teachers are faced with dilemma how to organize their CLIL classes, design and incorporate teaching materials and activities into their regular LSP courses and evaluate students' achievements and progress.

Keywords. Content and language integrated learning (CLIL), English for special purposes (ESP), environmental sciences, language for special purposes (LSP), tertiary education

1. Introduction

Content and language integrated learning (CLIL) refers to every form of teaching when there is integrated learning of a foreign language and content of a curricular subject. Integrated teaching can be organized at all levels of education - primary, secondary and tertiary. CLIL approaches vary considerably depending on the number of curricular subjects and foreign languages included, whereas duration depends on the programme (a complete school cycle, one school level, and a course module or a school class). Various forms of integrated teaching and learning are being increasingly introduced into educational systems around the world, including Serbia, where since 2004 twenty schools (ten primary and ten grammar schools) have received approval from the Ministry of Education, Science and Technological Development for the implementation of some form of integrated teaching. The paper presents challenges of a CLIL approach in teaching English at tertiary level to students of Environmental Sciences at the University of Belgrade, Faculty of Geography. It also explores the issues of selection and integration of teaching materials and design of activities and tasks.

2. Teaching a foreign language in the context of integrated learning

A fundamental issue in all forms of content and language integrated learning and teaching is to determine the main focus and main objectives. Thus, the following types of approaches can be distinguished (Seradžoto, Prnjat & Guljelmi 2008: 41):

- (1) a model of authentic integrated teaching in which there is a balance between linguistic objectives and objectives of curricular subjects, which are realized simultaneously within a joint framework;
- (2) a model of integrated teaching directed towards the language and
- (3) a model of integrated teaching geared towards a curricular subject and its content.

In all other situations when one of the objectives is missing, teaching and learning go beyond the scope of integrated learning. For instance, focusing exclusively on a foreign language presents an example of teaching foreign languages for specific purposes. Foreign language courses designed for students of particular professions (e.g. medical staff, engineers, managers, etc.), who attend classes to learn professional language, present foreign language courses for specific purposes. Likewise, in situations when the focus is solely on new content without explicit, specified and programmed linguistic objectives, language is used as an instrument for navigation through content that is studied. It is only within the framework of integrated teaching and learning that a foreign language is not taught but promoted, since it has the role of the *vehicular language*. Students use both previously acquired content knowledge and foreign language skills to learn new content (Serragiotto 2003: 3). Research has shown that CLIL approaches facilitate content acquisition and that CLIL students often outperform their peers in terms of learning content (Mehisto, Marsh and Frigolis 2008: 20). Furthermore, integrated learning facilitates development of language skills and students who participate in this type of teaching very often get higher scores on foreign language reading, writing and listening tests than non-CLIL students because the language is taught together with content rather than in isolated fragments (Ibid.). Integrated learning and teaching approaches allow students to develop metalinguistic awareness and help them compare the languages more easily and accurately, choose words and phrases, guess the meaning of words from context and improve productive language skills. Generally, they demonstrate foreign language knowledge at a higher level than students who attend traditional foreign language courses (ICF Report 2014: 5-8).

3. Integrated learning and implications for development of cognitive abilities

Apart from developing and enhancing students' linguistic and general academic skills, integrated learning contributes to development of cognitive abilities as well. Students become better in perceiving, recognizing, comparing, judging, reasoning, etc. When they analyze data, they consider different perspectives and perceptions, devise plans, assess their own progress, and thus develop cognitive abilities. Studies have shown that integrated learning improves the ability to learn and study, it promotes students' responsibility, confidence and motivation, and provides "a holistic educational experience" (Coyle, Hood & Marsh 2010: 1).

Gardner's theory of multiple intelligences is particularly significant for integrated learning (Gardner 1993). Integrated teaching tasks include implementation of several types of intelligence. In addition to verbal intelligence, which is prevalent in teaching of foreign languages, other intelligences that assist in processing of non-linguistic content of curricular subjects are equally present (Prnjat & Marković 2014: 115). For example, logical-mathematical intelligence is used in problem solving, hypothesizing, collecting and classifying data; spatial-visual intelligence prevails in interpreting and comparing charts and tables; interpersonal intelligence is dominant in discussions, cooperative learning, pair and group work, peer teaching, peer assessment, etc.

4. Integrated learning and implications for development of linguistic skills

Within the framework of integrated learning at tertiary level, students get familiar with discourse, register and professional characteristics of a foreign language because the topics are related to various aspects of their future professions. The use of a foreign language as a vehicular language requires foreign language skills at B1 level i.e. the level that students achieve through regular curriculum. The Common European Framework of Reference for Languages defines B2 level as the level when competencies necessary for studying at tertiary level develop. Likewise, Jim Cummins distinguishes *basic interpersonal communicative skills* (BICS) and *cognitive academic language proficiency* as fundamental for determining the role of a foreign language as a vehicular language in integrated learning (Seradoto, Prnjat & Guljelmi 2008: 39). The term BICS signifies a level of linguistic competence that occurs in everyday contexts and at low level of linguistic complexity, whereas the CALP concept involves cognitive processes at a higher level (e.g. analysis, synthesis, generalization, etc.). Within traditional foreign language teaching, students develop BICS competence, which is necessary and sufficient for understanding general topics. On the contrary, integrated learning and teaching develop CALP competence since a foreign language as the language of instruction is cognitively more demanding. It is often very formal and includes abstract concepts (Cummins 1984: 136-137). The determining factors that distinguish BICS of CALP competences are variables related to context and cognitive complexity of tasks.

5. Selection, evaluation and creation of materials and tasks

Content and language integrated learning has proved to be the most natural way to develop foreign language skills because it resembles the way in which mother tongue is acquired. When content is topical, interesting and relevant, students are motivated to learn the language in order to understand the content. In situations when integrated teaching is oriented towards a language, foreign language teachers involved in teaching should choose topics that are familiar to students, the ones that students have studied in their native language with teachers of curricular subjects. Familiarity with a topic allows students to pay more attention to semantic, lexical and syntactic aspects of a text.

The way in which teachers design materials depends on the type and content of materials, on the needs, motivation and interests of their students, on students' foreign language proficiency and their prior education. Before selecting and adapting materials, a language teacher should assess the needs and interests of the students, carry out class observation and study the methodology and teaching materials of curricular subjects. Within the model of authentic integrated learning, a teacher of a foreign language and a teacher of a curricular subject jointly select the topics and texts and make appropriate exercises. The foreign language teacher decides on the linguistic objectives (functional, grammatical and lexical), whereas the teacher of a curricular subject decides upon the objectives that are relevant for his/her subject. Both teachers agree upon the best way to use the texts and design activities and tasks, which should be interesting enough to enhance students' attention and motivation and facilitate language skills practicing. In situations when it is necessary, a foreign language teacher can leave out parts of the original material or add some supporting exercises to help students understand the linguistic features of the text - vocabulary or grammar points. Also, exercises that precede reading of the text, as well as those which assess reading comprehension are important because they allow students to focus on the content of the text. There should be a progression from easier to more difficult tasks and there should be enough exercises that provide opportunities for practicing both new and old vocabulary. (Prnjat 2015: 170-171). It is widely recognized that receptive vocabulary, which is considerably wider than productive, can be successfully developed through reading authentic texts that enable contextualization of new lexical items and their easier memorizing.

When acquiring new words and phrases some of the following techniques should be employed (Gairns & Redman 1986: 115-124):

- it is necessary to read or hear a new word or phrase in a particular context several times (e.g. greenhouse effect, global warming, deforestation, etc., all appear more than once in each of the texts used in our CLIL module);
- visual reminders, such as pictures or diagrams should be used while teaching (e.g. texts containing graphs and tables presenting data related to green-house gases emission);
- a new word or phrase should be taught in groups that relate to the same topic (e.g. extreme weather events: storms, floods, droughts, heat waves, cold waves, tropical cyclones, etc.);
- a new word or phrase should be taught in groups that consist of synonyms or antonyms (e.g. non-renewable vs. renewable sources of energy, reforestation vs. deforestation);
- a new word or phrase should be taught in collocations (e.g. greenhouse gas emissions, climate change refugees, climate proofing);
- a new word or phrase should be translated into mother tongue;
- students should be encouraged to use a new word or phrase in their own sentences (e.g. writing compositions on particular environmental issues).

6. Example of a CLIL module: Climate change - what is it all about?

In the second part of the paper, we present a CLIL module that combines teaching of English and environmental content. This is an experimental CLIL module devised and implemented at the Faculty of Geography with the second-year students of the Environmental Sciences Department. The module consisted of four teaching sessions of 90 minutes and was carried out as an extracurricular module. The group consisted of 20 students, who had voluntarily enrolled on the module, and whose knowledge of English was at B1 – B2 level. The instructor was the English language teacher. The classes took place in the computer lab, since most of the activities demanded the use of computers (MS word and the Internet).

6.1. Teaching objectives

The linguistic objectives of the module were:

- creation of an interactive teaching and learning environment in which students use authentic materials presented in English, which was the vehicular language (e.g. brochures and reports published by various European Union agencies; video footage released by the European Commission, etc.)
- development of linguistic competences;
- acquisition of new vocabulary related to the non-linguistic subject;
- grammar revision: parts of speech, tenses, numbers, etc.;

Learning new content related to the topic of climate change was a non-linguistic objective, whereas development of cognitive and academic skills presented a shared objective that referred to both linguistic and non-linguistic aspects of integrated learning.

6.2. Prerequisites for attending the module

- previously acquired knowledge of the subject: all students finished their first year and passed the final exams in Ecoclimatology, Natural conditions and environmental disasters and Biogeography as compulsory courses;
- knowledge of the language of instruction (vehicular language): all students attended English courses for at least 8 years at their primary and secondary schools, and have passed the English language final exam in the first year.

6.3. Selection of texts and environmental issues

The texts used in the module were taken from the brochure *Climate change - what is it all about? An introduction for young people* published in 2009 by the European Commission and Directorate-General for the Environment. The texts explain formation and causes of climate change (the greenhouse phenomenon); consequences of climate change (global warming, melting of polar ice caps, melting of glaciers, rising of sea levels, the phenomenon of extreme weather conditions, etc.); problem of food and drinking water shortage; spread of tropical diseases such as malaria and dengue fever; problem of endangered plant and animal species, etc. Students also learn about the Kyoto Protocol and the EU Emissions Trading System.

For purposes of brevity, only materials and tasks of one teaching session are presented in the paper.

Task 1 (individual activity)

Read a text from the brochure *Climate change - what is it all about? An introduction for young people*

The Kyoto Protocol (abridged)

In 1997, in the Japanese city of Kyoto, governments agreed the important Kyoto Protocol. This treaty commits industrialised countries to reduce or limit their greenhouse gas emissions and reach certain emission targets by 2012. Most of these targets require greenhouse gas emissions reductions of 5-8% from 1990 levels by 2012. The Kyoto Protocol focuses on industrialised countries because they are responsible for most of greenhouse gas emissions and have the knowledge and money to reduce them. For example, the amount of greenhouse gases produced in the EU is around 11 tonnes per citizen every year, while developing countries produce only around 1 tonne.

The Protocol also introduced various economic mechanisms under which countries cooperate in reducing emissions. The Clean Development Mechanism allows industrialised countries to meet their emission targets partly by investing in emission-saving projects in developing countries. This, in turn, is helping to transfer new technologies to poorer countries, enabling them to develop in a cleaner way.

The need for a global climate deal is a crucial step towards cutting greenhouse gas emissions. However, scientists' projections that global warming will continue at an accelerated pace this century urge for much more ambitious measures after 2012. Europe is determined to ensure the agreement keeps global warming to less than 2° Celsius above the pre-industrial level (that is, about 1.2°C above today's temperature). A bigger increase would bring a much greater risk of environmental disasters and of diminished food and water supplies. To prevent such dangerous levels of climate change, worldwide emissions will need to be cut to less than half by 2050. Though this will be a huge challenge, the technologies to achieve it are already available or soon will be, and the cost is affordable – in fact it is much less expensive than the damage that climate change would cause if we do nothing to stop it.

Task 2 (whole-class activity)

Answer the following questions:

Why does the Kyoto Protocol present a crucial step towards cutting greenhouse emissions?

Which countries does the Kyoto Protocol mainly focus on?

What is the average amount of greenhouse gases produced per citizen per year in developed countries?

What is the average amount of greenhouse gases produced per citizen per year in developing countries?

What percentage does the Kyoto Protocol set as the target in reducing emissions of greenhouse gases by the year 2012?

What is the percentage that has to be achieved by 2050?

Why is the Clean Development Mechanism important?

Which negative effects would an increase of temperature of more than 2° Celsius have?

Why is it important to stop or at least slow down climate change?

Which are some of the most evident negative effects of climate change?

Task 3 (pair work)

Read the dictionary explanations on the use of the following verbs and do the exercise. Match each phrase on the left (1-8) with its closest synonym on the right (a – h).

1. grow	a. rise exceptionally	5. drop	e. halve
2. rise by 50%	b. go up	6. cut down	f. diminish
3. increase	c. double	7. decrease by 50 %	g. fall
4. skyrocket	d. rise	8. decrease	h. reduce

Task 4 (whole-class work)

Practice reading the following sets of numbers and numerical expressions

The initial cost to introduce green technology is more than \$3,000 per household.

Population density in Tokyo is 6,038 persons per square kilometer.

\$2.2 bn a year; € 6.5 bn debt

1,550 students; 500,000 residents; 465,283; 12.58 million citizens;

Tel. No. 0044 533 125697; 38111 44 44 283

44.5×17 m², 58×72 cm

3rd March 1989; 21st June 2008; By 1900; in 1987, 2004, 2010, 2050; in the 1950s; in 4th century BC;

Henry VIII; Queen Elisabeth 2nd

10 to 20 percent; 5.2 % annual growth; 47.25 %; 29.567 %; 0.55%; 0.375; 3.458; 25.679;

½; ¼; a half; a quarter; ¾; 9½; 6⅔; 5⅞

It's 6.45 a.m.; It's 8.00 p.m.; It's 18.00;

Task 5 (pair work)

Complete the table with appropriate forms

verb	noun	adjective
agree		
commit		
	emission	
	reduction	
produce		
increase		
		accelerated

Task 6 (individual activity)

Search the web to find information on the reduction of greenhouse gases by individual EU countries.

Write a short report (200 – 250 words) and present it to the class.

Task 7 (whole-class activity)

Purposeful listening activities that require note-taking, discussion and analysis of audio recordings enabled students to practice language skills, primarily listening and speaking. For this purpose, we used a video realized by the European Commission on the objectives of the European Union in terms of energy saving in the circumstances of climate change (*The EU's 2030 goals for climate and energy*).

Task 8 (individual activity - homework)

Write a summary (up to 500 words) on the importance of the Kyoto Protocol.

7. Conclusion

Reasons for implementing integrated teaching and learning at tertiary level can be found in the results of numerous studies that show positive gains for students in terms of foreign language acquisition and development of both academic and cognitive skills. In CLIL educational settings students simultaneously develop language skills and vocabulary and improve knowledge of curricular subjects. It can be concluded that CLIL approaches, as opposed to traditional teaching of foreign languages, provide opportunities for implementing cognitively demanding materials and tasks. This allows students to learn effectively a foreign language and content of curricular subjects. Therefore, this type of teaching and learning is becoming more present in educational systems of many countries as an integral part of school curriculum.

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Converting the European terminology database IATE into the world's largest multilingual data space

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Abstract. The EU has created IATE, a huge interactive terminology database that today contains more than 11 million terms in more than a hundred domains and in the 24 official EU languages. IATE is essential for guaranteeing the consistency of legislation in the different Member States and across all the languages since this depends on the use of accurate terminology in every field of action and in every language. The quality of entries in IATE is guaranteed by the implementation of very strict interinstitutional rules. Terminology is an important activity for a large institutional complex such as the European Union and requires a lot of interinstitutional and multilingual communication and cooperation. For this, EurTerm was created which is an interinstitutional terminology portal that enables the sharing of internal and external resources, collaborative work on terminology projects, and updates with the latest information on terminology both inside and outside the EU. The very rich terminology material gathered for so many years from the huge legislative corpora of European legislation in so many languages must now respond to the challenge of sharing, interlinking and structuring data using the most efficient communication end-sharing technologies.

Keywords. IATE, European terminology, multilingual, interoperability, EurTerm, interinstitutional terminology portal, interinstitutional cooperation, sharing, interlinking, terminology resources

The European Union provides up to 80% of the national legislation of its 28 Member States, in 24 official languages. This legislation is debated and finalised mainly by the three legislative institutions – the European Commission, the Council of the European Union and the European Parliament – but many other institutions and bodies participate in the governance of this large economic and political confederation of states. The fact that every legislative document produced by the EU institutions can become a binding legislative act for each Member State in its official language(s) means that the multilingual aspect of the procedure is obligatory. Indeed, multilingualism was the subject of the very first regulation issued, in 1958, by what would later become the European Union. This regulation has always kept its number as the first legislative act, but has taken account of the increase in the number of official languages from 6 to 24 between 1958 and the present day. The fact that a translated legislative act may be made use of in any Member State and by any citizen or company for legal purposes means that every translation of a legislative text has the status of an original, and this explains the need for the accuracy and consistency of all translations in all the official languages. To achieve this goal, the European Union has the largest linguistic apparatus in the world, with some 5 000 translators in more than 10 institutions, along with hundreds of interpreters, translating and interpreting in 552 language combinations. The production of legislation in every field of activity and for so many Member States with different needs and structures involves hundreds of meetings needing interpretation, and thousands of documents needing translation: all this is part of everyday life in the European institutions.

The consistency of legislation in the different Member States and across all the languages depends on the use of accurate terminology in every field of action and in every language.

This terminology needs to be stored and constantly updated, so that it can be shared by the translators of all the institutions, bodies and agencies participating in the drafting of European legislation. For this purpose, the EU has created a huge interactive terminology database that today contains more than 11 million terms in more than a hundred domains and in the 24 official EU languages. This database is called IATE (Interactive Terminology for Europe.) It is interactive in the sense that each translator in any of the institutions has to consult the existing terminology of the database, but is also enabled – even encouraged – to add to it the result of his or her research into any problem term encountered during translation. In this way, the database is enriched every day by an average of 600 new terms: in 2014, for example, IATE acquired 223 000 new entries. However, apart from creating new entries for new concepts and adding new terms, the interactive function of the European terminology database permits constant updating of the existing entries, thus maintaining its very high level of reliability. The interactivity of the database is limited to the internal version, since the terms are inserted into the public version only after a process of validation. They can be commented on, but not changed, by external users of IATE. The number of these external users is impressive, since an average of 3 600 clicks per hour are recorded worldwide. IATE is recognised as the most precious resource for freelance translators, being the biggest multilingual database covering all fields of legislation.

The quality of entries is guaranteed by the implementation of very strict rules contained in a very detailed handbook, based on the international ISO standards on terminology and adapted to the specific needs of a multilingual database covering legislative texts in so many domains and addressing so many layers of users ranging from specialised bodies to individual citizens. This procedure includes a form of cooperation among the institutions known as ‘consolidation’, which permits shared work on terminology projects related to the legislative procedures involving them all, the merging of entries with similar content, and the interinstitutional updating of the various fields, such as definition, reference and missing languages. The quality level of an entry is ‘marked’ on a points scale from 1 to 4, depending on the reliability of the source and how recent the update is. There is a final stage called validation, carried out by the translator-terminologists in the EU institutions. This action is very important, especially for the wider public, because ‘clicking on the validation button’ automatically sends the entry to IATE Public.

The structures of this cooperation among such a large number of institutions are considered to constitute an exemplary procedure. The cooperation is governed by a working group which is responsible to the senior management of the translation services in all the institutions. The IATE Management Group takes all policy decisions for the database, on the basis of the work and conclusions of numerous taskforces dealing with the various issues.

Since 2013 IATE cooperation has been enhanced by the use of an interinstitutional terminology portal that is accessible to all EU officials in all the institutions. This portal, called EurTerm, enables the sharing of internal and external resources, collaborative work on terminology projects, and updates with the latest information on terminology both inside and outside the EU. Furthermore, it gives central access to wikis for each EU official language, through which the language community can develop common terminology projects, discuss various topics via domain- or text-related forums and, last but not least, involve national experts by giving them access to the EurTerm language wiki.

Terminology is thus an important administrative activity for a large institutional complex such as the European Union, but it is also much more than that: in our times of intensive global communication in every field, multilingualism becomes a great challenge and an unavoidable necessity. Communication and understanding of the same concept in all languages used for a multinational or globalised activity is crucial, and this means consistent terminology. New technologies and intensive research in new fields daily create large amounts of new terminology

in all domains and in all languages. Digital progress provides support in the form of huge interactive databases and metasearch tools to store and consult multilingual terminology. Today there is no large institution or company without a specialised database or glossary to enable understanding between its partners in different countries.

This international multilingual communication and cooperation creates huge needs for translation and interpretation. Terminology is the touchstone of the quality of these two activities. Technology provides more and more tools and software to ease this work: computer-assisted translation tools, and – gradually – automated translation. The research into the development and improvement of these tools is based on two supports: the corpora of translated texts (known as ‘translation memories’), and terminology databases. While translation memories can perpetuate mistakes, the terminology database guarantees the quality of translations and their consistency in all languages – elements that are crucial for the correct functioning of any multilingual institution or company. As with the need for consistency of European legislation as explained above, imagine how important it is that the instruction manual for a complex machine, or a scientific report in a field like medicine, should have an identical meaning in all languages!

New language technologies need specialised terminology. They also enable and ease terminology work, its sharing and storing, and cooperation between terminology producers and managers. Interlinking possibilities, metasearch tools permitting easy searches, managing of big data, cloud technologies, statistical term extraction and multilingual alignment: all these possibilities now mean that overlapping can be avoided in terminology work. Just think of the number of glossaries or databases you encounter that contain the same entry for a specialised but commonly used financial term, for instance ‘tax fraud’. Translators and terminologists from every financial or political institution, every bank, every university department dealing with finance or politics have created an entry in their terminology database or glossary, and in all the world’s languages.

The very rich terminology material gathered for so many years from the huge legislative corpora of European legislation in so many languages must now respond to the challenge of sharing, interlinking and structuring data using the most efficient communication end-sharing technologies. It will, of course, always be based on the strictest international quality standards, in order to offer, both to European citizens and to all professionals in translation and interpretation around the world, this precious linguistic asset that has been created, and is constantly enriched, by the world’s biggest human translation apparatus: the translation and interpretation services of the European institutions.

Case study method in teaching languages for specific purposes

Prospects and challenges

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Abstract. Rapid globalization, rise in international trade and global communication prompted a need for an even more efficient and applicable language learning, particularly in the business context. The methods used for the purpose are various. However, most of them tend to focus on the communicative approach. One of the methods supporting the communicative approach is the case study method. It was taken over from the business context and implemented into the language learning process. This paper attempts to give an overview of the types, structure, application and challenges of the use of this method in learning languages for specific purposes (LSP). Special attention shall be paid to the potentials of this method for learning Business English in a university context.

Keywords. Case study, ESP, executive summary, integrated skills approach, mixed-ability classes

1. Introduction

Rapid globalization, rise in international trade and global communication prompted a need for an even more efficient and applicable language learning, particularly in the business context. For several decades now, there has been constant striving towards bridging the gap between the classroom and the real world that awaits students once they complete their formal education. Traditional classroom could not cater the need of these students, particularly in the field of business. Consequently, new models of teaching and learning were developed, and some were adopted and adapted from other disciplines. Such was the case with the case study method.

Case studies as we know them and use them in teaching today were first used at the Harvard Business School. However, originally they were conceived at the Harvard Law School, being a somewhat of a Socratic means of arriving at the truth. Transposed into the business context, this method facilitated problem-solving. In the context of teaching, this method was seen as “a pedagogy enabling a deeper and more reflective engagement with business problems than the pressures of work usually allowed in real life” (Hoskin 1998: 60). It provided a sheltered and isolated situation where students can offer solutions to problems, regardless of the consequences and outcomes.

According to Hoskin (1998), the use of case studies is a “success story”, since it is successful both as a technique and a research tool. In teaching, it helps overcome some fixations of traditional pedagogy, while in research it helps generate ‘learned truths’. Case studies have become widely used since 1945 and this author claims that “the more we learn via case studies, the more we ‘learn to learn’ that doing case studies is good, thus reinforcing their success” (Hoskin 1998: 58). It also gives students an opportunity to further their professional education allowing them to “practice reflection-in-action while playing the role of a professional” (Boyd 1991: 731).

As for the very definition of a case, one of the more simple and direct definitions would be that it is “a description of a problem or decision that faces company managers” (Uber Grosse 1988: 131). This is a starting point for the development of the whole activity.

Many examples in the literature speak in favour of this method being a success story. At the University of Belgrade, Faculty of Organizational Sciences, this method has been used for teaching business-related disciplines providing students with hands-on knowledge of real-life business. Having seen this, this method was seen as a good means to be used in teaching Business English in language classes.

2. Approaches and types

2.1. Approaches

Over the course of time that this method has been used, several approaches emerged. Esteban and Canado (2004) gave an extensive overview of the history of this approach. The main approaches they highlighted are: Harvard Approach, Abbreviated Case Approach, Incidence Approach, and Open and Closed Case.

Harvard Approach means that students consider a series of questions about a problem described in narrative form. Having done this, the students then offer their solution.

Abbreviated Case Approach condenses the problem situation excluding the unnecessary details and avoids the complexities which are typical for a real situation.

Incidence Approach means that the students look up information necessary to solve the presented problem with no strict directions and guidance.

The authors link the Incidence Approach with the Open Case where students gather information themselves, as opposed to the Closed Case where all the information is given in advance.

2.2. Types

According to Westerfield (1988), there are three main types of case studies.

The first describes a situation in which the management is facing a problem when no decision has yet been made and the student is asked to suggest a solution. The second type describes an action that has already been taken, requiring an evaluation on the part of the reader. The third requires general appraisal, in which students are asked to analyze the structure of an organization to determine whether everything is proceeding as it should. (Westerfield 1988: 76)

All of the aforementioned types allow for elaborate work on different language skills, thus supporting the integrated skills approach to it.

3. Advantages and drawbacks

3.1. Advantages

Since this is a highly communicative activity which engages different skills and includes content into language learning, it has several advantages. According to Uber Grosse (1988), since the case study method focuses on “teaching business concepts, situational analysis, and problem solving skills [...] it bridges the gap between English language and business content instruction.” (Uber Grosse 1988: 131) This author also highlights the teaching of language through content

which is business-related using authentic materials which present actual business problems. This automatically makes it of greater relevance and interest to the student. The aforementioned integrated skills approach is applied, which consequently develops reading, oral and aural skills. The author continues to list advantages emphasizing that the class is learner-centered, as opposed to the previous traditional teacher-centered class.

As for the main benefits for the Business English teacher using this method for working with students, the same author emphasizes “development of critical thinking and problem-solving skills, communication skills, and understanding of group dynamics” (Uber Grosse 1988: 134). Also, the method makes room for creativity, since it employs numerous instructional techniques – group discussions, role plays, and simulations which centre on problem-solving and situational analysis. The language is used freely and as close as possible to real-life language use, thus giving students the opportunity to experience possible future professional situations.

Kreber (2001) notes another advantage, particularly in post-secondary teaching. The author claims that this mode of work fosters students’ growth in critical thinking and self-direction through genuine experiential learning experiences.

3.2. Drawbacks

On the other hand, in addition to the various advantages to this method, there are several drawbacks to it and difficulties to be surmounted in order for it to be implemented to the benefit of both the students and the teachers.

As Uber Grosse cites: “content-based nature of the approach assumes that the teachers has a mastery of the subject matter” (Uber Grosse 1988: 133). Therefore, thorough and detailed previous training and preparation is required from the part of the teacher/instructor to give them enough confidence to go on with this method and to be ready to answer numerous possible questions posed by students. In addition, the levels of syntactical and lexical difficulty of case materials may be inappropriate for students who are non-native speakers. This would require anticipation on behalf of the teacher and adjustments to the text.

Another key difficulty could be the free-flowing nature of student directed classroom, since this can be a source of frustration to both teacher and student. According to Uber Grosse, there is no one solution to this problem. Hence, “lesson planning can be a major challenge” (Uber Grosse 1988: 134) because it means going through several phases. The author states that the teacher should first read the case in detail and provide an analysis or obtain it from the teacher’s manual. Then, based on the individual strengths and weaknesses of the students in the class, the teacher should try and predict the course of the discussion and prepare for a variety of responses. While doing this, the teacher should try and achieve a high degree of student interaction and participation. This is particularly difficult with students whose knowledge of language is on a lower level, since they are reluctant to participate and get involved.

As the biggest problem, the authors lists the lack of second language exercises and activities to supplement the cases. This means that the teachers should supplement their own activities for each case used in class.

Since it is hard to predict problems when using this method in class, thorough preparation is necessary, which can be time-consuming.

Research conducted with business students at Hong Kong university showed that they were not only “ill-prepared for discussions, they were not used to dealing with the ambiguity inherent in cases and were uneasy with the open-ended nature of this approach” (Jackson 2003: 468). However, students did show interest in participating, but noted that they needed additional language support and encouragement.

4. ESP at the Faculty of Organizational Sciences - applying the case study method

At the Faculty of Organizational Sciences, University of Belgrade, English for Specific Purposes is taught at undergraduate level. Students attending these obligatory courses during first four semesters study either IT or Management. The course programme covers a wide range of general topics in these areas and introduces the students to common syntactic, discourse and pragmatic patterns of Business English. This is mostly done through text-based exercises and class discussions, with follow-up activities to be done at home.

Students are on average at the level of B1. They are grouped in large, mixed-ability classes, which makes it more difficult to apply the case study method. The classes are held over a semester of 13 weeks, with a 45-minute class per week, which is an additional strain for the implementation of the whole process.

However, starting from academic year 2016/2017, a group of 60 students is to attend the studies completely in the English language. The students will be taking an additional entrance exam to test their language skills and confirm their ability to attend classes. This will provide an opportunity to conduct the whole process of teaching ESP through case studies. Since the students will be required to have a certain level of language knowledge, the whole process of implementing the case study method in class should be made easier through faster understanding of instructions and input provided by the teacher/instructor, and consequently the build-up of knowledge. Also, it makes room for dealing with more complex topics and issues.

4.1. Setting-up the scene

The case study method asks for thorough preparation on the part of the lecturer/instructor. In addition to doing research on the specific topic of the case, the instructor should also consult colleagues specializing in the particular field.

As for the work done in class, at the beginning of the process, the teacher presents students with the case text and provides language support. Depending on the complexity of the topic, a series of exercises and explanations will ensue in class. The teacher should then allow for a week or two for the students to read the text and provide feedback on the text, including both the content and the language aspects. All these iterations should be followed up with grammar and vocabulary exercises preferably tailor-made for the particular case.

Students should be presented with the whole process from the beginning to the final phase and given detailed instructions of what is expected of them. They should then be divided into groups of three to five, and each group should go through every phase of the case. Finally, groups give a presentation of their case solution and submit a written executive summary.

4.2. Sample case

Consulting the colleagues from the Marketing Department of the Faculty of Organizational Sciences who have had extensive experience in working with students using the case study method and preparing them for international competitions, we have arrived at a model appropriate for students at the Faculty. However, with alterations, the sample could be adapted to fit the needs of students in various other fields of studying.

4.2.1. Parts of a case

- Introduction

The first part of the case text is the Introduction. This segment should contain the information necessary to understand the context and aspects of the particular case, such as who the decision

maker is, the company, time of the case problem, location, company's goal, what the problem is. The students should also have a clear idea about their role in the case, as well as the strategy to be applied in order to respond to the request/task. There should normally not be more than two tasks per case.

- Information about the company

The second part includes further and more detailed information about the company.

- Further detailed information

The third part should provide detailed information about the market, including market overview, competition, distribution channels, consumer/customer behaviour, etc.

- Foreign markets

The fourth part should discuss the current international strategy of the company in question, market segmentation and potential.

- Finance

This part tackles the finance and is suggested as an optional part, due to the complexity and possible issues that both the teacher and the students may have when dealing with it.

4.2.2. Case follow-up

After students are presented with the case and the case has been thoroughly analyzed in class, it is followed-up with exercises. As mentioned previously, the exercises are scarce and the teacher/instructor should invest some time and preparation in providing appropriate exercises, bearing in mind the knowledge level, strengths and weaknesses of the students. These should focus on language, especially on the communication skills needed for negotiation. Also, the teacher should include exercises dealing with vocabulary and grammar useful for the discussions and presentations, including discourse patterns needed for business correspondence.

When the subject matter has been analyzed and clear, the students should be equipped with enough material to be able to give presentations of their case solution. If possible, it would be useful to include the rest of the group in the assessment of student presentations. This way, they are active participants in all phases of the learning process.

The final part of the case study should be the submission of a written executive summary/report. Therefore, in addition to reading and speaking skills, the students would employ their writing skills as well. However, this should be focused writing and the teacher should provide input so the students would be able to write a report which resembles a piece of writing they would produce in their future professional career. The executive summary, as recommended by our colleagues from the Marketing Department, in the context most useful for our students, should include the following pieces of information: information about the company, statement of the problem being tackled, what the goal is, the solutions the students are offering, and finally, their conclusion.

5. Conclusion

Despite difficulties related to this method, with detailed planning and preparation on the side of the teacher/instructor, this method may bring numerous advantages to the teaching/learning process. With thorough planning and anticipation of possible pitfalls, the method brings many benefits to the classroom. If executed properly, case studies provide room for critical thinking, problem-solving and the development of oral and written fluency regardless of the disciplinary content. In university context, particularly with students studying business-related disciplines,

this method brings to the classroom situations which resemble real-world ones and equips students with skills to help them tackle future professional challenges.

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“Witness and become a part of history”. The pragmatic aspect of specialized equestrian discourse

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Abstract. The worldwide fame of the Polish Arabian Horse bears fruit during the annual Pride of Poland auction at the Janów Podlaski State Stud. Its lavish English-language catalog is aimed at convincing expert breeders from all over the world into spending high sums on the animals. Thus, it employs pragmatic and stylistic features not immediately associated with specialized discourse, such as persuasion mechanisms and rhetorical figures. They are enclosed in a specific text structure and presented using a well-thought out layout to create a powerful image of a perfect Arabian Horse. The text also apply the main subject field concepts: equine descent, conformation and achievements. The analyzed discourse is horse characterizations from the 2008 Pride of Poland catalog, selected for two reasons: the jubilee 30th edition of the Polish National Arabian Horse Show held before the auction and a historic sale offer – the multiple champion Kwestura. Thus, the catalog had been prepared with special care, featuring particularly refined and elaborate horse characterizations. The paper aims to prove that, contrary to popular belief, specialized discourse does use diversified pragmatic and stylistic tools carefully combined with extralinguistic means to achieve the assumed goals.

Keywords. Arabian Horse, auction, discourse, LSP, persuasion, pragmatics, rhetoric, stylistics, terminology

1. Subject and aim

The aim of this paper is to present and analyze the diversified pragmatic and stylistic tools employed in specialized discourse in order to prove its linguistic richness going beyond a given subject field. Since van Dijk (1997: 19) stresses the fundamental role of context in discourse analysis, defining it as “the structure of all properties of the social situation that are relevant for the production or the reception of discourse”, I shall first introduce the exact discourse to be used herein.

My LSP of primary interest, and one that still requires comprehensive linguistic description, is the equestrian language, so I decided to examine its use in a truly significant situation to that subject field: the annual Pride of Poland auction at the Janów Podlaski State Stud, where the worldwide fame of the Polish Arabian Horse is confirmed and bears fruit. This August sale is accompanied by a lavish English-language catalog issued in the spring and aimed at convincing breeders from all over the world into spending high sums on the animals. Since those recipients are subject field experts, the discourse needs to present the known in a new light: specialized vocabulary alone is not enough to make a sufficiently strong impression. The paper aims to investigate how that impression was actually made via language in the 2008 Pride of Poland catalog, which I have selected for two reasons: the jubilee 30th edition of the Polish National Arabian Horse Show held before the auction and a historic sale offer – the multiple champion Kwestura. This ensures that the catalog had been prepared with special care, featuring particularly refined and elaborate horse characterizations.

Kress et al. (1997) and van Dijk (1997) emphasize that modern texts are increasingly multi-modal, i.e. their authors intentionally employ many different communication modes, forcing linguists and addressees alike to pay attention to the text as a whole. This principle is also reflected in the catalog: every horse characterization is a part of a carefully structured two-page presentation (Fig. 1), which consists of identifying information, i.e. auction number, name, pedigree, breeder, color and measurements (top left), a breeding/racing/show record (bottom left), the characterization analyzed herein (bottom middle) and a color photograph (right). Still, the characterization remains central both physically and structurally: its subsequent paragraphs refer to other presentation components, enhancing and interpreting the data they provide about the horse to ensure that “the most apt representation” (Kress et al. 1997: 259) of the intended meaning, i.e. a perfect Arabian Horse (hereinafter “AH”) concept, emerges in the addressee’s mind. This paper concentrates on the linguistic means used to achieve this goal, the most significant ones being persuasion, rhetorical figures, specialized vocabulary and specific text structure. Their analysis was conducted using 17 representative (out of 37) characterizations of Arabian mares from the 2008 catalog: Alberina, Bellissima, Cefeida, Dombra, Egea, Ekina, Ellanda, Elwinga, Emeeria, Emegna, Eukomia, Eutenia, Fukara, Garuna, Kwestura, Wesola Nowina and Wrózka.

LOT A. KWESTURA			
NEGARRAZ bay, 1971 Polish Arabian USA	Stark Nogodas	Wzrost Białolica Nogodas Nogodas	Bred and owned by Michałow Stud PSIS Val XXIV p. 29 chestnut mare, foaled on 10th of February 1906 measurements: 148-169-17,5 cm Sire line: Kubaikin Haidi d.b. imp. 1931 to Charnicka Dam line: Gaudula d.b. imp. 1949 to Jaruzowca
MONOGRAMM chestnut, 1905 Polish Arabian USA	Kniptol Monopol	Kraj Przemysla Pobel Muzyczna	
PESENNIK chestnut, 1919 Terek Stud USSR	Kumir Prenia	Mak Knyda Arenas (Rozaf) Puzhika	The most extraordinary offer in the 40-year history of the Polish Arabian Auction – perhaps the most significant opportunity in the history of public auction with the Arabian breed. KWESTURA – the iconic daughter of MONOGRAMM – admired, adored and immortalized the world over as the quintessential Arabian mare. Her accomplishments in the international show ring are unmatched – as Polish National, US National, World, European & All Nations Cup Champion – KWESTURA has dominated the competition in both hemispheres as no other mare in modern history. Every inch the queen from the day she was born in Michałow, KWESTURA continues to become more stunningly beautiful and engagingly refined with each passing year, entering the prime of her life as both a broodmare and show horse. An especially dished head with those dark, engaging eyes, incredible length of neck, elegant slenderness, impeccable chiseltone, incredible shape and extraordinary elasticity, smooth, harmonious and well balanced with a radiant feminine elegance, an exceptional level of spine and coup, a distinctly maternal capacity through her body, as well as strength, length and muscular power through her hindquarter. Her limbs are clean, strong, well designed and incredibly refined, enabling KWESTURA to move with both charismatic brilliance and explosive power in her trademark style – lily, light and impressively cadenced with incredible length of stride, impulsive power and extravagant animation – with tail draped, stern up, head held high, neck arched gracefully in absolute command of her domain. Witness and become a part of history as it unfolds – seize the once in a lifetime opportunity to share in the incomparable legacy of the one, the only – the legendary KWESTURA .
KWESTA grey, 1906 Michalow Stud US	Kumir Prenia	Mak Knyda Arenas (Rozaf) Puzhika	
KABALA grey, 1919 Michalow Stud 2/18 (3-3-3)	Puho Kosetta	Arenas (Rozaf) Puzhika Eli Charnicka	
<p>RAISING RECORDS: 1998 8 starts: 1st, 1st, 1st, 1st, 1st, 1st, 1st, 1st</p> <p>SHOW RECORDS: 1986 Polish National Champion Filly – Jaszow Podlaski (PL) 1987 Spring Show Reserve Champion Filly – Michalow (PL) 1989 All Nations Cup Champion Mare – Aachen (DE) 2000 European Champion Mare – Wilmshurst (UK) 2000 & 2001 Polish National Reserve Champion Mare – Jaszow Podlaski (PL) 2002 Champion Mare – Columbus, OH (US) 2002 US National Champion Mare – Louisville, KY (US) 2005 World Top Ten Champion Mare – Salon du Cheval, Paris (FR) 2007 World Champion Mare – Salon du Cheval, Paris (FR)</p> <p>BREEDING RECORDS: 2000 colt KAROL (Lahesh) grey 2/10 (3-1-2-0), gelded, sold to Belgium 2001 filly KASOPKA (Lidoc) grey, 1/3, broodmare at Michałow Stud 2002 colt KUBILA KHAN NA (Mona) bay, gelded 2003-2005 five foals born by embryo transfer: white on lease to Nicholas Janzians (US) 2005 colt KWESTYR (Jullyen El Jemal) chestnut, in racing training 2006 colt KASZTAD (Pogani) grey, Bialka Spring Show Champion Colt, at the Stud 2007 colt KIRCHOLM (Al Marwan) bay, at the Stud</p> <p>BREEDING STATUS: bred to QR MARC (frozen semen – last service on 19th of March)</p>			



Figure 1. Sample catalog presentation (Krawczyk et al. 2008: 24-25).

2. Structure

To describe an overall arrangement of a text, van Dijk (1997: 12f) uses a notion of *schematic structure* or *superstructure*, with categories of a particular order and function (for instance, a news report has a headline category aimed at beginning and summarizing the text, while an argument ends with a conclusion category recollecting what has been outlined). The horse characterizations include four such categories corresponding to components of the multi-modal text (Fig. 1) with analogous functions:

- Topic – the identifying information (function: horse introduction)
- Conformation description – the photograph (function: exterior presentation)
- Pedigree description – the pedigree (function: descent presentation)
- Conclusion – the whole multi-modal text (function: summarizing the presentation).

Thus, the structure is a tool for what Tomlin et al. (1997: 66) label *thematic management* as it outlines “the central elements around which the discourse is developed”. The remaining part of this section is therefore devoted to a description of the four abovementioned components.

The **topic** selects key features of the referent, i.e. the mare’s advantages, which attract attention and constitute starting points of the message (ibid: 85-86). For nine mares, the topic is clearly separated as a sentence or elaborate noun phrase(s) (page numbers follow the examples):

- (1) An extraordinary daughter of LAHEEB, Egea exemplifies the world-class caliber of the Arabian mares of Michałów (32)
- (2) The most extraordinary offer in the 40-year history of the Polish Arabian Auction – perhaps the most significant opportunity in the history of public auction with the Arabian breed (24)
- (3) One of the most exciting young offers of the 2008 Pride of Poland collection, despite her age Garuna is already an experienced and accomplished show achiever, with a Junior Champion Mare title from St. Petersburg and a class win in Wels to her credit (52)
- (4) An exciting young show/broodmare prospect from Janów Podlaski’s cherished family of EUNICE (68).

For five mares, the topic transforms into a conformation/pedigree description:

- (5) One of the most beautiful and celebrated daughters of Janów Podlaski’s premier broodmatron CELNA, Cefeida is a mirror reflection of her dam, boasting the same vascular black skin (28)
- (6) An opportunity experienced breeders will not want to miss – a chance to secure a mare out of a full sister to EKSTERN, the undisputed King of the Ring (86).

Finally, for only three mares, the topic is placed after conformation description (example 7) or contains no direct reference to the mare due to serving rhetorical figures:

- (7) Exotic type, graceful femininity, [...] , brilliant movement and that alluring coat color – the fashion world knows that black will never go out of style. Neither will correct conformation and thorough selection in the world of Arabian horse breeding, and Wróżka is one of these rare individuals who has all of the above (26).

The **conformation description** is nearly always (i.e. in 13 cases) located directly after the topic or shortly thereafter, which is justified by the extralinguistic nature of AH breeding domain (horse exterior is the first and main aspect assessed at shows). In four characterizations, however, a slightly different location of this description serves specific purposes. In the case of the mare Ellanda, it is embedded in the third component – pedigree description – because her chief advantage is the performance exhibited by herself and her relatives (a “hardy athlete and a warrior at the racetrack”) rather than her beauty. Accordingly, in the actual conformation description, the highlighted features are those that prove strength and solid build:

- (8) The features which earned them their titles are also evident in Ellanda – considerable height, with a tremendously long neck, good length of leg, prominent withers and good depth of girth, exceptional and substantial proportion, plentiful of charisma and wonderfully feminine. A hardy athlete and a warrior at the racetrack, Ellanda was never out of the money in all her starts, a trait which she definitely inherited from her sire WOJSŁAW (82).

For two further mares, the location is justified by the achievements of their sires: their accounts follow the topics directly and push the conformation components as far down as to the middle of the entire characterization. Finally, for one mare, this component opens the text, with the topic following (see example 7).

Another important aspect of the conformation component is its length, spanning 16-107 words (average: 38.7 words). A significant deviation from the average serves pragmatic purposes. The shortest description belongs to a young mare which has not yet proved her conformation value at numerous shows and thus is advertized mainly via an elaborate pedigree description that follows:

- (9) Feminine allure, striking charisma, a short head of a dished profile with an abundance of type (52).

In turn, the longest conformation description constitutes the majority of the whole characterization. The advertized mare, Kwestura, is one of the most successful show Arabians ever, so her presentation focuses on the traits that earned her all the trophies. This implies that she is a source of heritage herself, so an elaborate pedigree description is redundant:

- (10) An exotically dished head with those dark, engaging eyes, incredible length of neck, elegant slenderness, impeccable cleanliness, incredible shape and extraordinary elasticity, smooth, harmonious and well balanced with a radiant feminine elegance, an exceptional level topline and croup, a distinctly maternal capacity through her body, as well as strength, length and muscular power through her hindquarter. Her limbs are clean, strong, well designed and incredibly refined, enabling KWESTURA to move with both charismatic brilliance and explosive power in her trademark style – lofty, light and impressively cadenced with incredible length of stride, impulsive power and extravagant animation – with tail flagged, ears up, head held high, neck arched gracefully (24).

Despite the deviations in location and length, all conformation descriptions share two characteristics: the equine features discussed and the collocation structure.

The equine features are determined by traits marked at the shows: type, head and neck, body and topline, legs, movement (Magid 2009). The type is a composite of features typical of the breed (Arabian Horse Association) and as such is responsible for the overall impression a horse makes. Thus, its descriptors are imprecise, general-language adjectives, as in “enchanted feminine type”, “superior breed type”, “unsurpassed breed type”, “exceptional type”, “exotic type”, as well as “charisma” (nine times), “presence” (five times) and “design” (four times). The head and neck are important type-bearers in AH, so even the most concise conformation descriptions mention the head and many elaborate on this body part. The image of body and topline is conveyed either directly (see example 10) or via providing an overall sketch, as in “strongly coupled build, solid structure” or “substance, structure and balance”. The legs are only mentioned in six characterizations, which reflects an international tendency to neglect this unstriking, yet fundamental element and favor beauty (Luft 2008). Finally, the movement is described in ten characterizations, in five of which the reference is general (see example 10), while in the remaining five trot is directly described because it is a key gait assessed at the shows. It is depicted as “energetic, animated and powerfully impulsive” or “exhilarating powerfully animated”, so as to convey its speed and lively nature.

The collocation structure of specialized vocabulary used in conformation descriptions is as follows: evaluating descriptor(s) + term. Contrary to the words describing the type (see above), conformation terms commonly have two or more descriptors, which are general-language adjectives and adverbs that strengthen or even exaggerate the meaning of the term. Regarding their position, they most often precede the term (“exotically dished head”, “deep, round, widely placed jowls”, “well muscled horizontal topline”, “tremendously long neck”, “long, lean, wonderfully shaped neck”, “beautifully chiseled, dry, refined head”, “energetic, animated and powerfully impulsive trot”, “incredibly long, elegantly shaped and desirably placed neck”), but they may also follow it (“limbs are clean, strong, well designed and incredibly refined”) or even surround it, if they are particularly numerous (“wonderfully shaped long neck, emerging gracefully and cleanly from the chest”). Such vocabulary structure merges specialized knowledge

with advertisement: the terminology roots the advertizing strategies in the subject field, making the characterizations appear more credible, while the descriptors attach the desired values to terms to ensure favorable conceptualization and interpretation. Thus, the collocations can be considered a powerful persuasion tool.

The **pedigree description** is by far the longest component in all characterizations except Kwestura's (see above). Departing from the sire and dam, it reaches several generations back, mentioning all the renowned relatives and their achievements, with occasional evaluating descriptors. All horse names are written in block capitals to highlight their multitude visually, make them serve as small headlines advertizing the Polish AH breeding and order the intricate pedigree part, so that the addressee does not get confused. The purpose of this component is showing the long tradition and success of the Polish AH breeding. It implies that a given mare is an outcome of long-term careful selection, destined to continue this heritage, and that her bright future is easily predictable. This intention is often stated explicitly (see examples: 11, 12, 15, 17, 18 and 22).

Finally, the **conclusion** is always a full sentence (in one case – two sentences); it recapitulates the mare's key advantages introduced in the topic and elaborated on in the text to embed the message in the addressee's memory. This beginning-end link is achieved by repeating the stylistic tools and words, as in these topic-conclusion pairs:

- (11) An obvious choice for breeding programs focused on performance excellence, Alberina possesses the phenotypic strength and proven genetic predictability of her renowned racing dam line combined with the athletic achievements of her valiant sire. / With athletic potential from both sides of her pedigree coded in her genes, Alberina promises to deliver premier performance in the shape of future generations to the world's best breeding programs (56)
- (12) An unprecedented offering in the 2008 Pride of Poland collection, as MAGNUM PSYCHE is ready to mark his presence on the Janów Podlaski Sale stage for the very first time, courtesy of his Polish-bred daughter Emegna. / Benefit from the genetic potential of living breed legend MAGNUM PSYCHE aptly combined with a dam line bearing world-class heritage and let Emegna bring your breeding program to new heights (62).

Therefore, this device is another proof that the characterizations constitute carefully structured arguments and complete, persuasive advertisements.

3. Persuasion

Persuasion is the most prominent pragmatic tool in the characterizations: they feature numerous instances of both explicit and implicit persuasion, each of which displays three patterns.

Of the three **explicit persuasion** patterns, the first two are the most prominent and compatible with a list of ten primary principles of an effective advertisement found in Armstrong (2011: 749): its first principle "communicate a unique selling proposition" corresponds to the first pattern below, while the fifth principle "for high-involvement products, the reasons should be strong" is reflected by the second pattern:

- 'Seize a special offer': the addressee is directly urged to decide quickly at the auction because a given mare is or will soon be an object of huge interest owing to her splendid descent:
- (13) Witness and become a part of history as it unfolds – seize the once in a lifetime opportunity to share in the incomparable legacy of the one, the only – the legendary KWESTURA (24)
- (14) Don't miss this opportunity to share in the extraordinary success of her heritage (82)

- (15) Equipped with a legacy of accomplished ancestors, young Eutenia is ready to hit the big stage and make a name for herself – make sure she does so under your banner (68)
- (16) As EKSTERN gains more and more acclaim as a sire of merit, expect broodmares from his dam line to become a hugely sought after commodity, especially ones as dazzling as Emeeria (86);
 - ‘Expect a lot’: the addressee is assured that they may hold high expectations towards the mare, a certain leader-to-be in their stable. Again, the main justification is the pedigree:
- (17) With a pedigree full of accomplished descendants and a truly royal heritage [...] expect Her Darkness to shine with a bright light both on the show arena and in the foaling barn (34)
- (18) Destiny awaits this distinguished young beauty – with her astonishing good looks and impeccable pedigree expect Garuna to lead the charge as both a show horse and future broodmare being an adornment of any breeding program (52);
 - ‘Indulge yourself’: the addressee is encouraged to satisfy a craving like a cake shop customer (for the confectionery metaphor, see also section 4):
- (19) If you’re into tasty delicacies, we have just the treat for you (36)
- (20) go directly for the icing on the cake and treat yourself to the most sublime delicacy (36).

As shown above, the text authors are aware of the most important subject field concepts: quality and pedigree; however, they also employ common human desires to encourage the addressees to satisfy them because this group can certainly afford it.

Concerning the **implicit persuasion**, its patterns identified in the characterizations can be grouped under three implicatures, i.e. messages derived from what is said without being its strict part (Huang 2007: 279); again, the first two patterns are the most significant ones:

- ‘Prove that your breeding program is good’: a mare is presented as a perfect choice for a successful and ambitious breeding program, so its purchase will confirm the applicability of that image to the buyer’s breeding program:
- (21) An obvious choice for breeding programs focused on performance excellence (56)
- (22) With such an outstanding heritage of accomplishment Fukara is the logical choice for the leading breeding programs focused on racing talent and world-class performance ability (96)
- (23) Cefeida is an excellent choice for any breeding program focused on type, quality and refined elegance (28);
 - ‘Prove that you are a good breeder’: via purchasing the mare, the addressee will confirm that the image of an expert, ambitious breeder interested only in valuable horses applies to them:
- (24) Stunning looks and an impeccable pedigree make Bellissima an obvious choice for breeders not willing to settle for anything less than perfection (80)
- (25) Dombra promises to be a mare of great value to the serious breeder (58)
- (26) for breeders wanting to incorporate a true gem into their herd (44);
 - ‘Prove that you have style’: the addressee is instructed about the trends they should follow via buying the mare if they wish to be viewed as a fashion connoisseur; this pattern is used only for two black mares to highlight their rare color:

- (27) the fashion world knows that black will never go out of style. Neither will correct conformation and thorough selection in the world of Arabian horse breeding (26)
- (28) All fashion enthusiasts will tell you that “any color is good as long as it’s black”. She’s black alright, but there is much more to Elwinga than just her coat color (34).

This way, the implicatures conveyed messages which could not have been stated directly or the advertisement would have turned into an open challenge. Instead, they utilized an image of a successful AH breeder, using the most important subject field concepts (pedigree and quality), with minor reference to common human desires.

4. Other rhetorical figures

Van Dijk (1997: 12) discusses the notion of *rhetorical structures*, or figures of speech, defining them as means which make discourse “more memorable and hence more *persuasive*” because they attract attention. As has been shown above, the horse characterizations are actually advertisements and as such are obviously based on persuasion, but they feature a number of other stylistic tools, used to enrich and strengthen the message wherever possible. This section is therefore devoted to personification, reference to names and coat colors as well as metaphor, which can all be found in the 2008 sale catalog.

Personification takes two forms in the catalog characterizations. First, it is clearly visible in the fact that the personal pronouns consistently used with reference to the horses are “he” and “she” – the ones intended for humans (instead of “it”, which should be used for animals according to English grammar). Second, this stylistic figure also concerns the horses’ achievements at the shows and in racing:

- (29) she had not simply made herself at home, but literally thrived (56)
- (30) he did not limit himself to just one area of excellence (56)
- (31) the superlative mares [...] who have found fame and fortune around the world (32)
- (32) CELNA’s exquisite phenotype, which she so generously shares with her daughter (28).

Both personification forms are aimed at preventing an image of the horses as traded goods or passive tools in the hands of breeders. Instead, the animals are presented as being actually in command: they are not only bred – they establish breeding programs (29) and ensure their quality (32); they are not shown – they strive for achievements of their own accord (30, 31). Thus, they are implied to be not only beautiful, but also intelligent, yet the main image created this way is that the horses are cooperating partners which share the key human goals characterizing the AH breeding and make breeding easier.

Reference to the coat color is used for five horses. This stylistic tool is closely linked to the extralinguistic nature of the subject field as the mares in question are of rare colors in the AH breed (three are chestnut and two are black – see also section 3). Therefore, their uniqueness is additionally highlighted and the addressee’s sense of sight is employed in the conceptualization process:

- (33) A gleaming chestnut coat color (62)
- (34) This chestnut mare very much resembles her dam WENESSA (44).

Moreover, in the characterizations of the black mares Elwinga and Wróżka, the color reference also allows for establishing a beginning-end link (see section 2) as well as for using contrast and personification:

- (35) expect Her Darkness to shine with a bright light (34).

Reference to the name concerns only three mares, but their names serve as the basis for well-thought out stylistic figures aimed at highlighting the uniqueness of those animals. Thus, the name is linked to the horse's features:

- (36) As her name suggests, Bellissima is a lovely, enchanting young mare (80)

or constitutes the basis for a metaphor (the mare as a newspaper headline and a piece of good news), which additionally allows for establishing a beginning-end link (see section 2):

- (37) *Wesoła Nowina* is a Polish phrase for “Triumphant Tidings” – and indeed they are, when such a mare is available for sale among the Pride of Poland collection. / The combination of the world-class heritage of the family of WADERA with the excellence of show dazzler EKSTERN make *Wesoła Nowina* not just a good tiding, but headline news for breeders wanting to incorporate a true gem into their herd (44).

Finally, **metaphors** are based on selected features of the described horses like an unusual, meaningful name (see example 37) or, in the most striking instance, name combined with color – the characterization of the mare *Ekina* is entirely built using a confectionery metaphor:

- (38) A stroll through a Polish stable can easily be compared to entering a candy store – everything looks appealing. If you're into tasty delicacies, we have just the treat for you – the *creme de la creme* of *Białka's* breeding program, an exceptional filly of a caramel coat color, out of a dam whose mere name (EKLERA) brings to mind an *éclair* filled with cream and topped with icing – *Ekina*. As admirable and lovely as the most exquisite praline, *Ekina's* key features are [...] / go directly for the icing on the cake and treat yourself to the most sublime delicacy (36).

The latter is developed in the topic and briefly recapitulated in the conclusion, thus establishing the beginning-end link (see section 2). The text mentions several types of sweets (“candy”, “*éclair*”, “praline”) to imply the richness and diversity of Polish AH breeding, and their quality is stressed as well (“most exquisite praline”, “most sublime delicacy”, “*creme de la creme*”). *Ekina* is presented as a refined cake in terms of her top position in the breeding program (“icing”, “*creme de la creme*”), her mother's name (*Eklera* – “*éclair*”) and even her direct physical resemblance to pastry (“caramel coat color”). Such a description is intended to stimulate the addressee's sense of taste, involving it in the conceptualization process and linking the image of the horse with a common human desire (see also section 3). Moreover, an image of satisfying an innocent, yet usually strong craving (the one for a cake) diverts the attention from the serious financial context of the auction and possible hesitations about spending a high sum on the horse in question.

5. Conclusions

The purpose of the paper was to examine a consciously selected piece of specialized discourse in order to confirm the assumed presence of the pragmatic aspect and describe the latter in greater detail. The analysis can be said to have achieved its goal: it has proved that those equestrian texts successfully combine specialized language and the extralinguistic subject field knowledge with general-language stylistic devices. As was mentioned at the beginning, such combination was required to reach the intended addressees, who were subject field experts carefully spending their money. The diversified pragmatic tools – explicit and implicit persuasion, personification, reference to names and coat colors as well as metaphor – enclosed in a well-thought out text structure create a powerful image of a perfect AH against the background of reputed Polish AH breeding. They certainly do not constitute the sole basis for the breeders to make their serious purchase decisions: the main factor serving that purpose is the visit in the stables, during which potential buyers can watch the horses closely before the auction as well as talk to the stable staff and fellow equestrian experts (Heribert Picht, conference conversations, Vienna 2015). However, since the sale catalog is issued in the spring, i.e. several months before the auction, it provides the

interested breeders with final, official information about which horses are going to be available as well as offers a starting point for an in-depth search for the data concerning the animals they would potentially like to buy. Thus, the catalog is a tool for making an important initial decision about which horses the breeder is interested in as well as considering the possibilities of joining those animals in the breeding program. When the breeder finally enters the stables, it may be assumed that the catalog has already fulfilled its function of helping them make final informed decisions on site and increasing the probability of purchase. Therefore, the pragmatic aspect of specialized language no longer seems so untypical of that kind of discourse because, as does the terminology, it helps specialized language play its basic role: ensure smooth communication and performance of activities in various subject fields.

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7. Appendix: Sample catalog characterization of a mare

[The four structural components described in section 2 are separated with slashes]

CEFEIDA

One of the most beautiful and celebrated daughters of Janów Podlaski's premier broodmatron CELNA, / Cefeida is a mirror reflection of her dam, boasting the same vascular black skin, thin lustrous coat, radiant maternal presence, huge, dark magical eyes, wonderfully shaped long neck, emerging gracefully and cleanly from the chest, a capaciously deep, well-sprung barrel, broad muscular chest, powerful quarter and level, supple topline with correct, desert dry limbs that perform a gliding, dynamic trot. / Without a doubt CELNA's exquisite phenotype, which she so generously shares with her daughter, is borne out of the presence of two of Poland's greatest broodmatrons in her pedigree – ALGERIA and BANDOLA – whose influence on Polish Arabian breeding is immeasurable. ALGERIA's, "the mare that lay golden eggs", input includes such names known to every breeder as Dutch Champion ALEGRO, Spring Show/Best in Show & Polish National/Best in Show Champion ALBULA, Spring Show Champion ALGERINA, Polish National Reserve Champion ALMERIA, chief sires ALKAZAR & ALGIERCZYK, Polish National/Best in Show & Warsaw Summer Show/Best in Show Champion AMRA, Junior Spring Show Top Five

ALABAMA, Polish National Reserve Champion ASLAN & Autumn Show Champion ALWARO. While BANDOLA is mostly remembered for her sires of immense significance – BANDOS and BANAT. True to her heritage Celna has been a prolific producer of typically beautiful and capably athletic foals such as Arabian Produce & Kabaret St. winner CALDERON, Junior Spring Show class winner CEFEDA, Autumn Show Champion CENOZA and the delightful Cefeida, whose phenotype is further influenced by her sire METROPOLIS NA, twice US Top Ten Stallion and Scottsdale Arabian Reserve Champion English Pleasure Horse – a stellar example of beauty and performance in one package and a modern day descendant of the immensely important sire line of Kuhailan Haifi through breed pillar BASK. METROPOLIS can also add to his list of sire achievements the colt BOREAS, freshly awarded with the title of Junior Spring Show Reserve Champion at Białka. / Symbolizing all that is valued in the Polish breeding program, Cefeida is an excellent choice for any breeding program focused on type, quality and refined elegance.

(Krawczyk et al. 2008: 28).

Metadiscourse in Croatian and English tourist discourse: A pilot study

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Abstract. This pilot study aims to apply the model of metadiscourse elements (Hyland & Tse 2004) to tourist discourse and to validate it on a corpus of Croatian and English brochures, as well as English translations of Croatian brochures to investigate the differences between the two languages and to determine how these differences between the two languages are manifested in translations. Hyland & Tse's (2004) model of metadiscourse in academic setting was adapted to tourist discourse and tested on a corpus of tourist brochures. Three English and three Croatian brochures, together with their translations into English were analysed manually. The brochures referred to three different locations in Croatia and the UK. Next, the model was tested on a corpus consisting of these tourist brochures expanded by other tourist brochures and websites related to same locations in Croatia and the UK with the help of Sketch Engine. The results show that the number of occurrences of the selected metadiscourse instances in English originals is larger than in Croatian originals and English translations, as well as that English translations of Croatian brochures follow Croatian metadiscoursal patterns.

Keywords: Metadiscourse, tourist discourse, persuasiveness, tourist brochures, corpus study, discourse study, rhetorical strategy

1. Introduction

Persuasion, an important element of the communicative purpose of tourist texts, is achieved differently not only in various genres, but also in different languages. Bruthiaux (2000) argues that the language of persuasion can take many forms and is often influenced “by the complex social relations anticipated by the participants” (Bruthiaux 2000: 309). Authors use various rhetorical strategies to achieve persuasion. Rhetorical strategies include all choices authors make to persuade readers in their claims and ideas. Metadiscourse is a rhetorical strategy that represents all items that are used by writers to guide and direct readers through the text, i.e. influence the reader and thus have an important role in attaining persuasion in a text: “metadiscourse focuses our attention on the ways writers project themselves into their discourse to signal their attitude towards both the content and the audience of the text” (Hyland & Tse 2004). Hyland argues that this pragmatic feature, rather than a subjective question of style is “critical to the overall purpose of language use, rather than merely an adjunct to it” (Hyland 1998: 453), without it authors would not gain acceptance for their writing and readers could not contextualise a text. Likewise, the writer's ability to write a successful piece of writing depends on his ability to construct a reader-friendly, cohesive and coherent text. Metadiscourse as a contribution to rhetorical patterns is essential in this process. It differs across languages (Mauranen 1993a) and it is an important element of argumentative and persuasive writing (Hyland 1999).

2. Metadiscourse

2.1. Defining metadiscourse

Taking into consideration the rhetorical perspective seeing metadiscourse as a rhetorical strategy with the main function of having a persuasive effect on the reader (Dafouz Milne 2003), metadiscourse is here defined as a rhetorical strategy used by the writer (in this case: by the original author and the translator) to persuade the reader. The importance of metadiscourse has been proven in newspaper discourse (Dafouz Milne 2008), academic discourse (Hyland 1998, Hyland & Tse 2004) and the discourse of economics (Mauranen 1993a). Furthermore, it has been proven that it is an essential feature of native speaker student writing (Cheng & Steffensen 1996), which authors cannot vary at will, but it is related to cultural and professional norms and expectations and dependent on rhetorical context (Hyland 1998). Although similar rhetorical means (metadiscourse) are available to authors in different cultures, their frequencies and uses are different: “the significance of metadiscourse lies in its role in explicating a context for interpretation, and suggesting one way in which acts of communication define and maintain social groups” (Hyland & Tse 2004: 175). Hyland also suggests that metadiscourse is constrained by disciplinary communities within which it appear and reflects the “connection between discourse practices and social organisation of disciplinary communities” (Hyland 1998: 452). Fuertes-Olivera et al. (2001) analysed metadiscourse with the persuasive function in advertising English according to Hyland’s taxonomy of metadiscourse (1998) and argued that the fact that only certain metadiscourse categories are used reinforces “the idea that genre constrains rhetorical choices, since the rhetorical means available to a writer are limited by the value and belief systems prevailing in his or her community” (Fuertes-Olivera et al. 2001: 1302). Dafouz Milne (2003) emphasizes that the choice of metadiscourse is influenced by two variables: culture and genre. Hyland’s (1999) analysis of coursebooks and research articles also showed that there are greater differences in metadiscourse between genres than disciplines. In her analysis of newspaper discourse, Dafouz Milne (2003) did not confirm the notion of Spanish as a writer-oriented language (at least in newspaper discourse), but she discovered significant differences between the two cultures, i.e. English and Spanish, especially in the use of textual metadiscourse due to different cultural preferences in constructing arguments. For example, Spanish texts used significantly more additive markers to link ideas, while the British-English ones preferred adversative markers. This could be explained by the fact that Spanish writers prefer to use longer sentences (with adversative markers) as opposed to the British-English writers who prefer shorter sentences separated by full stops. At the same time, there is certain genre uniformity in the two languages, especially in the use of interpersonal markers, revealing that metadiscourse categories play a significant role in genre characterisation.

This study focuses on Croatian and English, two different cultures with different rhetorical traditions. Previous research has shown that there are significant differences between the rhetorical strategies used in English and in Slavic languages due to different traditions: Čmejková (2007) argues that Czech and Slovak linguistics texts share numerous common features as a result of their mutual contact through history and the affiliation with the Central European intellectual style, as opposed to the Anglo-Saxon texts. Duszak (1994, 1997) argues that the Polish scientific style follows the Teutonic tradition, which is in sharp contrast with the Anglo-Saxon tradition. Studies by Pisanski Peterlin (2005, 2008, 2013) and Limon (2004, 2005, 2008) have revealed that there are differences between Slovene and English related to writer-responsibility - Limon (2005) describes English as a language that is ‘writer responsible’ and ‘addressee oriented’, i.e. with low information load, whereas Slovene is a ‘reader responsible’ or an ‘author oriented’ language with a high information load.

Differences and different attitudes towards metadiscourse may be also rooted in the educational system: American writing pedagogues have opposing attitudes towards it, whereas the Finnish

school system considers it superfluous (Mauranen 1993a). Mauranen's research (1993a) has shown that Finnish is a more 'reader responsible' language, as opposed to the English 'writer responsible' language; the main ideas and theses are left to the reader for interpretation. It also showed that Anglo-American writers not only use more metadiscourse, but also clustered different types of metadiscourse, while this was not common for Finnish writers. Furthermore, Finnish L2 economics texts in English lacked the authorial presence as opposed to the Anglo-American papers (Mauranen 1993a) which gave the human subject a more important role. Both strategies are persuasive in their own way, depending on the reader's expectations. However, the use of a strategy that differs from the reader's expectations can have wide-ranging consequences: "If a reader's learned expectations are strongly in favour of one of the strategies, he or she may experience the other as less appealing, and less convincing." (Mauranen 1993a: 17). For example, the implicit rhetoric could be interpreted as arrogant and the inexplicit writer as superior to the reader. It is probably that the typical strategy in a certain culture will be interpreted as positive and polite and the untypical as negative and impolite (Mauranen 1993a, Mauranen 1993b). Except politeness, these different strategies reflect different presumptions on shared knowledge (Mauranen 1993a). As Hyland (1999) points out, not only an awareness of audience (i.e. readers) as well as social purpose and effectiveness of a text are important, but also the appropriate use of metadiscourse is essential for production of successful texts.

The influence of a certain discourse community on rhetorical practice can be seen as extensive: a writer has to be aware of his audience in order to conform to and manipulate rhetorical features of the discourse community: "Features of discourse are always relative to a particular audience and social purpose and the effectiveness of writers' attempts to communicate depends on their success in analysing and accommodating the needs of readers." (Hyland 1999: 5). Writers must anticipate readers' knowledge, interpretation problems and reactions to the text. Just as academic writers produce texts informing and persuading their readers of the truth in their texts, trying to be accepted and acknowledged, writers of tourist texts try to inform and persuade the reader that a certain site or city is worth visiting. In academic prose, "metadiscourse is one indication of a writer's response to the potential negatability of his/her claims; an intervention to engage the reader and anticipate possible objections or difficulties of interpretation." (Hyland 1998: 440). Authors have to make numerous assumptions about their readers, such as about their knowledge and expectations.

The first researchers dealing with metadiscourse focused on the role that linguistic categories play in the construction of discourse and on interpersonal values transmitted in a discourse. Vande Kopple (1985) stated we write on two levels, i.e. on the level of propositional context we give information and on the level of metadiscourse we "help our readers organize, classify, interpret, evaluate, and react to such material. Metadiscourse, therefore, is discourse about discourse or communication about communication." (Vande Kopple 1985: 83). Subsequent definitions gradually moved to the rhetorical level. Beauvais (1989) gives the following definition of metadiscourse from the point of view of speech act theory: "illocutionary force indicators that identify expositive illocutionary acts" (Beauvais 1989: 15), emphasizing that its role is to show the writer's communicative intent in the presentation of the proposition, that is primary discourse. Dafouz Milne (2003) notes the double function of metadiscourse: to guide the reader through the text and to build a relationship with the reader (the textual and interpersonal functions). Metadiscourse as a rhetorical strategy has the primary function of persuading the reader: "In order to persuade, writers have to present propositional material in a form that the potential audience will find most convincing. Moreover, they have to create a credible textual persona and develop an appropriate attitude both towards their readers and their arguments" (Dafouz Milne 2003: 32). However, metadiscourse acquires its significance only in relation to other parts of the text, i.e. context. Hyland & Tse's (2004) model of metadiscourse emphasizes this distinction between internal and external relations and differentiates between interactive and interactional metadiscourse.

2.2. Metadiscourse in translation

How cross-cultural rhetorical differences in achieving persuasion are addressed in translation is also one of open questions. Williams' study (2009) showed that choices translators make significantly differ from those that native Spanish authors make. He suggests contextual analysis based on large corpora as a tool that can help translators make appropriate choices in translations. Interference seems to be present both at the lexico-grammar level and at the level of discourse, however, it is much easier to detect it on the latter level since it is less obvious (Pisanski Peterlin 2013).

If we compare languages in terms of reader versus writer responsibility and categorise English as a writer-responsible language and Slovene as a less writer-responsible language (Pisanski Peterlin 2005) and more reader-responsible, and apply it to the Croatian context, significant differences at the level of discourse are expected between the two languages. Furthermore, this will probably cause more difficulties for translators from one into the other language: If the translator is unaware or only vaguely aware of the discourse function of a selected rhetorical element, such as a metadiscourse item, he or she may opt for a translation solution that entails a target text expression formally closely resembling the source text expression. (Pisanski Peterlin 2013: 129).

3. A model of metadiscourse

Different taxonomies of metadiscourse markers have been proposed (including Hyland 1998 and Dafouz Milne 2003), mostly differentiating between textual and interpersonal metadiscourse. Hyland (1998) adapted the typology of metadiscourse to the academic context and made a distinction between textual and interpersonal metadiscourse. Textual metadiscourse helps the writer form a coherent and convincing text by organising individual propositions in the text and in relation to other texts. It includes all markers referring to the organisation of text. Interpersonal metadiscourse is directed both to the propositional information and the readers and helps build a writer-reader relationship. Dafouz Milne (2003) elaborated further the macro-categories into subcategories, where the function, i.e. the communicative purpose, defines macro-categories and the grammatical criterion (e.g. modal verbs, prepositional phrases) subcategories. According to Dafouz Milne (2003), the main difference between the two types of metadiscourse is that textual metadiscourse is less explicit in persuasion than interpersonal metadiscourse. Also, the category of textual metadiscourse is limited in range and sometimes restricted by linguistic constraints existing in a language. On the other hand, the range of interpersonal metadiscourse is wider, which broadens the writer's choice. Thus, the perfect combination of the two is the essence of a persuasive text. However, it is important to note that different types of metadiscourse do not always perform just one of the two mentioned functions due to the need to fulfil several goals simultaneously. Hyland's (1998) findings confirmed that metadiscourse is extensively used across the academic context, although to a different degree and in a different way in different academic fields, confirming the fact that "metadiscourse is a universal feature of professional rhetorical writing in English." (Hyland 1998: 447). There are certain categories that are abundantly used in different fields: Hedges are used in all academic fields to a great extent as a central means of academic argumentation in presenting claims. Dafouz Milne (2003) came to the same finding by analysing the Spanish and English newspaper discourse: although persuasive metadiscourse markers are present in both English and Spanish, they differ in distribution and composition, possibly because of the way "in which different communities view and construct their argumentation" and hedges were the most frequently used interpersonal metadiscourse in both corpora, more specifically epistemic verbs that are used to soften a certain statement and create an idea of solidarity with the reader. Hyland & Tse (2004), however, revised the model and claim that all metadiscourse is essentially interpersonal and differentiate between interactive and interactional metadiscourse. Their typology is based on three key principles, i.e. that metadiscourse is different from the propositional content of discourse, that metadiscourse embodies writer-reader interactions and

that metadiscourse distinguishes external and internal relations in the text (or relations outside the text and those among different parts of the text). Interactive resources organize discourse in order to anticipate readers' knowledge. Interactional resources refer try to involve readers in the argument, they focus on participants in the interaction (see table 1).

Metadiscourse marker can range from a word to an entire sentence, few sentences or a paragraph. Dafouz Milne (2003) includes also some punctuation devices and typographical markers (e.g. colons) since these elements signal clarification, explanation or exemplification. Metadiscourse is an open category to which new instances can be added depending on the situation.

4. Corpus and method

Since the topic of the text may influence the type and occurrence of metadiscourse (Hyland 1999), three brochures about three different destinations were chosen: the coast, the country and the city. Croatian brochures included the brochure about the town of Rovinj as an example of a coastal tourism, the capital city of Zagreb and the rural area of Baranja, as well as their translations. They were all published by tourist boards: the Rovinj and Zagreb tourist guides were published by tourist boards of the towns of Rovinj and Zagreb, respectively. *Zagreb – The capital of Croatia* brochure provides the names of the translator and the proofreader on the English version, whereas the *Rovinj tourist guide* does not. The *Magnificent Baranja* brochure was published by the Croatian National Tourist Board, but there are no credits on the translator on the English version of the brochure. The British brochures included a brochure about the villages Woolacombe and Morteohoe as a seaside holiday destination, the capital city of London and the valleys of the South Wales. The Woolacombe and Morteohoe brochure was published by the Woolacombe and Morteohoe Tourism Association, The Valleys of South Wales was produced by Valleys Consortium consisting of six county borough councils. The London Planner, London & Partners' official visitor guide to England's capital, is issued monthly by London & Partners (the official promotional company for London), and is a member of VisitBritain, a non-departmental public body funded by the Department for Culture, Media & Sport. All brochures were downloaded from the website, but were in the .pdf format and intended for the print. The length of the brochures ranges from 40 to 112 pages. The number of words in total were as follows:

	Words
Croatian originals	42,253
English originals	51,347
English translations	46,880

Table 1: Number of words in the subcorpora

The outline of the brochures itself is quite different. English brochures tend to follow an outline of a magazine, especially the London Planner, which is issued monthly and is written in the form of a magazine. They concentrate more on suggestions for the reader and refer to historical events only sporadically, within the suggested activities, whereas Croatian brochures emphasize more the historical viewpoint and give quite a detailed historical overview. If English brochures can be compared to a magazine, Croatian should be compared to a textbook trying to instruct the reader.

The brochures were manually analysed and the results obtained from different brochures compared. Metadiscourse items were categorised by adapting Hyland's and Tse's model (2004) to the context of tourist discourse. The examples were categorised by taking multifunctionality into consideration, due to the fact that one language utterance can have several functions, i.e. metadiscourse is sometimes used with the purpose to achieve multiple goals at the same time.

The primary function of a certain instance was analysed. Therefore, the texts had to be manually analysed. In order to test the list of potential metadiscourse for tourist discourse in English and Croatian, as developed from Hyland's and Tse's model (2004) of metadiscourse in the academic context, additional tourist brochures and websites were collected by using the WebBootCaT tool and uploaded to Sketch Engine. The added tourist brochures and websites referred to the same locations as the above mentioned printed brochures i.e. Rovinj, Zagreb and Baranja in Croatia and London, The Valleys of South Wales and Woolacombe and Morteheo in the UK. The discourse analysis was thus followed by the quantitative corpus analysis with the help of Sketch Engine. The expanded subcorpora were of the following size:

	Words
Croatian originals	299,379
English originals	315,880
English translations	333,286

Table 2: Number of words in the expanded subcorpora

Based on the results of manual discourse analysis, one metadiscourse element was selected per category in order to quantitatively compare corpora. The two English subcorpora (English brochures and brochures translated into English from Croatian) were PoS-tagged and lemmatised, whereas the Croatsians subcorpus was neither lemmatised nor PoS-tagged. For that reason, combined simple queries of the Croatian corpus were performed and the results were added up. On the other hand, English subcorpora were queried for lemmata.

5. Research questions

The discourse analysis attempted to address the following research questions:

1. What sort of differences occur between the Croatian and the English tourist discourse in terms of metadiscourse frequency and distribution?
2. Do the Croatian-English translations of tourist brochures follow the Croatian pattern of metadiscourse use?

The initial assumption was that metadiscourse markers will be used differently in Croatian and English, as well as in the translation from Croatian into English. They are expected to be used in both languages, but more abundantly in English: metadiscourse has proven to be an essential feature of various discourses (Mauranen 1993a, Cheng & Steffensen, 1996, Hyland 1998, Hyland & Tse 2004, Dafouz-Milne 2008), but research has shown that the Slavic languages (to which Croatian also belongs) follow slightly different rhetorical strategies than the English language (Čmejrková 2007, Duszak 1994, Duszak 1997, Pisanski Peterlin 2005, Pisanski Peterlin 2008, Limon 2004 and Limon 2005). English authors, according to the analysis of slogans and headlines in advertising English performed by Fuertes-Olivera et al. (2001), use person markers, hedges and emphatics to build relationship with the reader and endophoric markers and evidentials for establishing intertextuality. As for Slavic languages, tourist discourse has been scarcely researched, but in terms of academic discourse, researchers suggest that Czech, Polish, Russian and Ukrainian in comparison to English rely less frequently on metalanguage (Petrić 2005). A similar pattern is expected in tourist discourse.

However, although metadiscourse used and its distribution could be different for the two languages, English translations are expected to follow the Croatian pattern: studies of English and Slovene research articles and English translations of Slovene originals of research articles showed that English translations correspond to the Slovene patterns rather than to the English one (Pisanski Peterlin 2008). Discourse analysis showed that English brochures abound in metadiscourse

elements, whereas the Croatian brochures and their translations use metadiscourse elements to a lesser degree: English brochures use metadiscourse in every sentence, quite often more metadiscourse instances occur in one sentence. This is not the case with Croatian brochures, not every sentence contains metadiscourse, usually there are a few instances of metadiscourse per paragraph.

A difference can be noticed already in the subtitles: while the original English brochures use subtitles such as *A cut above* or *Get out – have fun!* (*London Planner*), Croatian brochures prefer the more formal *A must see* (even more formal than the original *Obavezno zastati...*) as in the *Zagreb – The capital of Croatia* brochure or *Attractions and activities* (*Atrakcije i aktivnosti*) as in the *Rovinj tourist guide*. In English brochures, it is not rare to have a number of metadiscourse markers in one sentence: *For **the more** adventurous, **how about** mountain biking – **we have superb** mountain bike parks with easy and challenging trails or **you can** follow the roads over the hilltops and **really** get your lungs burning!* (*The Valleys of South Wales*).

The English translations of Croatian brochures seem much more impersonal and in any case, use much less metadiscourse, e.g.: *Visitors can enjoy folk customs and culinary specialties, see displays of old crafts drive carts to wine destinations or **even** visit them by boat on the **beautiful** Dunavac.* (*The Magnificent Baranja*).

The analysis led to a further development of Hyland's & Tse's model (2004), including some of the subcategories proposed by Dafouz Milne (2008), as well as new subcategories and one new category. Interactive resources were not of the essence in the brochures. They were not used in greater measure since, as compared to the academic context, the sentences and paragraphs are shorter and less formal. Also, they performed a weaker persuasive function than the interactional resources, where the emphasis is on the external context and the relationship between the writer and the reader.

The presence and use of interactive resources differs from category to category. The additive, adversative and consecutive subcategories of transitions were abundantly used in both languages and in the translation (at least 200 instances per language). The only subcategory as proposed by Dafouz Milne (2008) that was not to be found in the corpus is the conclusive subcategory of transitions, which is not strange due to the fact that authors of the brochures usually let the readers make their own conclusions. However, since they do not perform an explicit persuasive function, but contrast and add ideas and thus help the reader form images of the destination, transitions were omitted from the model. Frame markers were used neither in English, nor Croatian brochures and were thus also omitted from the model. The same is valid for endophoric markers, there was just one instance of it in the English corpus, which is negligible. Evidential were also barely used in both corpora, but reference to the source of information, mostly a certain authority, bears here a persuasive function and gives weight to the statement. The last category, code glosses, bears the most persuasive function of all interactive resources since it helps the reader grasp the ideas in the text and make it more familiar to him. Again, one subcategory was not present, i.e. reformulators were not used at all in any of the corpora. However, other subcategories occurred quite often in all corpora.

Category	Function	Subcategory	Examples from English brochures	Examples from Croatian brochures
Interactive resources	Help to guide reader through the text			
Evidentials	refer to source of information from other texts	Quotation marks	An “artful” trail...	Hrvatski baranjski “trokut” omeđen je...
		Reporting verbs	...another diving instructor says beginners shouldn’t tvrde Baranjski...
		Prepositional phrases	According to one leading critic...	... prema predaji...
Code glosses	help readers grasp functions of ideational material	Parentheses	“hwy1” (fun the Welsh way)	...u Mađarskoj (12 km od graničnog prijelaza Duboševica)...
		Punctuation device	...rollercoaster ride: it’s fast, swoopingvidio s lađe: razrušenu utvrdu...
		Exemplifiers	For example , Chung Hae-Cho...	...ponuđen, primjerice , sladoled ili torta od tartufa...

Table 3: Model of interactive metadiscourse for tourist discourse

On the other hand, interactional resources occur frequently in brochures. Various elements falling under the categories made it necessary to differentiate further between several subcategories within a category, especially as boosters and engagement markers are concerned. The two are the most commonly used elements. Various elements are used to perform the function: from direct address to the reader to imperatives, suggestions and rhetorical questions. Rhetorical questions are often used in the English language, as opposed to Croatian. They give force to the writer’s argument and establish a personal bond with the reader by addressing him in a certain way, in this way persuading the reader.

Category	Function	Subcategory	Examples from English brochures	Examples from Croatian brochures
Interactional resources	involve the reader in the argument			
Hedges	withhold writer’s full commitment to proposition	Epistemic modal verbs	You might associate The Valleys with industry...	... može se zaključiti da...
		Probability adverbs	... maybe stopping at...	... možda najljepši zagrebački put...
		Epistemic expressions	I am more likely to be...	... vjerojatno na mjestu...
Boosters	emphasize force or writer’s certainty in proposition	Adverbs of frequency	... often a surprise	... uvijek podsjeća na vlastito djetinjstvo...
		Adverbs of quantity	...Downhill has loads of berms, switch backs...	... čeka mного zanimljivosti...
		<i>Qualifying adjectives</i>	... magnificent Tudor palace and impressive maze...	... prekrasan otok Sv. Katarina...
		Superlatives	...the very best facilities are found...	Najbolji fišpaprkaš na svijetu...
		Punctuation device	Sunny day aplenty!	...posjetite ih, ugođaj nije svakidašnji!
		Boosting expressions	...visitors are sure to enjoy...	... sigurno će vas privući...

Category	Function	Subcategory	Examples from English brochures	Examples from Croatian brochures
Interactional resources	involve the reader in the argument			
Attitude markers	express writer's attitude to proposition	Deontic verbs	Family groups will love...	...grad po mjeri čovjeka mora imati...
		Attitudinal adverbs	Of course , if you don't want to join...	Naravno , sastavni je dio ritual...
		Attitudinal adjectives	... extraordinary events and delicious food...	... izvanredno očuvana...
		Cognitive verbs	Many people think that...	...pa je smatraju jednim od najljepših...
Engagement markers	explicitly refer to or build relationship with reader	Rhetorical questions	...but when was the last time you visited?	Poželite li ponekad odjenuti frak ili krinolinu...?
		Imperative	Try the Red Leicester cheesecakes...	... posjetite ih, ugođaj nije svakidašnji!
		Suggestive expressions	How about trying the highest course...	Nju treba vidjeti...
		Direct address to reader	Did you know...	...svih vasse poželiš...
		Inclusive expressions	We all love a good song!	Mi prolazimo, ali ulice...
<i>Imagery</i>	build images in the reader's mind	<i>Proverbial phrases</i>	It's never too wet for a great day out!	... još jedna karika u nizu ...
		<i>Slang or regional language</i>	" hwy! " (fun the Welsh way)	U pokladnu nedjelju buše se kreću ulicama...
		<i>Metaphors</i>	...gave way to "Black Gold"...	...povezanih u Lenucijevu " zelenu potkovu ", nazvanu tako po...
		<i>References</i>	The Green, Green Grass of Home!	...može nahraniti i hrani... Matko Peić
Self-mentions	explicit reference to author(s)		We have three great animal attractions...	Baranja me u svakome trenutku...

Table 4: Model of interactional metadiscourse for tourist discourse

The category of imagery, written in italics, was added in this model. The added category refers to imagery that additionally involve the reader into the argument by helping him visualize the propositional content, either by using some of the local vocabulary, metaphors (*black gold*), references to familiar items (such as the song *The Green, Green Grass of Home!*).

Some researchers (Dafouz Milne 2003) have not included qualifying adjectives in their models of metadiscourse, e.g. *important* and *terrible*, as well as boosting expressions such as *very* and *too*, classifying it into the propositional content of a text. However, in this case I believe they perform their primary function, persuasion, as part of metadiscourse. As Hyland (2005) points out, both propositional and metadiscoursal elements appear together in a text, not only in same sentences, but sometimes a certain part of discourse can have both functions. In this case, writer's conscious choice of using a certain adjective or a boosting expression does not only alter propositional content, but also has a metadiscoursal i.e. persuasive effect on the reader.

6. Corpus analysis and results

The corpora were queried for selected metadiscourse elements for each category, based on the previous manual analysis. One element was chosen per category. Altogether, the following results were obtained for interactive resources of metadiscourse:

Category	Subcategory	English originals		Croatian originals		English translations	
Evidentials	Reporting verbs	<i>say</i>	6,65	<i>kazati</i>	2,91	<i>say</i>	2,61
Code glosses	Exemplifiers	<i>for example</i>	0,22	<i>primjerice</i>	1,37	<i>for example</i>	0,57
TOTAL			6,87		4,28		3,18

Table 5: Occurrence of selected interactive resources per 10.000 words

Since metadiscourse instances can include also sentences, not only single words, this is not a precise account of the proportion of text formed by metadiscourse, but an approximate occurrence of metadiscourse instances. Translated brochures tend to follow the patterns of the original, i.e. Croatian language. Overall, interactive metadiscourse is more used in English than in Croatian and in translations into English. Moreover, interactive resources are used even less in English translations than in the other two subcorpora.

The results of the analysis of interactional resources also confirmed that there are certain differences between English and Croatian (see table 6). Data for the category of imagery is not given due to the impossibility to perform a query of such a large and vague category.

Category	Subcategory	English originals		Croatian originals		English translations	
Hedges	Epistemic modal verbs	<i>might</i>	1,30	<i>moći</i>	0,94	<i>might</i>	0,45
	Probability adverbs	<i>maybe</i>	0,28	<i>možda</i>	1,67	<i>maybe</i>	0,21
	Epistemic expressions	<i>probably</i>	0,85	<i>vjerojatno</i>	1,37	<i>probably</i>	0,75
Boosters	Adverbs of frequency	<i>always</i>	3,04	<i>uvijek</i>	3,84	<i>always</i>	3,00
	Adverbs of quantity	<i>lots</i>	3,04	<i>puno</i>	0,47	<i>lots</i>	0,27
	Qualifying adjectives	<i>magnificent</i>	2,63	<i>prekrasan</i>	0,70	<i>magnificent</i>	2,28
	Superlatives	<i>best</i>	11,52	<i>najbolji</i>	4,68	<i>best</i>	7,50
	Boosting expressions	<i>sure</i>	1,71	<i>sigurno</i>	1,34	<i>sure</i>	0,36
Attitude markers	Deontic verbs	<i>must</i>	2,09	<i>mora</i>	13,03	<i>must</i>	2,22
	Attitudinal adverbs	<i>Of course</i>	2,75	<i>naravno</i>	0,43	<i>Of course</i>	0,72
	Attitudinal adjectives	<i>extraordinary</i>	0,60	<i>izvanredno</i>	0,20	<i>extraordinary</i>	0,60
	Cognitive verbs	<i>think</i>	3,04	<i>misliti</i>	0,50	<i>think</i>	0,39
Engagement markers	Rhetorical questions	?	11,40	?	5,85	?	1,98
	Imperative	<i>visit</i>	10,57	<i>posjetiti</i>	0,80	<i>visit</i>	5,16
	Suggestive expressions	<i>How about</i>	0,09	<i>zašto ne</i>	0,13	<i>How about</i>	0,00
	Direct address to reader	<i>you</i>	66,83	<i>vi</i>	11,12	<i>you</i>	21,06
	Inclusive expressions	<i>we</i>	15,73	<i>mi</i>	6,45	<i>we</i>	7,14
Self-mentions		<i>I</i>	17,98	<i>ja</i>	2,24	<i>I</i>	5,31
TOTAL			155,47		55,75		59,41

Table 6: Occurrence of selected interactional resources per 10.000 words

The occurrence differs across different categories. On one hand, Croatian brochures use more hedges than the English ones. On the other hand, boosters, attitude markers, engagement markers and self-mentions are more common in English brochures. The difference is especially evident in the subcategory of direct address to reader and the category of self-mentions. This shows that Croatian tourist texts are more indirect and do not explicitly refer to the reader: English tourist brochures are marked by a rather personal approach, with numerous self-mentions and direct addresses to the readers. Croatian brochures, however, use a much more impersonal and formal style, with less reference to both the author and the reader. Sentences such as *To je mjesto koje pruža nebrojene mogućnosti...* (*This is place providing endless options...*) are very common. English recommendations are much more direct: *Visit us and you'll see why people come back year after year*. The evident discrepancy between the two languages in terms of self-mentions deserves additional analysis, since it seems it could have a deeper effect on the reception of the brochures by the readers.

The frequency of metadiscourse in English translations is mostly somewhere between values for English and Croatian, which could mean that translators try to follow English rhetorical patterns, but still remain faithful to rhetorical patterns of the Croatian originals (inclusive expressions, adverbs of quantity or cognitive verbs). In certain cases, translations follow rhetorical patterns for English (as the case is with probability adverbs, epistemic expressions, adverbs of frequency or qualifying adjectives). The occurrence of metadiscourse in translations sometimes even slightly outnumbers the English originals (deontic verbs).

Since metadiscourse can range from a punctuation mark to a whole sentence or paragraph, this can sometimes be challenging for the corpus analysis. Quotations or exclamation marks occur quite often in texts, thus a lot of false results are obtained when querying. Due to that, results obtained by Sketch Engine have to be additionally manually analysed. Also, since metadiscourse instances can include also sentences, it is impossible to get a precise account of the proportion of text formed by metadiscourse, only an approximate occurrence.

Several categories of metadiscourse also seem challenging in terms of automatic analysis of metadiscourse in tourist discourse. The category of imagery is one of them: with a vast array of metaphors and references, without knowing precisely which one of them to look for, the efforts will be in vain. Imperatives, a subcategory of engagement markers, pose a different problem in English: since infinitives and imperatives have the same form, manual analysis is needed again.

7. Conclusion

Previous research pointed out the importance of metadiscourse as a strategy of persuasion (Hyland 1999, Hyland & Tse 2004, Dafouz Milne 2008). As a genre relying much on persuasiveness, tourist brochures use metadiscourse extensively to persuade readers and attract tourists. Hyland's & Tse's typology (2004) thus served as a starting point in the analysis of metadiscourse in English and Croatian brochures and their English translations. The analysis has shown that metadiscourse plays an important role in achieving persuasion, although the usage of metadiscourse differs between the two languages.

Both discourse and corpus analysis confirmed that Croatian and English brochures follow different rhetorical patterns and use metadiscourse in different ranges. English brochures are rich with metadiscourse elements, whereas the Croatian ones have a more limited range of metadiscourse, which is especially the case with interactional metadiscourse where metadiscourse is used almost three times as much in English as compared to Croatian. Also, English translations seem to follow the Croatian pattern (although there are exceptions). It is also important to note that interactional resources are significantly more than the interactive ones in both languages and carry a more prominent role in the achievement of persuasion. It only remains to investigate into the reception of such translations of tourist brochures and the effect of the used rhetorical strategies onto the readers, i.e. tourists.

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How changes in linguistic policies affect Linguistic Landscapes: An example from a multilingual university program in Brittany

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Abstract. As a result of globalization, universities offer programs including the learning of various languages. In Europe, the Barcelona Objective has set the goal for Europeans to become multilingual. These two facts have helped the development of some languages, as for example English. Trying to protect the national language, in 1994 France issued a law limiting the use of languages other than French in the public sphere, including schools, which had a direct impact on Linguistic Landscapes. However, this fact was nuanced by another law issued in 2013.

The present study is set at one university in the bilingual region of Brittany. The purpose was to analyse the linguistic landscape (LL) of the department of Applied Foreign Languages. The students in this program have to learn two languages, being English compulsory. Comparing the present LLS with a previous study in 2014, I analyse how changes in linguistic policies affect LLS as it reflects linguistic and identity conflicts. The results show that the space is divided into top-down and bottom-up. In this scenario, changes in LLS occur specially at the institutional level.

Keywords. Globalization, Language for Special Purposes, Linguistic Landscape, linguistic policies

1. Introduction

Globalization has changed the linguistic market (Bourdieu 1993, Heller 2003, Heller 2005) altering as well our linguistic landscapes. For that reason, it is not unusual to find inscriptions in all kinds of languages in streets all around the globe. Different linguistic landscapes show not only the statuses of the different languages (Cenoz and Gorter 2006) but also the ethnolinguistic vitality of our cities (Ben-Rafael et al. 2006).

The majority of Linguistic Landscape (LL hereafter) works are exterior studies which focus is the analysis of public streets. However, the study of interior LL seems to have attracted less attention and consequently is a neglected area where more research needs to be done (Hanauer 2009, 2010; Ramila Díaz 2015). My study falls into this category, as it concerns the comparative analysis of two LL within the same Department of Applied Foreign Languages at one university in French Brittany, but with a two years' time lapse in which a law encouraging the use of other languages was issued.

My hypothesis is that interior landscapes will also reflect ethnolinguistic vitality and statuses of the different languages, and thus changes in linguistic policies. The research questions of the study are: (1) to what extent does the interior landscape at a university in a bilingual region reflect ethnolinguistic vitality? (2) To what extent does this interior landscape reflect different languages' statuses? (3) To what extent do interior landscape reflect changes in linguistic policies? To answer these questions, I have analysed twice, once in 2014 and another time in 2015, the LL of the Department of Applied Foreign Languages where several foreign languages are offered to students.

In this study, I will first present the definitions and categorizations of LL. Secondly, French language policies will be explained. Finally, I will offer the data and methodology as well as an adapted categorization and the comparison of the texts in this particular setting. The results indicate that although ethnolinguistic vitality exists, texts in French outnumber texts in other languages, principally those in Breton which subsist in marginal or resistance forms. Also, the results of the comparison of the two LL in 2014 and 2015 indicates that although English seems to be encouraged by law in 2014, at the macro level the presence of Breton is more visible in 2015.

2. Theoretical background

2.1. Categorisations of Linguistic Landscapes

The work by Landry and Bourhis (1997) is generally cited as the precursor of LL studies, even if previous LL studies can be found in the literature (see for example Calvet, 1990). From the 1990s studies on LL have greatly developed and today we find many attempts to categorize them. For example, Franco-Rodríguez (2007) divides the LL studies into two main categories: studies of LL and studies based on LL. In the first category, Franco-Rodríguez includes studies focusing on the relation between linguistic policy regulation and LL (Leclerc, 1989); and studies about the impact of LL, such the study by Hicks (2002) about the lack of clear and coherent linguistic policies regarding signage in Scottish Gaelic. The studies based on LL category cover three different interests. The first subcategory comprises those studies that analyse LL in relation to the linguistic communities that come into contact with it. This subcategory would take account of studies like the one conducted by Cenoz and Gorter (2006) in two different bilingual communities, in the Basque Country (Spain) and in Friesland (The Netherlands), or the studies by Ben-Rafael et al. (2006) in Israel. The second sub-group would include studies about globalization and LL, such as Calvet's (1990) analysis of the linguistic signs in Paris and in Dakar; or the study of Backhaus (2006) in Tokyo. The third sub-group concerns works focused on the analysis of the linguistic features of the LL, such as Backhaus' (2007) or Franco-Rodríguez's (2007) analysis of the street signs in Miami.

Muñoz Carrobles (2010) offers a different categorization, classifying LL by looking at the causes for its development. He lists four types of LL: (1) LL as a result of social bilingualism, as in Brussels or Barcelona where signs are written in the official languages of the cities; (2) LL as a result of immigration, where the focus of analysis is to find how some places have integrated the languages of migrants, as for example in particular streets in Madrid; (3) LL caused by cosmopolitanism or globalization, such as analysis concerning the presence and prestige of global languages (overall English); (4) touristic LL, where signs are written in languages that tourists are supposed to understand. Muñoz Carrobles (2010) warns us that these categories can overlap as they are not mutually exclusive.

2.2. Linguistic policies in France

Baker (2006) considers the French system as representative of monolingual, mainstream education countries, where bilingualism is almost never accomplished even if a second language is studied as a subject at school. Regarding linguistic policies, France is a monolingual country, as it is established in the second article of the French constitution of 4 October 1958: "the language of the Republic is French".

Actually, France is one of the few countries where the national and official language is protected by law; the Toubon law of 14 August 1994 relating to the use of the French language. This law is a powerful instrument because it mandates the use of French in many contexts, as, for example, in official government publications, in advertisements, in workplaces, in commercial contracts,

and in all government-financed schools, limiting the use of other languages. As a consequence, the language of instruction must be French in most parts of France, with the exception of some regions where indigenous or minority languages are allowed at school. At university level, these should be written in French, with very few exceptions (Costaouec 2013). However this panorama has started to change as a result of the Fioraso law of 22 July 2013, which allows the use of the English language at university level. This law was hotly debated in the media because it was considered as a menace to the French language.

On the other hand, the most important law regarding regional languages is the Haby law of 1975 (Article 12) as it states that “regional languages and cultures can be taught throughout compulsory education”. As a result, in bilingual regions, students can learn regional languages at school, as is shown in the following section.

2.3. Brittany and the Breton language

This study was conducted in French Brittany, located in the westernmost region of France, bordered by the English Channel to the north and the Atlantic Ocean to the west. Brittany is divided into four départements: le Finistère, les Côtes d’Armor, le Morbihan, and Ille-et-Vilaine. As a result of being a bilingual region, it is possible to have Breton as a language of instruction at school. Every bilingual school is financed by the government, regardless they are private or public. Thus, French language policies apply in all of them. In the academic year 2014-2015, 4971 students attended bilingual private schools and 7,000 students attended bilingual public schools.

In addition to bilingual schools, immersion schools or Breton Diwan schools, are also important. Diwan schools are public and Breton (Breizh) is the medium of instruction. The 42 Diwan schools in the territory follow the official curricula. In 2014-2015, 3,984 students from kindergarten to high school attended immersion schools.

Moreover, in the French education system, the study of two foreign languages is compulsory. The first foreign language is introduced from the age of 10 and the second one is introduced in high school. However, universities do not offer programs with Breton as the medium of instruction, although the study of Breton literature and culture is available.

3. Data

The data collected in this study comprises 172 pictures taken in the Department of Applied Foreign Languages at a university in Brittany in 2014 and 50 pictures taken in the same place in 2015. Data was collected via digital cameras and was stored in digital format.

The pictures were taken in the areas that students and teachers would typically encounter on a daily basis: the main entrance of the Department of LEA (Applied Foreign Languages) building; the department main area; the teacher’s lounge; in a teacher’s office; in seven classrooms and in five corridors. The photos were taken in April 2014 and in April 2015.

The study was conducted at the aforementioned Department of Applied Foreign Languages, where students in the programme study to become translators or international commercial agents. Seven languages are offered in the Department: English, German, Spanish, Chinese, Italian, Portuguese and Russian. However, it has to be noted that the study of English is compulsory for all students.

A number of difficulties were encountered in the process of collecting and analysing the data. The first difficulty was access to the texts, as students and teachers were constantly passing by. The second difficulty concerns the fact that LL is very dynamic and dependent on both context as well as time. Consequently, the analysis presented here would reflect the LL of April 2014 and that of April 2015. Finally, deciding the unit of analysis also posed some problems as in the

literature review, two main postures can be found. On the one hand, Cenoz and Gorter (2006) take the larger whole of each establishment in the streets analysed as a unit of analysis. However, Backhaus (2006: 55) takes “any piece of text within a spatially definable frame”. For this study, the system proposed by Backhaus (2006) is followed and every text in the pictures was taken as a unit. A total of 430 texts were analysed in the LL of 2014 and a total of 120 in the LL of 2015.

4. Methodology

As regards methodology, all items were first categorized according to the producer of the message. Then these same items were divided into practical functions. In order to understand my categorization, I offer an explanation in the following sections.

4.1. Perspectives in LL

One of the most important distinctions was made by Calvet (1990) who differentiates between *in vitro* or signs written by the authorities, as opposed to *in vivo* or signs written by citizens. The results of his study show how depending on who is marking the territory, the list and salience of languages would be different (see also Landry & Bourhis, 1997). In line with Calvet’s distinction, Ben-Rafael et al. (2006) in their study of three settings in Israel and East Jerusalem, distinguish between institutional or top-down signs and individual or bottom-up inscriptions, which lead to the “symbolic construction of the public space” (Ben-Rafael et al. 2006: 10). In addition, Backhaus (2006) proposes the use of the terms official versus nonofficial, and similarly Huebner (2006) distinguishes between governmental and non-governmental. In this study, I follow the dichotomy by Ben-Rafael et al. (2006) and texts are divided into top-down, when the origin was governmental, and bottom-up, when texts are written by individuals.

4.2. Functions of LL

As Torkington (2009) states, the discourses represented in every text are linked to the producer of the message. The most renowned distinction is the categorization made by Landry and Bourhis in 1997 where the functions of the texts are divided into informative and symbolic. Texts are informative when they signal the territorial or linguistic limits of a community. On the other hand, the symbolic function is linked with the value and prestige of the different languages analyzed. In addition, Scollon & Scollon (2003) divided the texts according to the different discourses. They categorized discourses into regulatory (e.g. car park signs), infrastructure (e.g. street name plates); commercial (e.g. referring to commercial goods) and transgressive (e.g. graffiti).

As this study was conducted at one university, the functions of the texts reflect this fact. Texts have been divided into the following categories: normative, informative, pedagogic, contesting and playful. In the next section, a description of every category is provided along with the results.

5. Results

As previously mentioned texts were first divided into two categories: top-down and bottom-up. Examples of the former include fire instruction signs and exit signs. The bottom-up category refers to texts written by individuals or non-governmental organizations such as, music academies offering music courses. In both studies, top-down texts are dominant in the LL (76% in 2014 and 72 % in 2015). This fact could be explained by taking into account the fact that the study was conducted at a university where texts are mainly displayed by authorities (professors, secretaries and so on) and little place is left for individual texts.

As regards the functions of the texts, the normative sub-category would be linked to the regulatory function as stated by Scollon & Scollon (2003). Examples of this category are instruction panels

such as in the case of fire. Normative texts can only be linked to the top-down category, and they constituted 20% of that category in 2014 and 19% in 2015.

Examples of the informative sub-category can be found in both, top-down and bottom up categories. As these texts' main function is to give information, examples of informative bottom-up texts are the ones written by students seeking lessons in Japanese or dance academies offering Zumba lessons on bulletin boards. On the other hand, examples of informative top-down texts include the signs showing for example how to get to a particular classroom. Informative texts are very common, constituting 29% and 27% of top-down texts (in 2014 and 2015 respectively) and 80% and 83% of bottom-up texts (in 2014 and 2015).

The pedagogic category has also been considered in this study because some of the texts have a pedagogic purpose going beyond being merely informative. These texts are related to university matters such as for example informing the students of their grades. Pedagogic texts were only found in the top-down category in both studies (51% in 2014 and 52% in 2015).

The final categories include texts which are either contesting or playful and belong to the bottom-up category. Examples of contesting texts are the posters hung on the door of the trade union office located in the main area of the department. These pamphlets always contest language policies and favour a stronger presence of the Breton language. Playful texts include, for example, graffiti written by students, which may convey no particular message with entertainment as the only purpose. These texts represent 15% and 5% respectively in 2014 and 13% and 4% respectively in 2015 of the bottom-up category.

Finally, the presence of languages other than French is almost insignificant: the majority of the texts (95%) were written in French and only 5% displayed other languages in both LL. Many of the latter were bilingual texts belonging to the bottom-up category and informative sub-category, as for example, texts written by students looking for linguistic exchanges. Other examples of texts in different languages include vindictive graffiti by students or the bilingual texts in Breton and in French by the trade unions. The main difference between the LL in 2014 and 2015 is the presence in the latter of bilingual informative top-down texts in Breton and French. Although their percentage was not high (1%), they represent the hope for a bilingual signage at this university in Brittany.

6. Conclusions

This study offers a comparison of the LL of the Department of Applied Foreign Languages at a university in French Brittany analysed in two different years, in 2014 and in 2015. Firstly texts were categorized into two types, top-down or bottom-up, depending on the producer. A second categorisation was made depending on their main function: normative, informative, pedagogic, contesting and playful.

The results show that the large majority of texts in both LLs are written in French, leaving other languages for informative, contesting or playful purposes. In 2014 and in 2015, the majority of the texts pertaining to the top-down category are pedagogic texts, and thus linked to the main function of the university. Also, in the bottom-up category, texts are mainly informative and consist of advertisements written by individuals or by organisations.

In general, my hypothesis has been confirmed, as both LLs of this particular university show the statuses of the different languages: French holds the top position and vernacular or foreign languages have a marginal, contesting presence. However, although a certain linguistic vitality is achieved, as some bilingual texts were found in Breton, English, Spanish or Portuguese, these texts do not fully reflect all the languages offered by the department. Concerning my third research question, LLs in this setting do not particularly reflect changes in linguistic policies. However, it can be due to the youth of the law as it was issued in 2013. It has to be noted as well

that despite the fear of the media, there has not been an increase in the use of English in the LLs. On the other hand, a few top-down bilingual Breton-French informative texts found in 2015 are our hope for a bilingual signage in the near future.

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Multilingual terminology work in theory – and in practice

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Abstract. In theory, multilingual terminology work is done by creating concept diagrams in each of the languages and comparing them to establish equivalences between concepts in the two languages. In practice, however, various terminology management systems (TMS) are used, and these systems hardly ever support the ideal working method. First of all, only very few integrate adequate tools for modelling concept systems. Second, the data structure and the user interface do not support the process of linking entries in two languages. Concerning the data structure, the understanding of “concept oriented” plays a major role. In many cases the concept is perceived as a unit at the interlingual level, and in the data structure an entry corresponds to one concept with terms from several languages connected. In other cases, the concept is seen as language-specific, and in the data structure an entry contains equivalent concepts from the languages under consideration. In this paper, we illustrate the clash between theory and practice with an example, and outline the requirements for an optimal data structure and user interface that would allow theory and practice to meet.

Keywords. Terminology work, terminology management system, TMS, data structure, translation equivalents, concept orientation

1. Introduction

In the late 1990's, practical multilingual terminology work led us to propose a new structure for handling equivalence (Hull, Madsen, and Thomsen 1998; Madsen and Thomsen 1998). In this paper, we introduce this proposal again, this time based on our work in the research project DanTermBank (Lassen et al. 2013), a project creating foundations for a national term bank, including development of tools for automating terminology work, a revision of data categories for terminology databases in general (Madsen et al. 2013) and a proposal for a new structure for termbases.

We briefly introduce terminology work in theory, and show that state-of-the-art TMSs do not support the theory in practical work. Based on a concrete example of English-Danish terminology work, we repropose a revision of the data structure in termbases and sketch a user interface that will support practical terminology work procedures in accordance with the theory.

2. Multilingual terminology work in theory

Terminological theory recommends that multilingual terminology work is carried out by analyzing the terminology of one language at a time, and finding equivalents in a second step. This is done in order to account properly for differences in the conceptualizations of two or more cultures, where there may be cases of partial equivalence or gaps in one language compared to another. (ISO 860 :2007) is the only standard addressing multicultural terminology work (harmonization of concepts and terms), and also here the above method is prescribed: The first stage after deciding the scope of the work, is comparison of concept systems, which are assumed to exist before the harmonization starts.

The analysis of the terminology in a given domain comprises the elaboration of concept systems and registration of all synonymous terms for each concept, definitions and other relevant information (see for instance ISO 704: 2009). In the DanTermBank project, concept systems take the form of terminological ontologies, which means that they also include characteristics and subdivision criteria, as illustrated in Fig. 1. Characteristics are represented as attribute-value pairs below the concepts, and subdivision criteria are written in white boxes which span over the relations leading to the concepts they differentiate. Terminological ontologies are described in more detail in (Madsen 1998; Thomsen 1998; Madsen, Thomsen, and Vikner 2004).

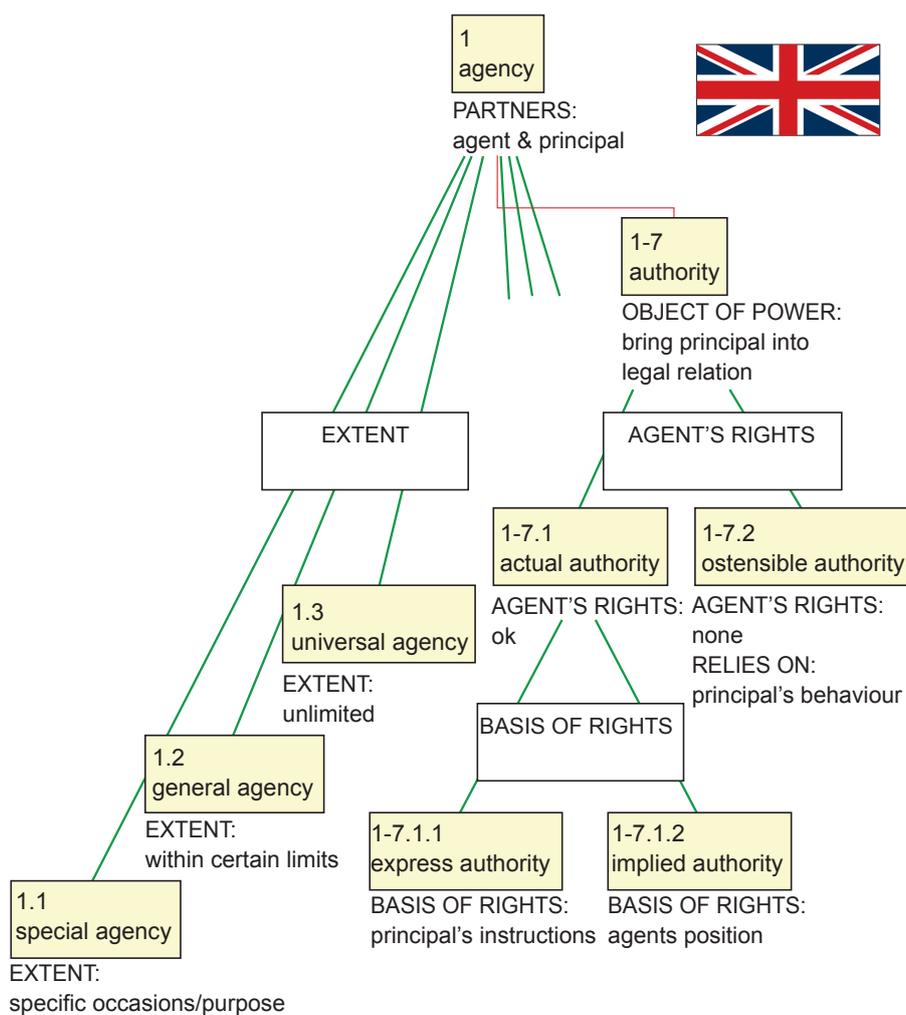


Figure 1: Terminological ontology of selected concepts from the domain of agency in the UK.

3. Multilingual terminology work in practice

3.1. Using a TMS

In practice, most terminologists use a terminology management system (TMS). Generally, this makes it difficult to carry out the work in accordance with terminological theory as we will illustrate below.

In a TMS, terminological data are stored in a concept oriented structure, which means that the concept is the central unit, and for each concept, information on several languages is registered, e.g. definition and all more or less synonymous terms. This structure is also prescribed in (ISO 30042 :2008) and is depicted in Fig. 2.

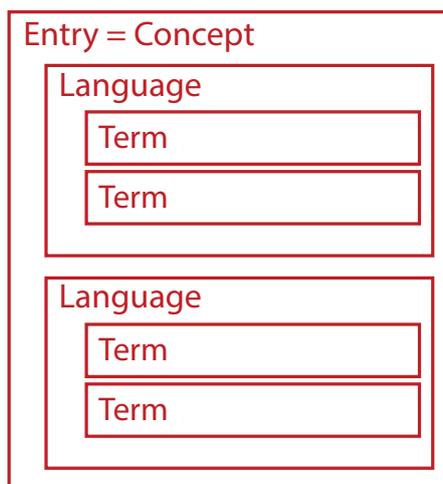


Figure 2: Concept oriented structure of entries according to TBX

The first difficulty is that, with a few exceptions, these systems do not support concept system development. This means that concept systems have to be drawn with other tools, separate from the registration of information on each concept, so information from the concept systems is not directly integrated into the TMS. The terminological ontology in Fig. 1 is developed in the TMS i-Term® (Madsen, Thomsen, and Wenzel 2006; DANTERMcentret n.d.), developed at the DANTERMcentret at Copenhagen Business School. In this tool, the terminological entries are directly accessible from the concept system and vice versa, and information generated in the diagram is also presented in the entry, as shown in Fig. 3, where information on characteristics and related concepts come from the concept system.

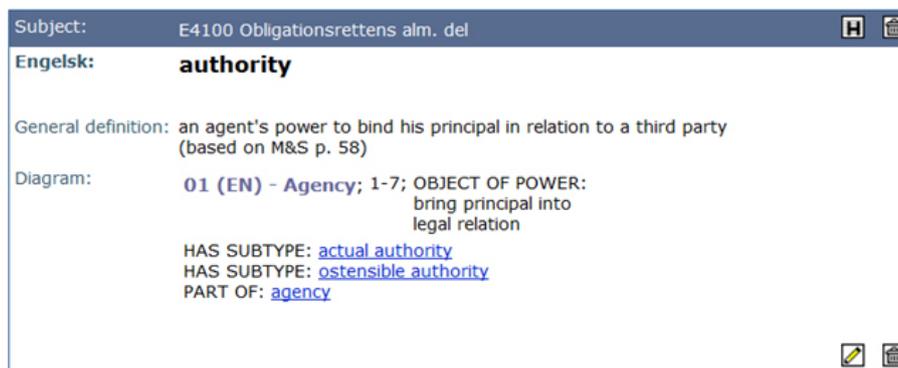


Figure 3: Terminological entry in the TMS i-Term®

Another difficulty is that systems do not support the recommended procedure for multilingual work. TMSs are constructed to **store the result** of terminology work, which was a big step forward when the first systems were developed, but today focus should be on adjusting the systems to also **support the terminological working process**. Current systems do not allow the users to analyze the terminology in one language at a time and then combine the equivalent entries afterwards. Instead, information on concepts in a second language must be entered into the entries of their equivalents in the first language.

In cases where concepts in two languages are equivalent, the basic structure of termbases according to TBX does not exclude system support of the recommended working method, but it requires that systems include a user interface that will move the language section of one entry into another entry, as illustrated in Fig. 4, when the user confirms the equivalence.

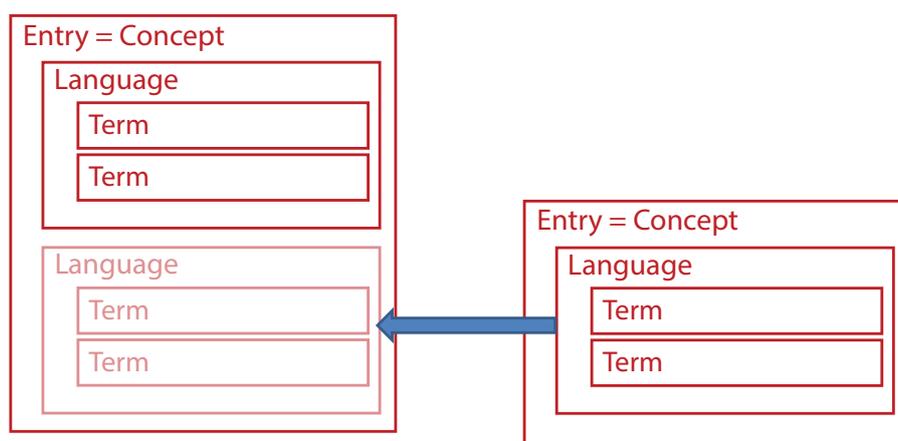


Figure 4: Moving language section from one entry into another

3.2. Cultural differences

In many areas, however, there is not a one-to-one correspondence between concepts in two languages (or cultures). One such area is agency in the case of UK English and Danish. In Fig. 5, the terminological ontology from Fig. 1 is compared to a corresponding ontology of Danish concepts pertaining to agency in Denmark. In this case, there are two examples where one concept in one language does not correspond to only one concept in the other language.

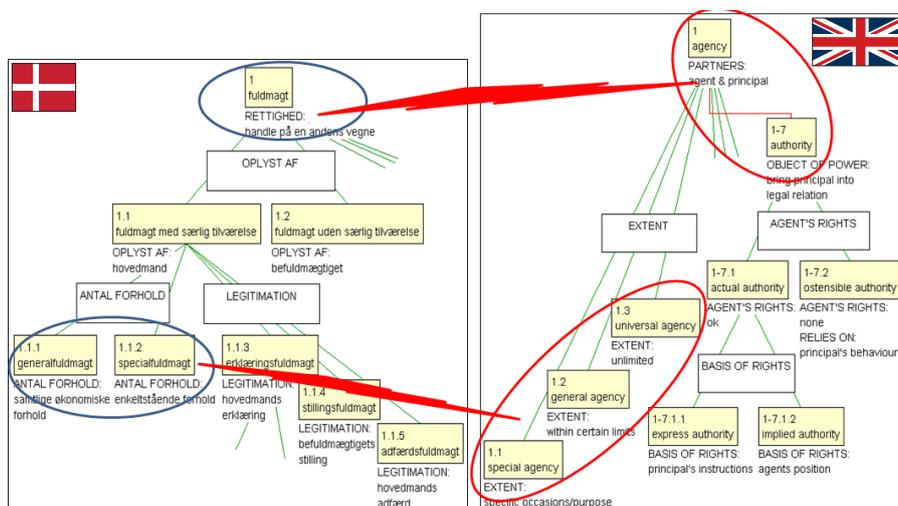


Figure 5: Terminological ontologies of selected concepts from the domain of agency in the UK and in Denmark

The Danish concept *fuldmagt* corresponds to both *agency* and *authority* in the UK. In Fig. 6, the entries corresponding to these three concepts are shown, with arrows indicating the equivalences.

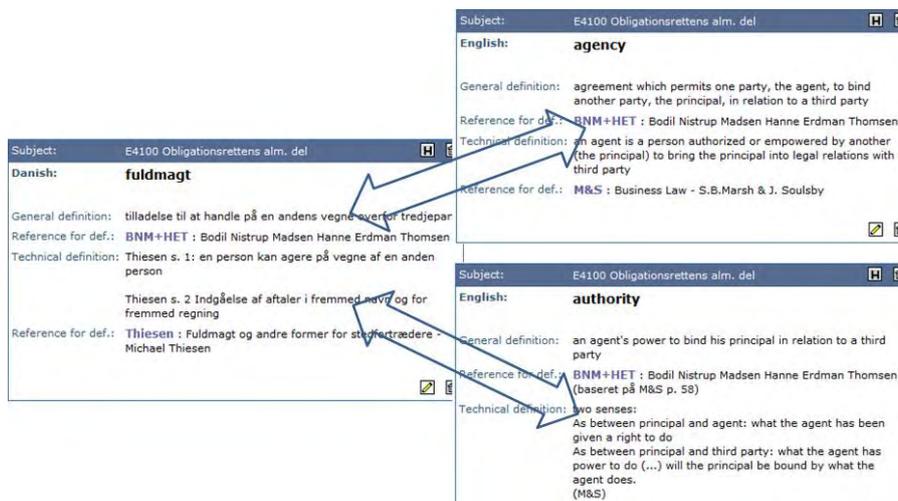


Figure 6: Entries for one Danish concept and the two English equivalents

The procedure described above of copying the language sections of the English equivalents into the Danish entry would result in two English language sections in one entry as illustrated in Fig. 7. This solution is not satisfactory, as it would indicate that the two English concepts are equivalent, i.e. synonymous, which they are not.

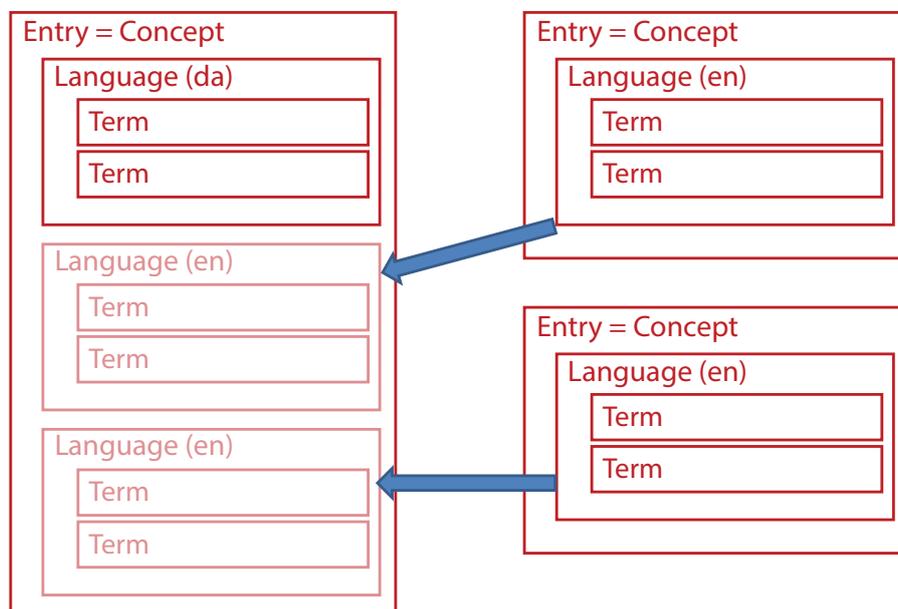


Figure 7: Two English language sections moved into one entry containing a Danish language section

In practice, the current structure of TMSs is thus not suitable for handling such cases of one-to-many equivalence. Instead, terminologists have to create doublettes of the entry in the one language, here the Danish entry for *fuldmagt*, and move one English equivalent language section into each of the entries containing identical Danish language sections, as it is done in Fig. 8.

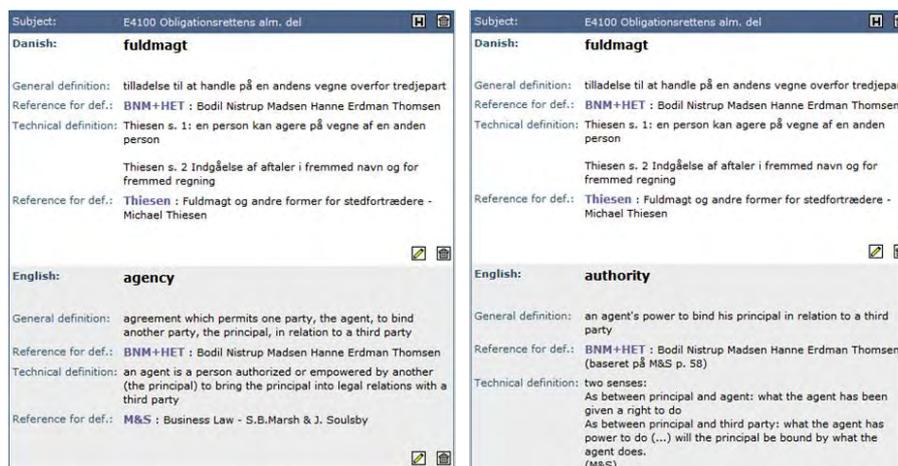


Figure 8: Danish doublettes

This is common practice, but not a satisfactory solution. When searching the termbase in Danish, *fuldmagt* will return two search results, indicating that there are two homographs, which is not the case. Furthermore, updating the termbase becomes complicated, since changes to the Danish concept *fuldmagt* requires the change to be duplicated, and this is contrary to the idea of a database: database integrity is compromised. Finally, if the termbase comprises more than two languages, which is often the case, duplications may increase even further.

4. Revising the data structure

In order to handle one-to-many equivalence, the structure of termbases must be revised. The structure needed, must be able to handle the situation illustrated by the example in Fig. 6. Instead of combining more languages in one entry, we propose to have separate entries for each language section and introduce equivalence as a relation between entries, as shown in Fig. 9.

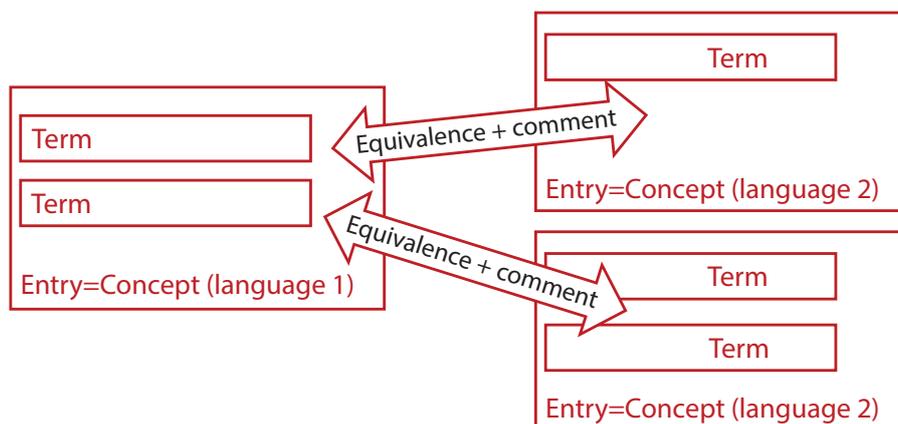


Figure 9: Proposed new structure for termbases

The original structure in Fig. 2 indicates that concepts are cross-lingual, whereas the structure in Fig. 9 implies that concepts are language-specific. As the example in Fig. 5 shows, at least some concepts are language-specific. On the other hand, within some domains, there are cases where concepts may be viewed as cross-lingual. The proposed structure in Fig. 9 can handle practical terminology management in both of these cases in a satisfactory way, whereas the structure in Fig. 2 covers only the fully cross-lingual case.

We first proposed the structure in Fig. 9 in (Hull, Madsen, and Thomsen 1998) and (Madsen and Thomsen 1998), and in (Thomsen 2016) it was reintroduced. In the DanTermBank project mentioned above, it was decided to use this structure in a future national term bank. We recommend that this structure is also integrated in future revisions of TBX (ISO 30042 :2008), TMS (ISO 26162 :2012) and other ISO standards on terminology databases.

5. Supporting the working process – from theory to practice

A further advantage of the proposed structure, is that it will also make it easier to develop tools that support the terminological working process as prescribed by theory and standards. In a termbase with the structure described in Fig. 9, the terminology of two (or more) languages can be analysed and registered separately, even by separate terminologists, and in a second stage equivalences can be found and registered without having to move content from one entry to another.

In Fig. 10, we show how a user interface for establishing equivalence relations between entries might be constructed. The terminologist user selects the relevant terminological ontologies, chooses concepts to be linked, and adds comments if appropriate. The entries created for each language remain separate entries, but the equivalence relation ensures that end users will be presented with the correct equivalents.

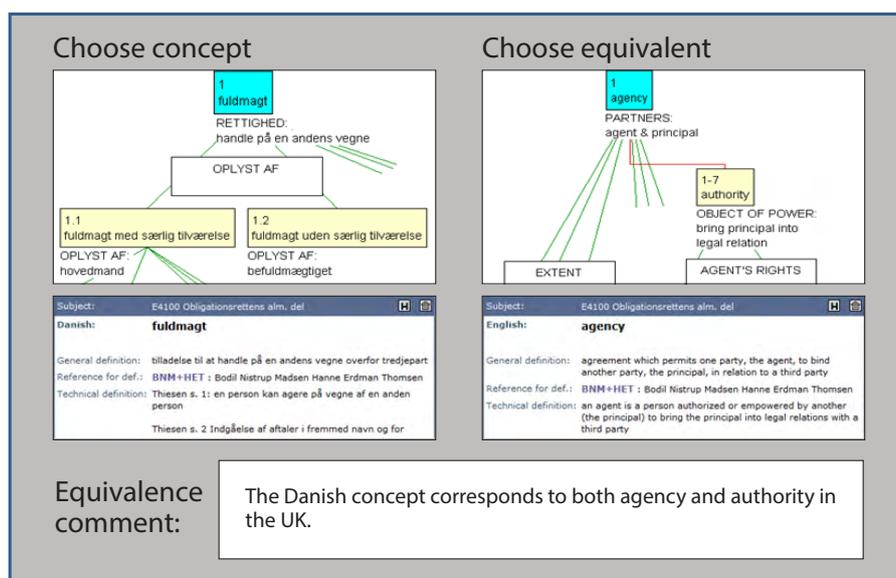


Figure 10: Mock-up user interface for establishing equivalence relations

6. Concluding remarks

Experience from practical multilingual terminology work has led us to propose a new termbase data structure for handling equivalence, a proposal that we are now putting forward again. The proposed structure, where equivalence relations are introduced between pairs of equivalent concepts, instead of the combination of equivalent concepts in the same entry, reflects more precisely what equivalence is, and makes it possible to register equivalence between one concept in one language and two or more concepts in another without having to compromise data base integrity through the introduction of doublettes. Moreover, it also enables terminologists to work in the prescribed manner, i.e. to register concepts and develop concepts systems for one language at a time and then, in a second step, find equivalence relations between concepts in the two languages. We therefore urge strongly that this change in structure is also introduced in standards for terminology databases and for the exchange of terminological data.

7. Acknowledgements

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