Young Linguists' Insights: Taking interdisciplinary approaches to the fore

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INTRODUCTION

Young Linguists' Insights: Taking interdisciplinary approaches to the fore.

> *The seeds of progress germinate, and the shape of the future unfolds in our conviviality, at the convergence of all our different paths. It is in this gradual cross-fertilisation that the future of knowledge—and indeed of the world—resides.*
>
> Federico Mayor

The idea behind compiling the present volume was to give the floor to young researchers whose original research poses a particular type of challenge. The activity that the contributors are involved in requires not only expertise in their major field of study, which happens to be language, but also in seemingly distant disciplines through the lens of which certain linguistic problems are explored. The interdisciplinary approach is as effective as it is challenging. It offers a fresh perspective, contributes new ideas, and enriches scientific discussion. It does this, at the same time requiring thorough knowledge of two or more disciplines, and thus asks for humility on the part of the open-minded researcher. Whatever attitude to interdisciplinarity one has, it seems almost trivial to state that sciences do converge. Even a cursory glance at the methodologies adopted in modern linguistic research reveals that it is via blending paradigms that scientists arrive at new and more nuanced insights. Because it pushes the boundaries of knowledge, interdisciplinarity gives birth to new research fields. Complexities which might have been overlooked or ironed out now come to light. Above all, the movement towards interdisciplinarity can be viewed as a testimony to the fact that language does not exist in a vacuum. In line with this, research performed on language perceived as an autonomous system – *langue*, as de Saussure put it – runs the risk of yielding a fragmentary, if not skewed, picture. It is this broad view of language that we had in mind when selecting papers for the present volume.

The monograph is divided into six subthematic sections. While language thematically binds the publication, each part offers a different interdisciplinary perspective. Sections open with expert articles by well-

established academics. These are in turn followed by papers authored by newcomers, taking their first steps into interdisciplinary research.

The opening section of the volume takes *Language, society & discourse* studies as its foci. A rich spectrum of articles is offered, comprised of linguistic intervention, language change, or the interface of pragmatics and interpersonal metadiscourse, among others. Both the volume and this section open with an article by the renowned sociolinguist Miriam Meyerhoff. The researcher discusses and illustrates the possibility of language change within an individual's lifespan. In the second article, Michał Paprocki and his colleagues talk at length about Wilamowicean – a language in southern Poland facing extinction. Having provided a socio-historical background to the issue, they concentrate on both civic and centralised struggles against the erasure of the language from the Polish linguistic map. Zorica Trajkowa, in her article, draws our attention to the importance of metadiscourse markers, such as hedges or boosters, in being persuasive. She takes a cross-linguistic comparative perspective, illustrating her claims with examples from American English and Macedonian. Magdalena Murawska's article is somewhat different in its focus. The author sets out to investigate the reactions of medical students to case reports where the authorial and patient's presence constitutes the independent variable. The section's final article, by Kinga Mátyus, is an exploration into the possible correlations of a linguistic variable – the inessive case in Hungarian – with residence, age and gender.

The subsequent *Language & Technology* section can be seen as a *bona fide* example of how two fields of enquiry – computer science and linguistics, disparate back in the 1980s – at present fade into one another to the extent that they constitute a legitimate and fully institutionalised branch of linguistics. The merits of Corpus Linguistics are utilised by Rafał Górski, the distinguished Polish linguist, in his thorough examination of suffix productivity. Taking advantage of Narodowy Korpus Języka Polskiego (the National Corpus of Polish), Górski investigates Polish Word Formation Rules when applied to the class of expressive adjectives. Two other authors, Katarzyna Marszałek-Kowalewska and Mojca Kompara, show how Corpus Linguistics works in conjunction with yet another field of study – lexicography. The former researcher reports on an exploration of technical English loanwords in Farsi and, on the basis of her findings, assesses Iranian language policy. The latter author is devoted to an innovative way of compiling dictionaries of abbreviations. She puts

forward a method that enables lexicographers to render dictionary production process more effective. The remaining two articles are authored by Carsten Weber and Johannes Handl. The first article introduces a segmentation algorithm which has a number of practical applications, for instance as a spell checking device; the second one focuses on preventing ambiguities in the course of automatic morphological analysis.

The third section of the present volume looks into various aspects of the relationship between *Language & Meaning*. In the opening article, Matthias Urban attempts to provide cultural explanations for the phenomenon of recurrent lexico-semantic associations by taking 'the pupil of the eye' as the central point of his discussion. Further, Giovanni Tallarico looks at the issue of lexical gaps and points to the role of bilingual dictionaries, claiming that they should serve as bridges to enable and improve cross-cultural communication. Anna Jelec, in turn, takes the abstract/concrete distinction as a starting point in her attempt to bind insights from three theoretical frameworks in cognitive linguistics: the Contemporary Theory of Metaphor (Lakoff 1993), the theory of objectification (Szwedek 2002) and embodied experience. Małgorzata Zawilińska-Janas' article is very different in focus. The author looks at the structure of synaesthetic metaphors in two languages, English and Polish, to find that expressions used in the non-literary register do not differ much in complexity and diversity from those typically found in poetic sources. Finally, Paweł Korpal draws on Ronald Langacker's theory of subjectivity, analysing both the subjective and objective perception of the English verb 'think' in order to see how the act of thinking is conceptualised in this language.

The intersection of *Language, Mind & Brain* in explored in the fourth section. In the first expert article, Kenneth Hugdahl, the famous Swedish psychologist, liaises over the issues of auditory laterality and speech perception, drawing on the data obtained in dichotic listening experiments. His paper is followed by that of Alexander M. Rapp, the renowned German psychiatrist. Rapp provides an overview of research that has been conducted on the neuroanatomy of figurative language processing and goes on to propose a model of nonliteral language comprehension, focusing on the role of brain regions involved. Further, Márta Szücs discusses idiom processing in children, paying attention to two important factors: context- and idiom type effects. In the subsequent article, Dorota Jaworska and colleagues take up the subject of irony processing in schizophre-

nia and point to the existence of a nonliteral language comprehension deficit in the psychosis. The author of the next paper, Marianna Bolognesi, describes the experiment she devised in order to investigate the link between episodic memory and the bilingual mental lexicon. Anna Klecha's contribution revolves around bilingualism, too. Her focus, however, is on L1 inhibition in language switching.

The fifth section of the volume is devoted to *Language in the Press*. It reflects the interconnectedness of the two subject areas by touching upon three aspects of language as observed in magazines and newspapers: markers of verbal irony, creative idiomacity, and loan words. The author of the first paper of this section, Silvana Neshkovska, gives insight into various markers of verbal irony used in newspaper headlines. Such markers signal ironic intent of the writer. The author compares various types of markers of verbal irony in Macedonian and English newspaper headlines. Ilze Oļehnoviča presents research on idiom usage in British newspapers. Various patterns of instantial stylistic use of idioms are shown, explained, and exemplified using Discourse Analysis methods. The author discusses effects obtained by creative idiomaticity in newspaper discourse. Małgorzata Karczewska analyses loanwords (Anglicisms) in a popular Italian women's magazine. The author observes that Anglicisms have become part of Italian compounds; they are adapted to Italian morphology (constituting a base of dervatives) and their original meaning frequently changes.

The final, sixth section of the monograph focuses on selected aspects of *Formal and Applied Linguistics*. Aleksandra Bartczak-Meszyńska looks at the structure and properties of Applicative Phrases in German Double Object Construction. The author analyses McGinnis' (2001) theory and goes on to conclude that this approach cannot be employed to fully account for object movement in German. Michaela Bentz describes Romanian and Germanic elements in the position of clitics in Cimbrian, a Germanic minortity language spoken in Luserna, a village in Italy. She observes that the surrounding Romanic dialects have been strongly influencing Cimbrian for a millenium. The author provides examples of mixed conjunctions with a Germanic and Romanic element, as well as a clitic work order. Natalia Ciesielczyk attempts to examine difficulties related to translating from a language that has infinitives to a language that does not. By analysing Modern Greek translations of Aristotle's works, she illustrates how translators approached this linguistic challenge. Next, Natalia Stoynowa presents a cross-linguistic survey of uses of the so-called

again-reflexives that are characteristic of Oceanic languages. The author points out that there is a wide variation in formal structure and semantic features of reflexive markers under consideration and she proposes two diachronic scenarios for different types of again-reflexives. Joanna Ziobro approaches the topic of feasibility of empirical research conducted on interpreters. She presents a study in which she investigates differences in the distribution of local cognitive load in interpreters at different levels of advancement. Finally, the closing paper of the volume – by Olga Trendak – focuses on the form-focused instruction (FFI). The author presents types of FFI and explains which types place emphasis solely on form and which foreground meaning.

Having introduced the main thematic areas, which make up the present work, we would like to express our deepest gratitude to all the authors who contributed to the volume. Without their valuable input, it would not be possible for the monograph to come into being. It is our greatest hope that the variety of topics covered here will be appreciated by all readers who consider interdisciplinary linguistic research an important and inspiring field of study – just as we do.

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LANGUAGE, SOCIETY & DISCOURSE

CONSTRAINTS ON LANGUAGE CHANGE OVER THE LIFESPAN: KEEPING IT AND KEEPING IT REAL

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ABSTRACT

Recent work in sociolinguistics has begun to interrogate the potential for, and constraints on, change in an individual's linguistic system during their life. The potential for "lifespan change" is now recognised, but the data indicates that there are clear and sociolinguistically meaningful constraints on such change: it only seems to occur under quite specific sociolinguistic conditions, and may have quite specific linguistic characteristics. This paper examines the potential for lifespan change, and the constraints that are attendant on such change in the creole English spoken on Bequia (St Vincent and the Grenadines). We focus particularly on the performance of 'urban sojourners' – speakers who have spent time away from Bequia but returned to their natal village. We find clear evidence in two grammatical variables (presence/absence of BE and existentials) that there are powerful constraints on their underlying grammar. By keeping some aspects of the grammar intact, the urban sojourners are, in some sense, 'keeping it real'.

Keywords: sociolinguistics, variation and change, apparent time, lifespan, Bequia English

1. Constraints on language change over one's life: the apparent time construct

The 'apparent time' construct has been extremely important in the history of sociolinguistics. It provides an effective way inferring whether there is change in progress in a community. It does this by assuming minimal (significant) change in individuals' speech performance as they grow

older, hence by listening to 40 year olds, we gain a reliable picture of the what the norms of the speech community were when they were acquiring language (30 or 40 years earlier); by listening to 60 year olds, we gain a reliable picture of the speech community's norms 50-60 years earlier, and so forth.

Figure 1 shows that in some studies, the differences between speakers in different birth cohorts can explain virtually all of the variance observed. This data, from Gillian Sankoff's work on the change from an apical trilled [r] in Montreal French to a uvular trilled [ʁ] plots both the observed mean frequencies of [ʁ] among speakers by the decade in which they were born against a linear model of the change assuming its start between 1900 and 1910. The R^2 statistic shows that roughly 85% of all the variation in how speakers use [ʁ] can be accounted for solely by knowing their decade of birth.
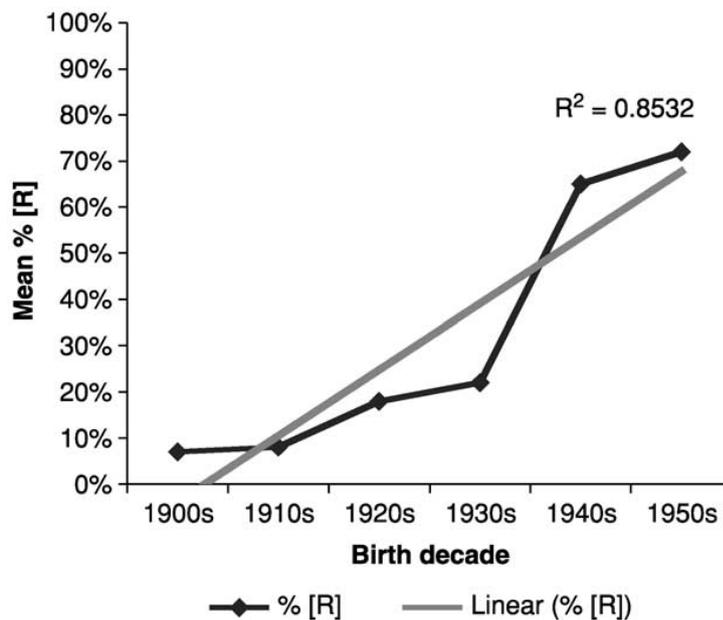
Figure 1. Mean percentage use of the innovative velar [R] by 119 Montreal French speakers in 1971, grouped by decade of birth (adapted from Clermont and Cedergren 1979)

The validity of the apparent time construct lies in real time tests of the inferences we draw from it. Real time studies allow the analyst to actually observe whether change has occurred and the nature of that change by repeated visits to the same speech community. This is a little harder than it sounds, since few speech communities remain 'the same' over a period of decades. Social changes may occur, with migration in and out of the community depleting it of some social classes or changing the how members of the speech community feel about the status of their community. We also need to bear in mind that what constitutes 'the same' community is partly defined by the methods of the analyst.

For instance, when William Labov undertook his groundbreaking study of Martha's Vineyard (1972, originally published 1963), he interviewed and recorded speakers from across the island, from different age and ethnic groups and different occupations. On the basis of the patterns of variation he observed in speakers of different ages, he suggested that there was a change taking place in the pronunciation of the diphthongs (ay) and (aw) (the PRICE and MOUTH lexical sets). There was an apparent increase in the use of centralised onsets for these diphthongs among younger speakers on the island – and in particular among people who felt positively towards living on the island.

Forty years later, Meredith Josey and Jenny Pope independently returned to Martha's Vineyard to collect real time data on the centralisation of (ay) and (aw). Their results were somewhat different, but this serves to illustrate the point about the importance of trying to make sure that the community you are sampling is in fact 'the same' as the one you want to make a comparison with. Blake and Josey (2003) concluded that there was a shift away from centralised onsets of (ay), while Pope et al. (2007) concluded that there was strong evidence to support Labov's apparent time inferences of a change in progress. A crucial difference seems to be that Josey's fieldwork was conducted among a smaller group of speakers, whos socio-economic relationship with the tourists and summer visitors on the island had grown much more positive in the forty years between Labov's fieldwork and her own. Pope et al., on the other hand, replicated Labov's methods more precisely, both in sampling across the island's population and in the kinds of speech she recorded. Her results, shown in Figure 2, vindicate Labov's apparent time inference of change in progress exactly.
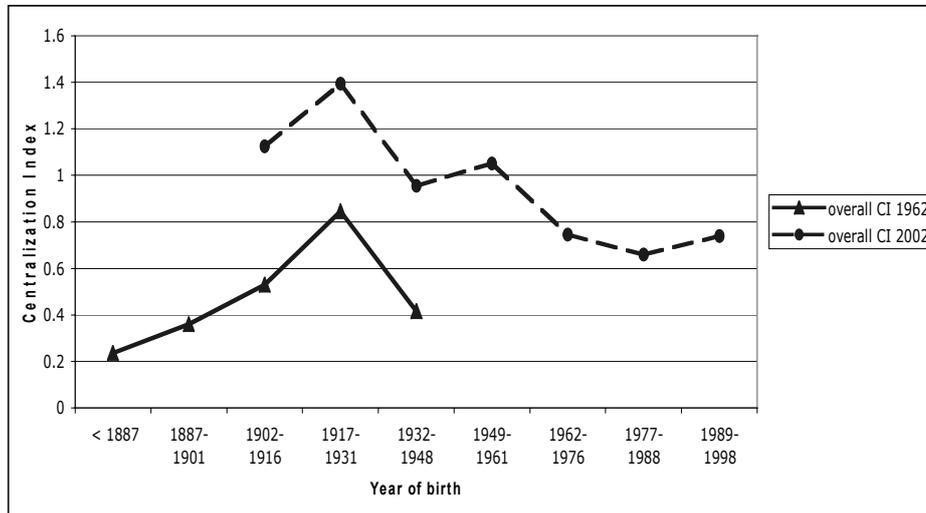
Figure 2. Overall degree of centralisation of (ay) and (aw) variables on Martha's Vineyard. Labov's 1962 data compared with Jennifer Pope's 2002 study (source: Pope et al. 2007)

It is clear that Pope records exactly the same rise and decrease in centralisation that Labov did for the approximately 35 years that their two samples overlap. Pope's research, therefore, shows us that real time data validates the use of apparent time as a basis for inferring that a change is in progress in a community, but that apparent time data is not necessarily very good at predicting how fast a change will progress. We can see this in the higher mean rates of centralisation in Pope's age cohorts that overlap with Labov's sample.

2. Lifespan change

While Pope's findings do not challenge the use of apparent time as a basis for inferring change, the change in the overall rate of centralisation does suggest that there is some potential for change over the lifespan. Other studies, like Pope's, have found that there is evidence for individual change – crucially, this is almost always in the direction of the community change. Sankoff and Blondeau (2007) review this evidence in detail from

the data on Montreal French. The paper is a subtle synthesis of quantitative and qualitative reasoning and is highly recommended for anyone venturing into this area. The only exception so far observed to the generalisation that individual change over their lifespan moves in lockstep with the community is data on use of the synthetic versus periphrastic future in Montreal French, i.e. *elle attendra* versus *elle va attendre* for 'she will hear/listen'.

Sankoff and Wagner (2011) found that a small set of speakers – all from the highest socioeconomic class – used significantly more tokens of the inflected future over time, while in the community as a whole there is a clear shift away from the inflected forms. They attribute this to the influence of formal norms for language use. They point out that speakers in the highest socioeconomic class have the most formal education and formal education emphasises the inflected future as a sign of erudition. It is, in short, a classic symbol of the linguistic marketplace (Bourdieu 1991).

To sum up, we find that speakers can change their performance over their lifespan, but this is almost always in the direction of ongoing community change. Reversals of this are only attested under very specific social conditions. What we do not know, though, is (i) what potential there is for lifespan change when people have not remained embedded in their home community, and (ii) if there is change in such speakers, how this might interact with stable changes differentiating social groups in the speech community.

In the remainder of this paper, I turn to data from our own research that sheds some light on these questions, and conclude with some new questions it raises in turn.

3. Variation in Bequia, St Vincent and the Grenadines

Bequia is the northernmost of the Vincentian Grenadine islands (St Vincent and the Grenadines (see Figure 3).
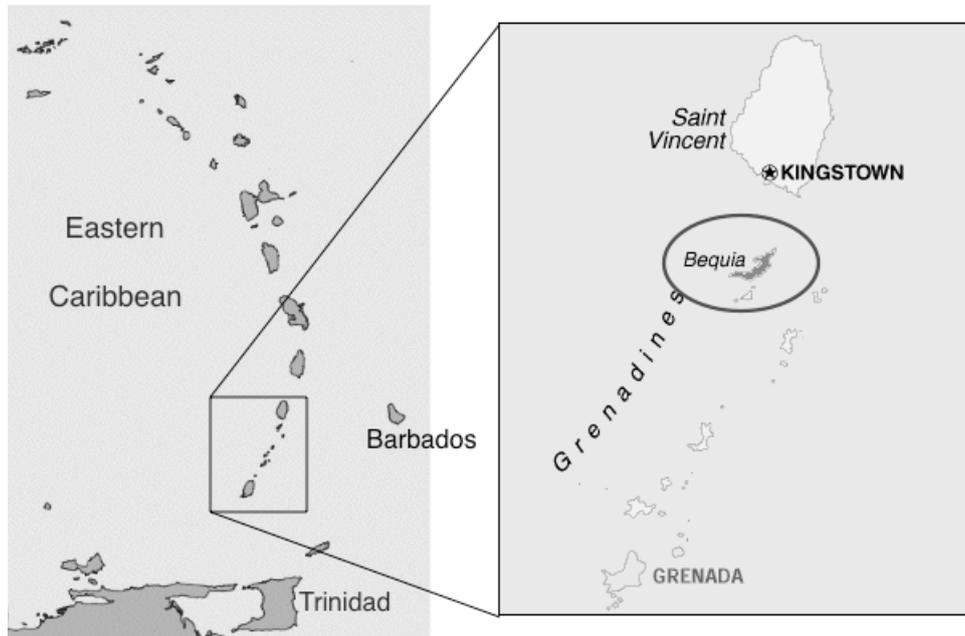
Figure 3. Bequia island (St Vincent and the Grenadines) within the Eastern Caribbean (Image courtesy of James A. Walker)

Our fieldwork in Bequia was conducted over three trips between 2003-2005.[1] Using local research assistants to conduct interviews (to minimise the observer's paradox), we recorded 62 Bequians over the age of 40. We chose this cut-off because after the late 1960s, Bequia became much less isolated within the Caribbean due to changes in technology and mobility. Our fieldwork focused on speakers primarily from three areas on Bequia: Hamilton, a village on the site of a former plantation largely inhabited by Bequians of African descent; Mount Pleasant, an affluent village in the hills above the main harbour, inhabited largely by people of Anglo-Irish descent; and Southside, a string of fishing villages with ties to the traditional whaling culture, where inhabitants are more ethnically and economically diverse than in the other two villages. When we asked people on Bequia direct questions about language, they were united in telling us

that they believed it was possible to tell where someone came from on the island based solely on the way they talk. Given the very small size of the island, and the relatively shallow time depth for settlement (Anglo settlers and Black slaves only came to the island after it was ceded to Britain as part of the 1763 Treaty of Paris), we found this a remarkable claim. Moreover, given the relatively small population (5000 people), we wondered, even if this were true, whether people might be identifying someone because of features in their speech or because they actually recognise their voice. Hence, we were interested to see whether there might be empirical evidence to support Bequians' claims that language identifies people from different villages.

Our instructions to our research assistants were to only interview people who had been born in these villages and preferably whose parents also came from these villages. Most of the people they recorded had lived there continuously, but unintentionally, we found that in each village, the recordings included interviews with one or two people who had been born in the village, left the island completely for some years to work overseas, and then returned to their natal village. Although we had not anticipated this, with hindsight it was an obvious category that would emerge. The Eastern Caribbean has long been characterised by employment related migration, historically, this involved men signing on to work on ships for years at a time and travelling at least throughout the hemisphere but often around the world. But women, too, migrated. Since the Second World War, the people interviewed on Bequia had gone to London or Canada to take up service industry jobs. Many, of course, have not returned permanently, but we found a small number of these people who had returned to Bequia. Because they spent some time in urban centres overseas, we dubbed them 'urban sojourners' (Meyerhoff and Walker 2007).

What happened to their speech overseas? This is the object of our enquiry, and we are particularly interested in how their sojourn affected their use of variable features that differentiate the three communities we studied on Bequia. I will report results from two variables that I have analysed with James A. Walker (York University). These are presence/absence of BE, and the use of *there is/are* existentials versus the Caribbean variants *it has/have* and *it get/got*.

3.1. The urban sojourners and local variables

Superficially, the urban sojourners sound rather different from their stay-at-home peers. Although we have not analysed their speech phonetically, this is clearly an area where further research will be rewarding.[2] However, we have examined their performance in relation to two grammatical/lexical variables that we have studied for the rest of the speech community as well.

The first variable is presence/absence of BE. This is variable both in auxiliary contexts, as in (1) and also in copula contexts, as in (2).[3]

1. a. He *Ø* <u>making</u> speed, running.   (H3:217)
   b. A little drink *is* good, keep you body good.   (H1:1668)
   c. A lot of people *Ø* coming here and they love Bequia.   (P34:135)

2. a. So they figure everybody *is* <u>for theyself</u>.   (M303:634)
   b. He *Ø* <u>there</u> in Antigua.   (P19:731)
   c. But her father *is* <u>a Ollivierre</u>.   (P24:172)

In Walker and Meyerhoff (2006), we showed that three villages in Bequia could be differentiated on the basis of how speakers use BE in both of these contexts. As in many other studies of this variable (in the Caribbean English creole, Pacific English creoles, and African-American Vernacular English), the principal constraint on the presence or absence of BE in the Bequia village communities was the following grammatical category. But the three villages appeared to be characterised by different frequencies of BE presence/absence, different underlying grammars for BE presence/absence, and crucial differences in the way speakers treated following adjectives.

Readers interested in the details of the different underlying grammars are referred to Walker and Meyerhoff (2006). Here, I will focus on the dignostic of how a following adjective is treated. Using multiple regression as implemented in Goldvarb X (Sankoff et al. 2005), we found that the probability of BE absence was greatest in all villages when it was used as a verbal auxiliary. This can be seen in Table 1.

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[2] Anyone qualified and willing to undertake a sociophonetic study of the urban sojourners is encouraged to contact James Walker or me directly to discuss access to the corpus.
[3] Examples are identified by village (H = Hamilton; L = La Pompe (Southside); M = Mount Pleasant; P = Paget Farm (Southside)), speaker number and line in the transcript.

	Hamilton	**Mount Pleasant**	**Paget Farm**
Total N:	587	469	376
Input probability:	.287	.351	.117
gon(na)	**100%**	**.89**	**100%**
Verb-*ing*	**.93**	**.86**	**.93**
Adjective	.71	.51	**.74**
PP	.49	**.64**	.46
NP	.25	.13	.29
Locative adverb	.09	0%	**.68**

Table 1. Probability of BE absence in three villages on Bequia according to following grammatical category. Favouring contexts for BE absence highlighted in bold (source: Walker and Meyerhoff 2006)

If we look at following adjectives, we see that in Paget Farm (Southside) and Hamilton, they pattern with following verbs in favouring absence of BE. In Mount Pleasant, though, following adjectives show no such effect. On the basis of this, we concluded that *be* presence/absence might be one reliable index of where a person comes from on Bequia and might indeed be one of the features people attend to when placing an unfamiliar or unseen speaker.

The second variable is existentials (Meyerhoff and Walker 2009). In Bequia there are two main variants, one that is shared with Standard English where the main verb is BE and the dummy subject is *there* as in examples (3). There are also local, Caribbean variants which have a verb of possession HAVE or GET and a dummy subject *it* as in examples (4-5).

3. a. <u>There is</u> still some interest ... (M316:1933)
   b. Yeah, <u>there is</u> so jokes when you're in school you know. (H5:621)
   c. <u>There are</u> very, very few students that I can name (L28: 351)

4. a. I like it being alone and <u>it have</u> all kind of book I coulda read (L20:542)
   b. if I meet there, <u>it has</u> phone and thing (P24:243)
   c. but <u>it has</u> some long line boats that the Japanese sell over to St. Vincent (P22: 1175)

5. a. Because <u>it got</u> several spirits out there. (M303:1197)
    b. we deh pick them and shell out the seed, and open the seed and <u>it get</u> a white something what with it (H16: 830)

Note that for both the *there be*-type existentials and the *it have*-type existentials, there is the option of having a plural verb form when the postposed (semantic) subject of the phrase is plural, but it is also possible to have a plural postposed subject with a singular verb form. We will find that this is a useful diagnostic of adherence to community norms for this variable.

The *it get/got* variants are least frequent in our corpus as can be seen in Table 2 and will be set aside for the remainder of this discussion.

Village	*% there BE*	*% it HAVE*	*% it GET*
Hamilton	24	51	25
La Pompe (Southside)	64	34	2
Paget Farm (Southside)	75	23	2
Mount Pleasant	48	37	15

Table 2. Percentages of different existential constructions for stay-at-home speakers in four villages in Bequia

As we can see, this variable, too, provides a basis for distinguishing between villages, and may well contribute to Bequians being able to identify a speaker as coming from a particular village. In terms of overall frequency, the *it have*-type existentials are most typical among Hamilton speakers; speakers from Southside villages (Paget Farm and La Pompe) are more likely to use *there be*-type existentials; and in Mount Pleasant speakers tend to use the Caribbean variants, i.e. *it have* and *it get* existentials slightly more often than the Standard English variants.

The use of a plural verb when the postposed subject is plural also differentiates the villages. Although Hamilton residents were less likely to use *there be* existentials than speakers form other villages, when they did produce *there be* with a plural subject, they were more likely to use *there are* than *there is*. Conversely, speakers from the other villages – although more likely to use *there be*-type existentials – were more likely to use a nonstandard pattern of agreement. That is, in Paget Farm, La Pompe and Mount Pleasant, a plural postposed subject was more likely to be introduced with *there is* than *there are*.

In other words, for this variable there are two things we should consider when establishing community norms. First, the type of existential construction favoured over all others, and second, whether or not speakers inflect the verb to agree with the postposed semantic subject of the clause.

4. Urban sojourners' lifespan change

I turn now to consider what our urban sojourners might have to tell us about the questions raised at the start of this paper, regarding the stability of language variation across the lifespan. The situation we are considering in the Bequia data is a little different to that outlined by Sankoff and Blondeau. We are not investigatign whether the urban sojourners are moving in the same direction as a community change, rather we are assuming stability within the community, and asking whether the urban sojourners experiences overseas will have altered their speech patterns in ways that are similar, or different to, the individuals studied in Montreal.

Our findings with respect to the presence/absence of BE (discussed in detail in Meyerhoff and Walker 2007) seemed to indicate that there was relatively little fundamental change as a result of time spent abroad. While the urban sojourners seemed to show a marked decrease in how often BE was absent in their speech, we were struck by the apparent retention of their village constraints on BE absence. That is, the changes in how they used the variable seemed to be rather superficial ones of frequency, while the deeper knowledge of the variable seemed to remain intact.

However, the picture is a little more complicated when we consider what happens with existentials. The frequencies for each type of existential are shown for the urban sojourners in Table 3.

Village	*% there BE*	*% it HAVE*	*% it GET*
Hamilton	99	1	0
La Pompe (Southside)	88	0	12
Paget Farm (Southside)	31	69	0
Mount Pleasant	91	6	3

Table 3. Existential constructions favoured by urban sojourners on Bequia

Table 3 makes two things clear: most urban sojourners are rather inclined to abandon the Caribbean variants in favour of the Standard English one. The notable exception is the urban sojourner from Paget Farm who uses the local *it have*-type forms more often even than stay-at-home speakers from Hamilton (Table 2). However, intriguingly, beneath these extreme frequency patterns which undoubtedly make the urban sojourners sound very different form the rest of their home village, they retain the same tendency for the verb to agree or not agree with a postposed verbal subject. That is, even though the urban sojourner from La Pompe uses *there be* must more often than the other La Pompe speakers, when she uses it with a postposed plural subject it is much more likely to be *there is* than *there are* and in this respect, she behaves like the rest of the La Pompe community. Likewise, the Paget Farm urban sojourner uses *it have* more often than the other speakers from her village, but like them, if it occurs with a postposed verbal subject, she is likely to use a singular verb, i.e. *it has* not *it have*.

There is an exception to this. The Mount Pleasant urban sojourner uses *there be* existentials more often than the rest of the speakers from that village and he also uses it in a much more standard way – when the postposed subject is plural he almost always says *there are*, whereas the rest of the community is more inclined to say *there is*.

5. Conclusion

Overall, our urban sojourners suggest to us that we can add the following generalisation to Sankoff and Blondeau's and Sankoff and Wagner's findings about lifespan change with changes in progress. The urban sojourners suggest that lifespan change may affect superficial aspects of a variable component of the community grammar, such as frequency. In this respect, the changes are similar to the superficial changes to their phonetics. But if the frequency changes are not so extreme that the urban sojourner gives up one variant (usually the local, Caribbean one) entirely, the rules conditioning the distribution of the two variants (local and Standard English-like) remain remarkably similar to those of the community members they grew up with and who have not spent time overseas.

We are now in a position to start to piece together what has been confirmed about the stability of variation across the lifetime to a single, more

coherent picture. We have seen a real time study in Martha's Vineyard confirm the validity of the assumption underlying the apparent time construct, namely, that groups of speakers are relatively stable in how they produce variables over their lifetime, thus providing synchronic snapshots of previous states of the community grammar.

We have also seen a real time study tracking individuals in Montreal confirm that individuals are overwhelmingly stable in their production of variables. The exception is when very strong social pressures influence individuals. These pressures may be located in an individual's life history of extraordinary social mobility, or the normative pressure of advanced levels of formal education.

Unanswered questions from our study include whether there are possible differ-ences between variables that are embedded in different parts of the linguistic system as well as variables that are embedded differently in the social system. Are the con-straints on lexical, grammatical and phonetic/phonological variables likely to be more or less stable across the lifespan? Is there some threshold effect, such that once the frequency of a variant gets sufficiently low/high, the constraints associated with it may be reallocated by a speaker, but not before?

Our work in Bequia has provided us with some insights into the stability of the variable component of linguistic systems, but like all good insights they have raised new questions for us – and we hope others – to address in the future.

REFERENCES

Blake, R. and M. Josey. 2003. "The /ay/ diphthong in a Martha's Vineyard community: What can we say 40 years after Labov?" Language in Society 32(4). 451-485.

Bourdieu, P. 1991. Language and symbolic power. Cambridge: Harvard University Press.

Clermont, J. and H. Cedergren. 1979. "Les R de ma mère somt perdus dans l'air". In: Thibault, P. (ed.), Le français parlé: Études sociolinguistiques. Edmonton: Linguistic Research. 13-28.

Labov, W. 1972. Sociolinguistic patterns. Philadelphia: University of Pennsylvania Press.

Meyerhoff, M. and J. A. Walker. 2007. "The persistence of variation in individual grammars: Copula absence in 'urban sojourners' and their stay-at-home peers, Bequia (St Vincent and the Grenadines)" Journal of Sociolinguistics 11(3). 346-366.

Meyerhoff, M. and J. A. Walker. 2009. "Variation in the use of existentials on Bequia (St Vincent and the Grenadines)". Paper presented at the Creolistics Workshop. Gießen: Justus-Liebig-Universität.

Pope, J., M. Meyerhoff and D. R. Ladd. 2007. "Forty years of language change on Martha's Vineyard" Language 83(3). 615-627.

Sankoff, D., S. A. Tagliamonte and E. Smith. 2005. Goldvarb X. [URL: http://individual.utoronto.ca/tagliamonte/goldvarb.htm].

Sankoff, G. 2006. "Apparent time and real time". In: Brown, K. (ed.), Encyclopedia of language and linguistics (Vol. 1) (2nd ed.). Oxford: Elsevier. 110-116.

Sankoff, G. and H. Blondeau. 2007. "Language change across the lifespan: /r/ in Montreal French" Language 83(3). 560-588.

Sankoff, G. and S. Wagner. 2011. "Age grading in the Montréal French inflected future" Language Variation and Change 23(3). 275-313.

Walker, J.A. and M. Meyerhoff. 2006. "Zero copula in the Caribbean: Evidence from Bequia" American Speech 81(2). 146-163.

CIVIC AND CENTRAL INITIATIVES TARGETED AT PRESERVATION AND REVIVAL OF WILAMOWICEAN: A SOCIOLINGUISTIC STUDY

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ABSTRACT

The aim of this paper is to present the language policy[1] targeted at preservation and revival of Wilamowicean, undertaken by civic and central institutions. Also, the article presents a historical background of the town of Wilamowice, the linguistic situation of its ethnolect[2], typological information about the language, along with the phases and factors regarding the process of linguistic extinction.

Keywords: endangered languages, linguistic extinction, Wilamowicean, language policy

1. Introduction

The town of Wilamowice is located in the southern part of the Oświęcimska Basin in the Śląskie Province (Kondracki 1998). The settlement of Wilamowice was probably founded between 1250 and 1300 during the

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[1] According to Shohamy, language policy is "the primary mechanism for organizing, managing and manipulating language behaviours as it consists of decisions made about languages and their uses in society" (Shohamy 2006: 45).

[2] Androutsopoulos (Androutsopoulos 2000: 2). defines ethnolect as "a variety of the majority language (or host language) which constitutes a vernacular for speakers of a particular ethnic descent and is marked by certain contact phenomena".

greatest wave of German Colonization of Silesia. Groups of colonizers migrating to Eastern parts of Europe were of heterogeneous descent (German, Flemish, Dutch, Walloon, and even French). The name of the town was mentioned for the first time in chronicles from 1325. It may have been derived from English or Scottish names William or Willem, however, names such as Willem or Wilhelm were also popular in Germany and Flanders (Wicherkiewicz 1997: 21). According to the *Ethnologue*, Wilamowicean is classified as East Middle German language. As a representative of East Middle German languages it is closely related to Standard German, Upper Saxon and Upper Silesian.

2. Linguistic Extinction: Phases and Factors

The year of 1875 may be regarded as the breakthrough year in the history of Wilamowice. Then, the process of language death, which "is the loss of a language due to gradual shift to the dominant language in language contact situation" (Campbell 1994: 1961), began. The authorities of the Austrian-Hungarian Empire (during this time the region was a part of the Austro-Hungarian Empire) introduced teaching Polish language into the school curricula and local government institutions in Wilamowice. This is the first case of the language contact, which according to Thomason is "the use of more than one language in the same place at the same time" (Thomason 2001: 1), between Wilamowicean and Polish. According to the historians, these decisions signalled the start of the process of polonization of the town, thereby the process of linguistic extinction of Wilamowicean.

The Nazi occupation during the Second World War did not exert considerable influence on the linguistic situation of the region. The use of the language was not prohibited due to the fact that "all of the town inhabitants were assigned what was labelled as the second or the third category on the *Deutsche Volksliste*, so they could be treated as German citizens, with all rights and obligations of the latter" (Wicherkiewicz 1997: 17).

After World War II, Soviet repressions contributed to the process of linguistic extinction of Wilamowicean. Due to the fact that the Wilamowiceans were commonly regarded as Germans, their culture, tradition and language instilled hatred in the Soviets. What is more, the fact

that the citizens of Wilamowice claimed their Flemish or Anglo-Saxon origin did not prevent them from being deported to labour camps in the Ural and Caucasus Mountains (Wichierkiewicz 1997). Many citizens were forced to leave the town, some of them got arrested and imprisoned which resulted in confiscation of their properties. Faced with such oppressions, members of local the community decided to apply for a regulation banning the use of the language and traditional costumes. In March 1946, a local Catholic priest proclaimed the following "Herewith I have announced the death of the language and culture of Wilamowice" (Wicherkiewicz 2003: 12). Since that time, the process of linguistic extinction has begun because every attempt of using Wilamowicean was denounced and punished. The exact numbers representing the process of linguistic extinction can be found in Table 1.

Years	Percentage of the speakers
1880	92%
1890	72%
1900	67%
2001	4% (100 people)
2010	2% (about 70 people)

Table 1. Phases of linguistic extinction of Wilamowicean

3. Civic Initiatives

Various attempts at preservation and restoration of Wilamowicean can be discussed. One of the most important initiatives undertaken by members of the local community in Wilamowice concerns the activities of folk groups *Cepelia-Fil Wilamowice* supported by *Centre of Culture in Wilamowice*, and *Regionalny Zespół Pieśni i Tańca "Wilamowice"* [*The Regional Song and Dance Ensemble of Wilamowice*], which functioned under the auspices *Stowarzyszenie na Rzecz Zachowania Dziedzictwa Kulturowego Miasta Wilamowice "Wilamowianie"* [*The Association for the Preservation of the Cultural Heritage of Wilamowice 'Wilamowianie'*]. The performances of "*Wilamowice*" were broadcast on television and on the radio. Both groups promote culture (including language) by

performing regional songs and dances at many international contests and festivals. Moreover, the establishment of the Internet forum "*Wilamowianin – Wymysiöejer*" was created by the group of people interested in various aspects of the Wilamowicean culture and language. Another important activity held by civic institutions is the *Request for New Language Code Element in ISO 639-3*. Thanks to this request, Wilamowicean has been included in codes for representation of names of languages. The identifier for the language is *wym*[3]. A further initiative taken by individuals refers to a series of articles on grammar of Wilamowicean prepared by Alexander Andrason from the University of Iceland.

4. Central Initiatives

The European Union gives precise instructions as to protection and promotion of local and minority languages. All the directives can be found in the European *Charter for Regional or Minority Languages*, which was adopted in 1992. Poland signed the Charter in 2003. However Wilamowicean has not been listed among the languages to which regulations of the Charter apply. Due to a small number of speakers authorities should not be expected to accomplish all the requirements specified in the signed legislation. Despite all that, the state put some effort into promotion of the language. It helped to publish books devoted to the Wilamowicean culture, namely "*Strój Wilamowski*" [*The Wilamowicean Costume*] written (partly in Wilamowicean) by Elżbieta Teresa Filip from The Department of Ethnology of Museum in Bielsko-Biala and Tymoteusz Król. This particular publication aims at promotion of a very important part of the cultural heritage of Wilamowice which is its regional costume. What is more, the fact that the book was written partly in Wilamowicean points out that the language is still in use and even though it is not promoted directly, it is presented in publications about the culture of Wilamowice. Other works concerning the issue of the cultural heritage of Wilamowice are "*Strój Wilamowski – The Wilamowice Folk Costume*" and "*Katalog Stroju Wilamowskiego – oraz dywagacji kilka*" [*The Catalogue of Wilamowicean Costume – supplemented with several digressions*], both written by Jolanta

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[3] For more information visit: http://www.sil.org/iso639-3/default.asp.

Danek from the Centre of Culture in Wilamowice. The publication of these books was supported by The Centre of Culture in Wilamowice, Śląskie Voivodeship and the County Office of Bielsko – Biała. The Commune Council of Wilamowice was also the publisher of "*Wilamowice. Przyroda, Język, Kultura oraz Społeczeństwo Miasta i Gminy*" [*Wilamowice, its Nature, Language, Culture and the People of the Town and Commune*] which is a collection of academic works edited by Antonii Barciak. The publications refer to the cultural heritage of Wilamowice, still there have been no works concerning the issue of the endangered language published for a wider audience. The representatives of the local government should put more emphasis on actions concerning the preservation and revitalisation of the ethnolect in question. The turning point would be the collaboration establishment with local organisations and individuals who need support to undertake certain actions.

5. Conclusion

Wilamowicean is a language on the verge of extinction. Due to the fact that it is a part of national heritage, the actions targeted at preservation and revival of the language should be intensified. As regards the initiatives mentioned above, this paper is an attempt to prove that civic initiatives outnumber central ones. The implementation of the guidelines included in *European Charter for Regional or Minority Languages* can be a milestone as for the preservation of the language.

REFERENCES

Androstopoulos, J. K. 2000. From the streets to the screens and back again: on the mediated diffusion of ethnolectal patterns in contemporary German. [URL: http://rzuser.uni-heidelberg.de/~iandrout/papers/iclavedraft.html].
Campbell, L. 1994. "Language Death". In: Asher R. E. and J. M. Y. Simpson (eds), The Encyclopedia of language and linguistics (Vol. 4). Oxford/New York: Pergamon. 1960.

European Charter for Regional or Minority Languages. 1992. [URL: http://conventions. coe.int/treaty/Commun/QueVoulezVous.asp?NT=148&CL=ENG].

Kondracki, J. 1998. Geografia regionalna Polski [Regional geography of Poland]. Warszawa: Wydawnictwo Naukowe PWN.

Lewis, M. P. (ed.). 2009. Ethnologue: Languages of the world (16th ed.). Dallas: SIL International. [http://www.ethnologue.com].

Shohamy, E. 2006. Language policy: Hidden agendas and new approaches. Townbridge: The Cromwell Press.

Thomason, S. G. 2001. Language contact: An introduction. Edinburgh: Edinburgh University Press.

Wicherkiewicz, T. 1997. Language, culture and people of Wilamowice in the light of literary output of Florian Biesik: An ethnolinguistic study. Poznań: Wydawnictwo UAM.

Wicherkiewicz, T. 2003. The making of a language: The case of the idiom of Wilamowice, Southern Poland. Berlin: Mouton de Gruyter.

HUMANE AND GRIPPING VS. HOUSE M.D. AND PROFESSIONAL: STUDENTS' REACTIONS TO TWO MEDICAL WRITING STYLES

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ABSTRACT

This paper presents the reactions of medical students to two different modes of writing as reflected in case reports from British and American medical journals aimed at health professionals. The difference between the modes considered authorial and patient's presence. The questionnaire conducted reveals that while some students preferred the impersonal style by praising its succinctness and conciseness, others opted for the more personal one, claiming that it was more compelling and exemplified a more humane approach to the patient.

Keywords: medical discourse, case reports, students' reactions, authorial presence, patient's presence

1. Introduction

The language that medical professionals use in order to document their academic activities has been widely researched in recent years within the framework of specialised discourse analysis (Gotti and Salager-Meyer 2006; Gunnarsson 2009). It has become a common practice to perceive medical writing style as neutral, economical (Kenny and Beagan 2004: 1072) and "author-evacuated" (Geertz 1988), primarily due to the notorious use of the Passive Voice. It is a discourse where *operations are done*, *procedures carried out* and *diseases treated*. As such, therefore, it does not focus on the patient as an experiencing individual and his/her suffering (Ans-

pach 1988; Albert 2004; Macnaughton and Evans 2004). However, patient presence in medical texts has attracted scant attention in linguistic literature as, generally, medical texts are not associated with the process of the formation of values and attitudes towards patients. The lack of such studies may suggest that interaction in the doctor-patient dyad is the only medical practice in which ways of talking and thinking about patients are produced and reproduced. However, it is the present author's belief that the writing and reading of medical texts may also be an important factor affecting doctors' perception of patients. Also, the role of medical literature in the context of medical students and novices in medical culture should be stressed. For many of them, medical publications are not only obligatory reading and/or a source of knowledge but also the examples to follow when it comes to the appropriate register and style of communication. Medical students may treat such publications as the mode of writing which is widely used and accepted, and consequently, the one to be copied.

In this study, an attempt has been made to elicit the attitudes of medical students to two different modes of writing which can be found in case reports from professional medical journals.

2. Methods

What had to be taken into account in the sampling procedure was the fact that an applied questionnaire required reading of professional medical texts. Case reports that comprise the corpus were written by researchers working in clinics or other medical professionals, who are already established members of the medical profession for whom the mode of writing under study is part and parcel of their practice. Yet, although these researchers have the necessary expertise to read the texts, they were not chosen as subjects for the study. It was assumed that because of the fact that they have already internalised the discourse under examination, they would probably be unable to approach the form of texts in a critical manner. Also lay audience had to be excluded due to their lack of medical knowledge, thus a compromise between the two extremes was the choice of medical students. On the one hand, selecting students at a certain stage of medical education was to ensure that they have the basic knowledge to understand the texts under study. They were not expected to be specialists in the issues dealt there, yet they were supposed to know what they were reading about in general. On the

other hand, students of medicine are not established in the medical field yet and, consequently, have not internalised certain modes of writing. Far from claiming that students do not know the modes, it was assumed that if students do not publish or produce medical documentation on an everyday basis, they might be more critical of how patients are written about. In other words, it was believed that their medical knowledge sufficed to make some conclusions about the studied texts but, at the same time, their lack of medical practice ensured their unbiased approach to the studied discourse. What is more, the questionnaire was not aimed at checking students' comprehension of medical issues described or terminology used in the texts. It was particular formulations with the author/patient references that were under examination.

The study considered one case report from an international journal written in an impersonal mode. On the basis of this texts (Text 1), a second version has been prepared (Text 2), this time without references to the authors and patients. The changes involved removing author and patient references, or replacing them with the Passive Voice or other impersonal constructions. However, the modifications were made only in the sentences which dealt with medical procedures presented either as performed by physicians or on patients. It needs to be stressed that examples similar to Text 1 seem rather rare and what served as the altered version in this task, i.e. Text 2, is actually common practice. The text which was chosen for the study is presented below. Fragments in bold include the fragments of interest (Text 1) with their modified alternatives in brackets which appeared in Text 2. There were no other changes in the text.

*32-year-old man presented in March, 2003, with a purple nodule on his right elbow (figure). He had had a motorcycle accident in Bolivia the previous year, sustaining minor abrasions to the elbow. A purple mass developed at the same site months later, followed by similar nodules on the trunk. **He was otherwise asymptomatic and had no history of drug use. (There were no other (…) of drug use.). We found no palpable lymphadenopathy or hepatosplenomegaly. (No palpable lymphadenopathy or (…) were found.) We considered the diagnoses of cutaneous lymphoma, lupus vulgaris or deep fungal infection. (The diagnoses of (…) were considered.). His full blood count, urea and electrolytes, erythrocyte sedimentation rate, immunoglobulins, syphilis, yeast and HIV 1 and 2 serology, mycobacterial and fungal culture, and chest radiograph were***

all unremarkable. (Full blood count, (…) were unremarkable). His CD4 count was 621 (range: 775-1385) with a normal CD8 count. (CD4 count was (…).) We took skin biopsies which showed dense non-caseating granulomata in the lower dermis with no clonal proliferation. (Skin biopsies (…) were taken which showed (…).) We started itraconazole while awaiting cultures, but the patient stopped treatment after 14 days. (Itraconazole was started while (…).) 8 weeks later, he was admitted in an acute confusional state. Cerebral CT showed multiple space-occupying lesions in the right cerebral hemisphere with oedema, hydrocephalus and a midline shift. This was consistent with cerebral lymphoma, although infection could not be excluded. ***We did another skin biopsy which showed amoebic trophozoites within granulomata. (Another biopsy was done which (…).)****Balamuthia serology was strongly positive at a titre of 1:10 000 confirming disseminated Balamuthia mandrillaris infection.* ***We started co-trimoxazole, rifampicin, ketoconazole and azithromycin (500 mg daily) as well as dexamethasone (4 mg qds) for cerebral oedema. (Co-trimoxazole (…) were started (…).)*** *The patient deteriorated rapidly with swinging pyrexia of 41oC and died 2 weeks later, in September, 2003. Postmortem examination showed herniation induced by raised intracranial pressure. Smear of brain tissue showed B mandrillaris, which was isolated in culture at Birkbeck College, using human brain microvascular endothelial cells* (White et al. 2004).

In the questionnaire, the students were asked which text was more interesting, easier to read and which one they preferred. In the last two questions, the students could explain their choice.

The subjects were 202 medical students from Karol Marcinkowski University of Medical Sciences in Poznań in Poland – 174 third year Polish students and 28 second year international students. The respondents were given a questionnaire in which they were asked to read the two texts and answer questions pertaining to their own subjective opinion on the material. The questionnaire was administered during English classes on the school premises. Each time a given English teacher was contacted in advance to request the permission. The teachers were told that the questionnaire concerned the students' reactions to the medical texts for professionals. The same information was given to the students before the administration of the questionnaire. The very procedure was preceded by a pilot study. The answers in Polish were translated into English.

3. Results and Discussion

Fifty four per cent of students chose Text 2 as more interesting, while 32% Text 1. When it comes to which one was easier to read, 68% of the students said that it was Text 2, as opposed to 20% who chose Text 1. It was also Text 2 that was the preferred one for a greater number of respondents, i.e. 65%, as opposed to 20% who opted for Text 1.

Those who chose Text 1 claimed that it was easier because it was similar to a story, which made it simple to read, understand and to remember. One student added that it seems as if it had been told by a doctor. One person associated it with a newspaper story, whereas another person contrasted Text 1 with a text from a course book. To some, it was more interesting or gripping, and one subject even commented that he/she was curious how it would end. Other students pointed to a more direct character of the text, which enabled the reader to identify with the described patient and the situation ("makes you part of the diagnosis team"). As a result, the reader does not read "cold facts" but a story from the doctor's perspective. Yet another person maintained that the mode of writing of Text 1 suggested doctors' involvement in the treatment. Therefore, the use of personal pronouns seems to have made the readers notice not only the textual presence of the researcher but also of the patients described.

The supporters of Text 2 explained that the ease with which they read the text could be attributed to its precision and concision ("we do not get lost in the text") or that it pointed only to important facts. Others elaborated claiming that it simply did not centre on "unnecessary information concerning the history of this patient". Yet another person was more specific, writing that "bearing in mind masses of information a doctor faces, more compact forms are desired; phrases such as *we did* can be irritating and simply litter the text but, admittedly, they can make the text accessible to an average reader".

Furthermore, the subjects in favour of Text 2 either stopped short of calling it impersonal and formal or described it as scientific and professional. Many of them explicitly pointed to the Passive Voice as giving this impression, whereas others explained that it meant that "important information is at the beginning of the sentences". One of the supporters of Text 2 said that "the patient's history is a document and it should be written in an official language". This may suggest that, according to the informants, the Passive Voice is THE linguistic means favoured in medical literature

(in comparison to the text from a course book) and the only mode of writing ("I got used to such constructions in medical texts"). The informants also made mention of medical publications. Although they are not established researchers, they seem to know well how a scientific paper is written when they say that, e.g., the mode of writing in Text 2 is "suitable for a scientific paper". Another subject admitted that although he/she preferred Text 1, he/she "doubts whether personal pronouns are professionally used". This only proves how well-established this mode of writing is, even among those who are at this early stage of medical education. Consequently, for those subjects, impersonal and fact-oriented means professional, i.e. appropriate for scientific publication. This observation is especially interesting in the light of the fact that it is Text 1 that is the original one, while Text 2 is its modified version. It needs to be stressed, however, that examples similar to Text 1 seem rather rare and what served as the altered version in this study is actually common practice. Of note is also that one of the subjects associated Text 2 with *House M.D.* series, whose main character is notorious for his unceremonious and abrupt behavior towards patients, treating them rather as interesting cases of diseases. In the case of Text 2, this comparison is very telling.

4. Conclusion

The results show that in spite of the fact that 65% of the students selected the text which textually abstracts from the patient/the authors, claiming that lack of the references of interest contributes to the appropriateness of the style and its reader-friendliness, 25% of the people were in favour of the text referring to patients/the authors directly. In other words, not all students evaluated the texts in terms of their usefulness and appropriateness. Although the majority chose the more impersonal text, a number of respondents acknowledged the second text as an alternative and were able to notice the effect that the presence of patient/author references makes. For some the case described was something they could identify with, for others it represented a more humane approach to the patient. As a result, for these subjects it was more than an interesting case to analyse. Such a text is not about an object but about a living person, an ill one. What is more, the answers given by the respondents show that already at this stage of their socialisation into medical culture, they seem to have clear views on what such texts should look like.

REFERENCES

Albert, T. 2004. "Why are medical journals so badly written?" Medical Education 38(1). 6-8.

Anspach, R. R. 1988. "Notes on the sociology of medical discourse: The language of case presentation" Journal of Health and Social Behaviour 29(4). 357-375.

Geertz, C. 1988. Words and lives: The anthropologist as author. Palo Alto: Stanford University Press.

Gotti, M. and F. Salager-Meyer (eds). 2006. Advances in medical discourse analysis: Oral and written contexts. Bern: Peter Lang.

Gunnarsson, B. L. 2009. Professional discourse. London: Continuum.

Kenny, N. P. and B. L. Beagan. 2004. "The patient as text: A challenge for problem-based learning" Medical Education 38(10). 1071-1079.

Macnaughton, J. R. and M. H. Evans. 2004. "Medical humanities and medical informatics: An unlikely alliance? Is there a role for patients' voices in the modern case record?" Medical Humanities 30(2). 57-58.

White, J. M., R. D. Barker, J. R. Salisbury, A. J. Fife, S. B. Lucas, D. C. Warhurst and E. M. Higgins. 2004. "Granulomatous amoebic encephalitis" The Lancet 364(9429). 220.

PERSUASION AND CULTURE: THE PRAGMATIC ROLE OF INTERPERSONAL METADISCOURSE IN SPEECH

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ABSTRACT

Based on contrastive textual analysis of speech, this paper seeks to explore the role of interpersonal metadiscourse markers in attaining persuasion through the use and linguistic form of hedges, boosters, attitude markers, self-mention and engagement markers in English and Macedonian excerpts from talk shows. The findings suggest that both Macedonian and American speakers use these markers but that there are variations as to their distribution in the spoken text and audience's perception of their persuasive power.

Keywords: metadiscourse, interpersonal markers, persuasion, speech

1. Introduction

Metadiscourse, a term coined by Zellig Harris in 1959 (in Hyland, 2005: 3), offers a framework for understanding communication as social engagement (Hyland 2005: 4) and refers to the features speakers/writers use in order to guide listeners'/readers' perception of their message and persuade them to share and accept their opinions. There have been opposing views as to whether metadiscourse is linked to the propositional content or is just a rhetorical, stylistic and peripheral feature which is secondary to it. Although many linguists have treated it as distinct from the propositional content (Vande Kopple 1985; Crismore 1989), several

linguists (Ifantidou 2005; Ädel 2006) have argued against this and tried to redefine the term[1].

This paper focuses on the interpersonal dimension of metadiscourse in spoken texts. The use of interpersonal metadiscourse markers shows that a speaker/writer is seeking to establish a relationship with the audience and does not simply state unmediated facts. Speakers' use of interpersonal metadiscourse markers is crucial for establishing contact with the audience and persuading them to accept their opinions without rudely imposing them. Although there is plenty of research on the use of metadiscourse in writing (Crismore et al. 1993; Hyland 1998, 2005; Dafouz-Milne 2007; Ädel 2006), metadiscourse in speech has been analysed by only a few researchers (Shiffrin 1980; Belles-Fortuno 2008). Speech is considered to be less complex, more implicit, contextualized, personally involved and less organized and planned than writing (Biber 1988: 47).

Several authors (Vande Kopple 1985; Crismore et al. 1993; Hyland 1998, 2005) have tried to define the categories of markers that contribute to the interpersonal relation between the speaker/writer and listener/reader. According to Hyland (2005: 45), all metadiscourse is interpersonal i.e. it refers to interactions between the writer and reader. In this paper, we adopt his categorization of interpersonal metadiscourse (2005: 49) which involves: *hedges* (markers which withhold commitment and open dialogue), *boosters* (which emphasize certainty and close dialogue), *attitude markers* (which express the speaker's/writer's attitude to a proposition), *self-mentions* (which are explicit references to the author/speaker), and *engagement markers* (which explicitly build relationship with the audience). The present study contrasts and compares the use of these interpersonal markers in a specific speech genre (talk shows) in two different languages and cultures, Macedonian and American. Almost all studies on metadiscourse focus on its use in various genres and cultures. Cultural factors have the potential to influence perception, language, learning and communication, and particularly the use of metadiscourse (Hyland 2005: 114). This is, as Hyland states (2005: 114), "partly because our cultural values are reflected in and carried through language". While the L1

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[1] For instance, according to Ifantidou (2005) metadiscourse is either *inter-textual* (other texts drawn upon a single text) or *intra-textual* (reference is made to other parts of the same text). In her opinion, at a semantic level, metadiscourse contributes to the propositional content of utterances and at a pragmatic level it is indispensable to the effective interpretation of academic discourse. According to Ädel (2006), metadiscourse can be *personal* or *impersonal*.

speaker speaks from the perspective of his/her own culture, L2 listener listens from a completely different context.

2. Methods

The corpus compiled for this study comprises 9 excerpts from various American and 9 excerpts from various Macedonian talk shows. The spoken texts cover topics of social interest for both countries: health system, media, sport, culture, education, drugs. The length of each ranges from 2 to 3 minutes. The speakers' names or any other information which could have influenced the assessors' decision were not presented. The texts, a total of 18, account for 7498 words (3344 in the Macedonian corpus and 4154 in the American corpus).

The paper analyses the use of interpersonal markers in these excerpts, i.e. the use of hedges, boosters, attitude markers, self-mentions and engagement markers. Furthermore, in order to examine the correlation between the use of these markers and the spoken texts' persuasive effect, 40 native Americans (students at Arizona State University in the USA) were asked to rank the persuasive effect of each American excerpt on a scale from 1 to 5 (1– the speaker is not persuasive at all, to 5– the speaker is exceptionally persuasive). 40 native Macedonians (students at St. Kliment Ohridski University in Macedonia) were asked to do the same with the Macedonian excerpts. The students were further asked to explain the reasons for their decisions. The questionnaire was adopted and adapted from Emma Dafouz-Milne's (2008) model and contained three basic criteria for evaluating the persuasive effect: *rational appeals* (which refer to logical lines of reasoning – offering argumentation by example, illustration and model, analogy and metaphor), *credibility appeals* (which refer to speaker's authority and competence and include the speaker's personal experience, knowledge of the subject and awareness of audience's values) and *affective appeals* (which refer to the respect for the listeners' viewpoint, using concrete and charged language, vivid pictures and metaphors to evoke emotion and sentiment in the audience). Metadiscourse contributes to these three types of appeals which are rooted in the Aristotelian tradition and have characterized persuasive discourse since the time of ancient Greece. Aristotle's *Rhetoric* (translated 2010) is regarded by most rhetoricians as the most important work on the art of persuasion ever written.

3. Results

Before she started analyzing the results, the author made some initial hypotheses. The expectations were that there would be some difference in the use of the various interpersonal markers by American and Macedonian speakers mostly based on their cultural differences, and that the more interpersonal markers used in the spoken texts, the more persuasive they would be for the audience.

3.1. Interpersonal markers

As to the distribution of hedges, the analysis showed that modal auxiliary verbs (English: *may, might, can, could, would, should*; Macedonian: *може, би, треба, ќе*) and modal lexical verbs (English: *seem, appear, believe, assume, suggest*; Macedonain: *изгледа, се чини, верува, претпоставува, предложува*) were the most frequently used hedges by both American and Macedonian speakers. Although the corpus was very small, one can conclude that Macedonian speakers – MSs. – used more modal auxiliary verbs (about 0.4% more than American speakers – Ass.) and ASs. more modal lexical verbs (0.2% more than MSs.) to hedge their propositions. Both American and Macedonian speakers used almost the same amount of modal adverbs (English: *perhaps, possibly, probably*, Macedonian: *најверојатно, можно*) and adjectives (English: *possible, probable, un/likely*; Macedonian: *можно, (не)веројатно*). ASs. appeared to use more approximators of degree, quantity, frequency and time (0.36% more than MSs.) (English: *approximately, roughly, often, generally*; Macedonian: *приближно, грубо земено, често, воглавно*). However, the overall analysis showed that although the number of hedges used by ASs. was higher in comparison to MSs., and the difference in use was not considerably significant.

The analysis on the use of boosters (English: *undoubtedly, certainly, truly, firmly, of course, indeed, surely, very*; Macedonian: *несомнено, секако, вистински, екстремно, многу*) showed that MSs. use them more frequently (about 0.20%) than ASs. It seems that MSs. use more emphatics rather than hedges when aiming to persuade the audience in their claims. On the other hand, ASs. hedge their statements more to mitigate their force and leave space for further debate and negotiation. This might be an indication of a cultural difference and needs further research on a larger corpus.

As regards the use of attitude markers, modal deontic verbs (English: *may, might, will, should*; Macedonian: *може, мора, ќе, треба*) were the most frequently used ones. The analysis showed that they are used more frequently by MSs. (about 0.57% more than ASs.). There was no significant difference in the use of attitudinal adjectives (English: *It is absurd/ surprising/, shocking*; Macedonian: *апсурдно е, изненадувачки е, шокантно е*) and adverbs (English: *unfortunately, fortunately, remarkably*; Macedonian: *за жал, за среќа, значајно*) between MSs. and ASs. Results showed that MSs., in general, use relatively more attitude markers than ASs., which adds to the previous conclusion that Macedonians use more affective language to achieve persuasion.

The most frequently used engagement markers were the pronouns. The analysis showed that ASs. use significantly larger number of pronouns when speaking (4.11% more than MSs.).

ASs. used more self-mention markers (English: *I, me, mine, exclusive we, our, ours*; Macedonian: *јас, мое, мене, ние, наше*), about 1.25% more than MSs. A more detailed analysis, however, reveals that in the Macedonian language, verbs themselves are marked for person. Therefore, if we take this into consideration, it seems that MSs. refer to themselves as frequently as ASs. do when speaking. It's just not that explicit.

3.2. Persuasive effect of the texts

As for the persuasive effect of the spoken texts on the audience, the results showed that in both Macedonian and English corpus, the higher the number of interpersonal markers used in a text, the less persuasive the text was (See Figures 1 and 2). The respondents mostly referred to the presentation of the arguments and the speaker's use of facts and examples, vivid language and emotion in deciding on how persuasive each speaker was in the separate excerpts.
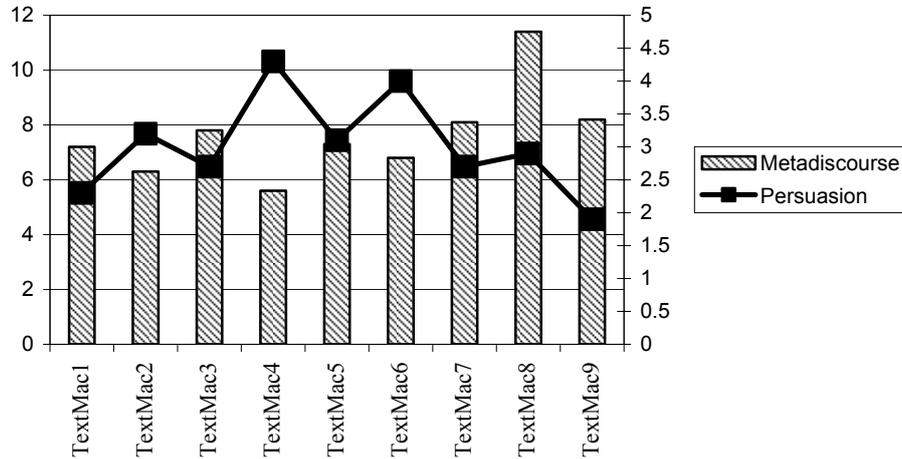
Figure 1. Use of interpersonal metadiscourse and its persuasive effect in the Macedonian corpus
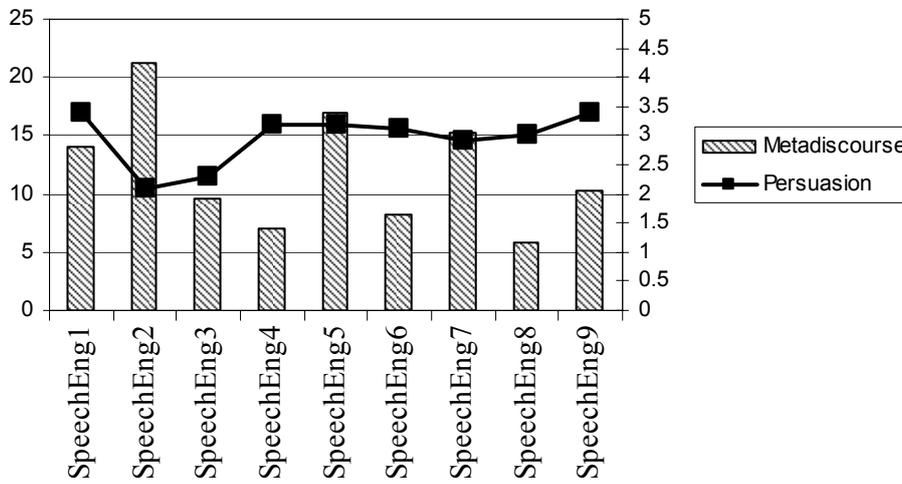
Figure 2. Use of interpersonal metadiscourse and its persuasive effect in the English corpus

4. Discussion

These small-scale research results showed some slight difference in the use of interpersonal markers between MSs. and ASs. As has been mentioned before, the results from the analysis showed that in their attempt to persuade the audience, MSs. used more boosters and attitude markers, while ASs. used more hedges and engagement markers to achieve the same goal. This might be an indication of a cultural difference, but, in order to confirm this initial hypothesis, a more elaborate and exhaustive research is needed.

As for the persuasive effect of the spoken texts on the audience, the results obtained were totally different from what was expected, proving the second hypothesis completely wrong. The results differ from Dafouz-Milne's (2008: 104), whose analysis of the persuasive effect of metadiscourse markers on editorials' readers showed that the texts with a balanced number of metadiscourse markers were the most persuasive. However, it should be mentioned that Milne's analysis incorporated both interpersonal and textual metadiscourse markers. Had textual markers been included in the present analysis, the results might have been different.

5. Conclusion

This paper has presented quantitative and qualitative research on the use and persuasive effect of interpersonal metadiscourse markers in a corpus of American and Macedonian excerpts from talk shows. The research showed that there were some indications of cultural influence on the choice of markers used in speech. Interestingly enough, the research also indicated that the more markers speakers use, the less persuasive they are. However, these results might be different if one takes textual metadiscourse markers into consideration when determining the overall persuasive effect of a spoken or written text. Finally, it is important to note that this was a small-scale research which only gives some insight into matters which need further and deeper examination.

REFERENCES

Aristotle. 2010. Реторика [Rhetoric]. Скопје: Ѓурѓа.

Ädel, A. 2006. Metadiscourse in L1 and L2 English. Amsterdam: John Benjamins.

Belles-Fortuno, B. 2008. A spoken academic discourse contrastive study: Discourse markers in North-American and Spanish lectures. Spain: Asociación Española de Lingüistica Aplicada.

Biber, D. 1988. Variation across speech and writing. Cambridge: Cambridge University Press.

Crismore, A. 1989. Talking with readers: Metadiscourse as rhetorical act. New York: Peter Lang.

Crismore, A., R. Markannen and M. Steffensen. 1993. "Metadiscourse in persuasive writing: A study of texts written by American and Finnish university students" Written Communication 10(1). 39-71.

Dafouz-Milne, E. 2007. "The pragmatic role of textual and interpersonal metadiscourse markers in the construction and attainment of persuasion: A cross-linguistic study of newspaper discourse" Journal of Pragmatics 40(1). 95-113.

Hyland, K. 1998. "Persuasion and context: The pragmatics of academic metadiscourse" Journal of Pragmatics 30(4). 437-455.

Hyland, K. 2005. Metadiscourse: Exploring interaction in writing. Bodmin: MPG Books.

Ifantidou, E. 2005. "The semantics and pragmatics of metadiscourse" Journal of Pragmatics 37(9). 1325-1353.

Longo, B. 1994. "The role of metadiscourse in persuasion" Technical Communication 41(2). 348-352.

Schiffrin, D. 1980. "Metatalk: Organisational and evaluative brackets in discourse" Sociological Inquiry 50. 199-236.

Vande Kopple, W. 1985. "Some explanatory discourse on metadiscourse" College Composition and Communiaction 36. 82-93.

THE (bAn) VARIABLE IN THE SPEECH OF
FIVE- AND TEN-YEAR-OLD HUNGARIAN CHILDREN

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ABSTRACT

This paper investigates how five and ten-year-old children use the (bAn) sociolinguistic variable (the inessive case marker ending) in Hungarian. The aim is to study whether there is differentiation in the use of this variable relating to age, gender and residence. The research sheds light on gender-difference in the use of the (bAn) variable by the five-year-olds, and different patterns can be seen in the two age groups.

Keywords: child language variation, Hungarian, sociolinguistics

1. Introduction

The study of child language variation has become more central in sociolinguistic research recently. Numerous studies have found that pre-school children already show variation according to gender, social background or style (Fischer 1958; Labov 1989; Ladegaard–Bleses 2003; Mátyus 2008; Romaine 1984), but these studies also emphasise that more visible gender differentiation occurs only later, mainly in (pre-) adolescence. At the same time, Chambers (2003: 171) argues that speakers use socially significant variants throughout the process of language acquisition.

No studies have investigated so far whether variation according to gender concerning the use of sociolinguistic variables occurs in the speech of Hungarian children. The aim of this paper is to study how five- and ten-

year-old children in Mindszent (a small rural town in southern Hungary) and Szeged (a county town in southern Hungary) use the (bAn) sociolinguistic variable, the inessive case ending suffix in Hungarian morphology.

In Hungarian, (bAn) is the inessive case ending of nouns as in ház-ban 'within a house' or kert-ben 'within a garden'. Letter A in the suffix can either stand for a (ban), or for e (ben), depending on vowel harmony: the vowels of the stem determine the vowel of the suffix. The variable (bAn) has two variants: [bAn] which is considered to be the standard variant, and the non-standard [bA] variant (Váradi 1995-96: 297-8).

In adult speech, this variable has been studied using several methods. The grammaticality judgement tests of the Hungarian National Sociolinguistic Survey show that the use of the (bAn) variable is stratified by sex and residence: informants from cities chose the standard variant more often than those from large villages, and in both residence groups women favoured the standard variant more than men (Kontra 2003: 93).

Studying the guided conversation data from the Budapest Sociolinguistic Interview-2 (BSI-2) database, (bAn) shows variation according to occupation groups – with the highest percentage of the standard [bAn] variant in the teachers' group (59.57%) and the lowest among the factory workers (6.98%): gender variation could not be studied in this corpus (Matyus 2011: 309).

According to the role-model hypothesis children model on their same-sex parents and same-sex peers, thus it is reasonable to expect a rate of gender variation similar to the adult pattern: we expect girls to use the standard [bAn] variant more frequently than boys, and children from Szeged to use it more often than children from Mindszent. Studying the past tense morphology of 4-, 6- and 8-year-old Danish children Ladegaard and Bleses (2003) found gender differences in all the three age groups. In their study the informants' use of vernacular forms increased with age, and gender difference was greater with the older children.

On the basis of findings from previous research I hypothesies that

1. in situations, where the interlocutor (i.e., the interviewer) is more standard than the informant, girls will use the standard form more often than boys from the same age group, i.e. girls will increase their use of the standard variants.

2. in Szeged the rate of the standard will be higher than in Mindszent – for both girls and boys.
3. ten-year-olds will use the standard variant more often than five-year-olds.
4. sex-difference will be higher among ten-year-olds than among five-year-olds.

2. Method

2.1. Participants

The present study investigates the language use of 40 children, 20 five-year-olds and 20 ten-year-olds. The children are drawn from two residences: Mindszent and Szeged. Mindszent is a small town in southern Hungary, with about 7500 inhabitants. During my previous research in Mindszent, I found that most of the inhabitants work in some branch of agriculture, and the rate of unemployment is well above the national average. As for the education level of the parents of children who attend the kindergarten, most of them have some kind of vocational training, very few finished secondary grammar school, and even less parents attended college or university. One reason for this situation may be that there are very few job opportunities in the neighbourhood, so most of the better educated young people move to bigger towns. According to teachers at the kindergarten, most children still acquire the regional dialect as their vernacular, and its prestige is quite high. Thus,, although quite a big settlement, Mindszent resembles a large village, not a town. The other town, Szeged is the centre of the Csongrád county with 170.000 inhabitants.

2.2. Procedure

The children were tested in their kindergartens/schools but in a separate room. A picture description task was used. Twelve cartoon pictures were presented to the children, and they were asked to talk about each one. If this free talk did not result in a sufficient amount of tokens, extra *Where is...? Where can you find...?* questions were asked by the interviewer – this was especially needed with younger children. For short periods with some participants, this picture description task sometimes changed into a picture-based free conversation.

2.3.   Recording and transcription

The children were recorded for approximately 20 to 30 minutes, in total 20 hours of speech was collected. Recordings were made with Olympus WS-310M digital voice recorder, and transcription was made with the help of Olympus AS-4000 PC Transcription Kit. Statistical analysis was performed using SPSS.

3. Results and discussion

In total 2018 tokens were collected from approximately 20 hours of recording. Table 1 presents the results of the study. The participant-code can be found in the first column. In the following section, participants are identified with abbreviations denoting their age, residence (M for Mindszent, SZ for Szeged), and sex (M for male, F for female). So, for example, the abbreviation 5MM stands for five-year-old Mindszent Male participants.

Participant	(bAn)	[bAn] standard	[bA] non-standard	Rate of standard tokens
5MF	350	234	116	66.86%
5MM	371	105	266	28.30%
5SZF	425	320	105	75.29%
5SZM	459	240	219	52.29%
5 total	1605	899	706	56.01%
10MF	101	61	40	60.39%
10MM	100	22	78	22%
10SZF	111	62	49	55.85%
10SZM	101	66	35	65.34%
10 total	413	211	202	51.08%
TOTAL	2018	1110	908	55%

Table 1. Findings of the research for all informants

The table shows that among the five-year-olds both in Mindszent and Szeged, girls used the standard variant of the (bAn) variable more often than boys (66.86% for Mindszent girls, 28.30% for boys; 75.29% for Szeged girls, and 52.29% for boys). However, the difference between the

"rate of the standard" of the production of boys and girls was much sharper in the Mindszent group (38.56%) than in the Szeged group (23%). (These results are not significant, using an independent samples t-test: Mindszent: t=1.907, p=0.093; Szeged: t=1.264, p=0.242).

If only sex is considered in the same age group, without reference to residence, five-year-old girls used the standard variant of the suffix at a rate of 71.48%, while for the boys this number was 41.57% (t=2.271, p=0.036).

The results also demonstrate that the participants (boys and girls together) from Szeged chose the standard variant more often than participants from Mindszent, with 63.35% standard tokens produced by the former and 47.02 produced by the latter (t=1.009, p=0.326).

However, the ten-year-olds show a different pattern: in Mindszent, girls used the standard variant much more often than boys (60.39% for the girls and 22% for the boys), just like the five-year-olds, but in Szeged boys had a higher rate of standard tokens (65.34% for boys and 55.85. for girls). These results are not significant, either: Mindszent: t=1.555, p=0.159; Szeged: t=0.506, p=0.626. If residence is not considered, girls used the standard variant at a rate of 58.01%, while the boys used it at a rate of 43.56% (but this result is not significant). Here the difference between girls and boys was much smaller than in the younger age group. (t=0.585, p=0.566). The ten-year-old participants (boys and girls together) from Szeged used the standard variant more often (60.66%) than interviewees from Mindszent (41.29%). (t=1.117, p=0.279).

Returning to the hypotheses, I assumed that in situations where the interlocutor (the interviewer) is more standard than the child, girls would use the standard form more often than boys from the same age group. This is true for three groups out of the four (5M, 5SZ, 10M), but is not true for the ten-year-old girls in Szeged. However, as most factors did not have a statistically significant effect on the use of the variable, I joined some groups together for a further analysis. This way the results show that among the five-year-old informants sex statistically significantly affects the use of the (bAn) variable.

According to the second hypothesis in Szeged the rate of standard would be higher than in Mindszent for both girls and boys, but just as with the previous hypothesis, tje ten-year-old Szeged girls show a lower

rate of standardness than ten-the year-old girls from Mindszent. Further research is required to determine why the 10SZF group is so different.

The ten-year-olds did not use the standard variant more often than the five-year-olds. The last hypothesis, saying that sex-difference will be higher among ten-year-olds than among five-year-old, was also disproved.

As opposed to the findings of Ladegaard and Bleses (2003), in the present study the children's use of vernacular forms did not increase with age. Different picture-sets were used with the two age groups in this study, and the task itself meant obviously different things to the five- and ten-year-olds. For the younger informants it was like a question-answer process, whereas for the older ones it was more like a picture description. These two differences may well have accounted for the differing results of the two studies.

Further research with the same methodology for all age groups could provide more precise results.

4. Conclusion

In my study I examined the use of the (bAn) sociolinguistic variable by 40 five- and ten-year-old informants in Mindszent and Szeged. Although most of the results were not significant, the findings of the mass categories suggest a clear gender-dependence, and also a great difference according to residence. However, the patterns in the two age groups are quite different, and in some cases not in line with the adult data: among the five-year-old children there is a larger difference between the sexes than there is in adults. These results are rather surprising, assuming that mothers serve as the most important models for both boys and girls during the early stages of language acquisition, which would suggest that the patterns of boys and girls should be closer to each other than the patterns of men and women.

Further examinations would surely provide us with a more detailed picture and help to understand how children acquire variant sociolinguistic patterns.

REFERENCES

Chambers, J. K. 2003. Sociolinguistic theory: Linguistic variation and its social significance (2nd ed.). Oxford: Blackwell.

Fischer, J. L. 1958. "Social influences on the choice of a linguistic variant" Word 14. 47-56.

Kontra, M. (ed.). 2003. Nyelv és társadalom a rendszerváltáskori Magyarországon [Language and society in Hungary at the fall of communism]. Budapest: Osiris Kiadó.

Labov, W. 1989. "The child as linguistic historian" Language Variation and Change 1(1). 85-94.

Ladegaard, H. and D. Bleses 2003. "Gender differences in young children's speech: The acquisition of sociolinguistic competence" International Journal of Applied Linguistics 13(2). 222-233.

Mátyus, K. 2008. "Ötéves gyerekek és a (bVn) változó [Five-year-old children ant the (bAn) variable]". In: Váradi Tamás (ed.), II. Alkalmazott Nyelvészeti Doktorandusz Konferencia kötete.

Mátyus, K. 2011. "-ba, -ban elméletben és gyakorlatban. A (bAn) változó variabilitása a BUSZI-2 öt foglalkozási csoportjában [The variability of (bAn) in the five quotas of the BSI-2 corpus]". In: Hires-László K., Z. Karmacsi and A. Márku (eds), Nyelvi mítoszok, ideológiák, nyelvpolitika és nyelvi emberi jogok közép-európában elméletben. és gyakorlatban. A 16. Élőnyelvi Konferencia előadásai. Budapest/Beregszász: Tinta könyvkiadó. II. Rákóczi Ferenc Kárpátaljai Magyar Főiskola Hodinka Antal Intézete. 303-312.

Romaine, S. 1984. The language of children and adolescents: The acquisition of communicative competence. Oxford: Basil Blackwell.

Váradi, T. 1995/96. "Stylistic variation and the (bAn) variable in the Budapest sociolinguistic interview" Acta Linguistica Hungarica 43: 295-309.

LANGUAGE & TECHNOLOGY

POLISH DERIVED EXPRESSIVE ADJECTIVES:
A CORPUS-BASED STUDY

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ABSTRACT

The paper examines productivity of four Polish Word Formation Rules which derive so-called expressive adjectives. What makes them an interesting object of study is a considerable (for near-synonymous Word Formation Rules) number of suffixes. Thus we can observe different degrees of their productivity, but also preferences in the choice of certain lexemes to join one of the suffixes. The study is based on the National Corpus of Polish (Narodowy Korpus Języka Polskiego, NKJP).

Keywords: morphology, word formation, productivity, corpus linguistics, National Corpus of Polish

1. Introduction

In the course of recent twenty years corpora have become an important source of empirical data for word-formation studies. There are several reasons for this turn; let us name just two of them. Due to the fact that the study of word formation could never rely exclusively on the competence of a native-speaker, dictionaries were consulted as a source of data. A corpus can serve as a source of derived lexical items which are to be analyzed and is no worse as a source than a dictionary. Strictly speaking, small corpora are almost as good as a lexicon. Large corpora show considerable advantages over dictionaries. The latter usually do not provide an exhaustive source of vocabulary. Normally

lexicographers exclude lexical material which is derived by highly predictable word-formation rules (henceforth WFR), such as English nouns derived with the suffix-*ity* or Polish diminutives derived with the suffix -*ek*. While small[1] corpora do not necessarily provide a more extensive list of words compared to large dictionaries, the number of lexical items gathered from a large corpus (especially in the case of so to say "obviously" derived words) can considerably outnumber the data gathered from a wordbook.

Still, even a small corpus provides the kind of data which is normally unavailable from a dictionary. It is the information about the frequency of a given word as well as of a given morpheme. This kind of information combined with a list of lexical items derived by certain WFR can in turn tell us much more about productivity than such a list alone.

This approach, which takes into consideration not merely the structure of the lexicon, but also the spread of words in texts (i.e. in corpora), was initiated by Baayen (1991, 1992; Baayen and Lieber 1991).

The aim of this study is to examine four Polish word-forming affixes very similar in meaning. Comparing four similar suffixes showing similar semantics and similar distribution give us a rare opportunity of observing how they "compete" for joining the same base and for emerging in texts.

These suffixes are -*utki, -usieńki, -uteńki,* and -*eńki.* They combine with adjectives to form adjectives with similar meaning, however the feature they describe is more "intensive" than the meaning denoted by its base. This very vague definition is the only commonly accepted one. In fact, we have to agree that the additional meaning created by the derivational process is not clear at all. What is more, as Bogusławski (1991) correctly points out, it is not easy to distinguish between the change of the meaning associated with the WFR and pragmatic factors determining the choice between the simplex and derived word.

Due to this vague meaning, but also to their rather marginal importance for the lexicon, these WFRs have not attracted much attention yet. Syntheses of Polish derivation, such as Kowalik (1977), Kallas (1998) and Szymanek (2010), devote only brief chapters to this topic.

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[1] I do not want to go into detail what is a "small" or a "large" corpus. It is, however, worth mentioning that the first machine-readable corpus of Polish, the corpus which served as an empirical basis for the frequency dictionary of modern Polish, contains 0.5 million tokens and ca. 35 000 types, including proper names.

2. Qualitative analysis of the four WFRs

As mentioned above, the WFRs in question operate over adjectives. One of the suffixes, namely *-eńki,* can adjoin only to roots ending with a sequence of a vowel and a (predominantly palatal) consonant (Kowalik 1977). There are also semantic limitations on possible base words, which will be discussed below.

The status of two of the four WFRs, namely *-utki* and *-eńki* is clear. The status of the WFRs *-uteńki* and *-usieńki* is somewhat dubious. The WFR *-uteńki* can be treated as an effect of the two above mentioned WFRs operating successively. Under this interpretation *cichuteńki* 'quiet'[2] is derived from *cichutki* and the latter from *cichy* (*cichy → cich-utki → cichut-eńki)*. This interpretation is supported by the fact that the words in *-uteńki* share a string (*-ut-*) with the words ending in *-utki.* At the same time the suffix *-eńki* exists on its own.

There is, however, a counterargument to this approach: there is no derivational suffix *-ki* in Polish. Kallas (1998) treats *-uteńki* as an "augmented" suffix. We shall adhere to this opinion not so much because of morphological arguments (which are in fact rather convincing), but due to the observation that our data attest only four words ending with *-utki* which are bases for words formed with *-uteńki.* In other words, postulating derivation of the words with *-uteńki* from words ending in *-utki* implies derivation mainly from unattested lexical items.

Whereas one can waver over the status of *-uteńki,* there are much stronger arguments in favor of accounting for the structure of words with *-usieńki* by treating them as adjectives cyclically derived from adjectives ending in *-usi.* However such adjectives are very scarcely represented in the corpus: actually there are altogether three such words (*malusi* 'small', *milusi* 'nice', likable (person)' and *ładniusi* 'nice', 'pretty'). Kallas (1998: 506) assigns *-uś-* the same status as *-ut-* namely an "augmentation". Nagórko (2001: 179) considers *-ut-* to be an infix.

There is also another reason why we shall treat *-uteńki* and *-usieńki* as single derivational affixes. One of the objectives of this paper is to exam-

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[2] As English has no means to distinguish between *cichy* 'quiet' and *cichutki* : *cichuteńki* : *cichusieńki* in this paper I gloss most Polish words with an English translation of the basic word. One has to bear in mind, however, that such a gloss does not reproduce the full meaning of the word.

ine the distribution of word forming affixes with same or similar meaning. As we shall point out, these WFRs behave in their own way.

3. Productivity

Productivity – a central concept in word formation – can be understood in different ways. Intuitively it is the ability of a given WFR to create a new word. Traditionally it is understood as simply the number of types created by a WFR; let us call it P(type). With this approach a hapax legomenon and a well established word are equal. The approach does not distinguish between central and marginal phenomena in word formation. As we will see, it is incapable of singling out some words which are on the one hand attested by the corpus, and whom, on the other hand, linguistic competence (at least mine) finds hardly acceptable. What is more, the approach does not distinguish between extinct WFRs and those which are still in use.

Productivity can be also understood as a proportion of words created with a given WFR to the overall number of words which can serve as the base for derived words. In the case of our data it would mean the proportion of the number of all adjectives and the number of adjectives derived by one of the WFRs. Of course if the WFR is more restrictive (for example it operates only on loanwords), one should take into account only the adjectives satisfying such restrictions. Baayen and Lieber (1991) point out that this approach is problematic, for the lexicon is an open subsystem of the language and we can never say what the "true" number of adjectives is. Of course we could operationalize the question by assuming that the number of all adjectives in the corpus is the "true" number of adjectives. This is, however, hardly feasible, especially in case of highly restrictive WFRs, which have to be manually selected. We should also bear in mind that a non-negligible number of types of any corpus is formed by misspelled words[3].

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[3] This might suggest that the corpus based data are extremely misguiding. The fact is that misspelled words are relatively rare and if one is interested in typical phenomena, they play a marginal role. However, every misspelled word (artificially) raises the overall number of types in the corpus. If a hapax legomenon is as important as a highly frequent word the picture is skewed.

A measure typically used in corpus linguistics is the type/token ratio (TTR)[4]. In the case of word formation it will tell us how frequent on average the words formed by a given WFR are. A high TTR may indicate a) a low number of types b) high number of tokens representing individual types. This is characteristic of an unproductive WFR, that is WFR which is scarcely used to coin a new word. In fact, this approach is a combination of the first approach and the quantitative data of the corpus. We shall call it P(ttr).

A third concept was proposed by Baayen (1993). The underlying idea is that, out of two WFRs, the more productive is the one which would rather be chosen to coin a neologism. This in turn is an important indicator of the role played by a WFR in the mental lexicon. A high number of neologisms means that a speaker can easily add a derivational affix to a base and a listener can easily divide a word which is new to him into the base and the affix and reconstruct the meaning of the complex word on the basis of the meaning of the morphemes which form it. That is why this approach better describes productivity than P(type). It has also another advantage over P(ttr): let us imagine an unproductive obsolete WFR. It is quite possible that just because it is obsolete, the words formed by this very WFR are all low frequency words simply because they are archaisms. Still, however, the TTR for this WFR is low, suggesting high productivity.

Plag (2004) suggests that no single method describes all aspects of productivity. Rather, each measure highlights a different aspect of the phenomenon.

In the case of rivalry between WFRs another – apart from productivity – interesting question is how certain lexical items choose a particular WFR. In other words, if we treat the derived word as a combination of a base and a derivational suffix, we can ask if the suffixes join bases randomly or some preferences can be traced. Mutatis mutandis, this is the very question that we ask in case of collocations.

Mere estimation of the productivity would not tell us that possibly a low-productive suffix "omits" some words but shows a "predilection" to other words. The important point in estimating the collocational strength

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[4] Type may be understood as a string of letters or lemma. In case of English (or any language with limited morphology) the difference is not essential. In the case of highly inflecting languages as Polish the only sensible approach is to treat lemma as a type.

between two words is to decide if they co-occur more often than would be expected. In order to filter out collocations we consider not only the number of co-occurrences but also the overall number of occurrences of the node and collocate. Now, certain collocates appear in the corpus relatively rarely but if we take into account that the node and collocate are also rare, it turns out that in fact they tend to keep together.

The same holds for derived words. A certain affix may be infrequent; thus the words formed with it are also infrequent. Still, if we take into account the overall frequency of this affix, its preferences for joining certain bases in order to form a new word can be visible. We can look at this phenomenon also from a different perspective: we can ask which lexemes attract individual affixes. We shall illustrate it with two examples: the word *calutki* 'whole' is attested 122 times but the association between the base and the suffix is much lower than *pulchniutki* 'plump'; the association strength of *cieniutki, cieniuteńki,* and *cieniusieńki* is very similar although they occur 893, 20, and 14 accordingly. In the case of *calutki* its association measure is low because the base (*cały*) is very frequent; in the latter case the association is similar given that *-uteńki* and *-usieńki* are much less frequent than *-utki*.

4. Methods

4.1. The corpus

The study is based on the data drawn from a balanced subcorpus of the National Corpus of Polish (NCP, Narodowy Korpus Języka Polskiego, cf. Przepiórkowski et al. 2008, 2012). It contains 300 million segments, which are roughly equal to running words. The balanced subcorpus reflects (as far as possible) the perception of the language by the Polish linguistic community. Of course this does not hold for the proportion between spoken and written language. Although the native speaker is exposed mainly to the spoken languageony only 10% of the corpus representit.. This has to be borne in mind as the words we are dealing with are used rather in informal language, thus we might expect these WFRs to be more frequent in the transcripts of conversations than in written texts. Still, a balanced corpus provides reliable data assuming that the texts read by the majority of the society are extensively represented and vice versa.

This corpus triples the size of the British National Corpus[5]. This corpus set an informal standard for the length of a general-reference or a "national" corpus. This standard was followed by, for example, the Czech National Corpus, the Slovene FIDA, and the Russian National Corpus. The lexical items formed with the morphemes in question are rather rare, thus abundant data can be obtained only from a large corpus.

What is more, a corpus of such a large size is capable of showing true neologisms. One has to bear in mind that in a small corpus hapax legomena are often simply rare words which are attested in the corpus only once (and not say twice or more times) by sheer accident, and, in fact, are not newly coined.

The entire corpus is six times bigger than the balanced subcorpus. One could ask if a larger corpus would not be better. The answer is that a corpus of the size of the balanced NCP returns relatively abundant data; on the other hand – as it is well known – linguistic features are not evenly distributed over text types. This is also true in case of WFRs. The corpus as a whole consists of all texts available to the compilers and is not intended as a sample of the Polish language. A balanced corpus assures that the frequency of individual words is not entirely accidental, but is to some extent caused by the sampling procedure.

4.2. Queries

The lexical items were collected from the corpus by means of four queries, [base = ".*utki"], [base = ".*usieńki"], [base = ".*uteńki"], [base = ".*eńki" & !base= ".*usieńki|uteńki"][6], which mean "find any occurrence of a word formed by any number of letters followed by a string of letters »*utki*«" and so on. The last query returns words ending with a string "*eńki*", excluding words ending with "*usieńki*" and "*uteńki*", so as to filter them out.

The corpus was browsed with an off-line version of the concordancer Poliqarp which allows for retrieving up to 500 000 occurrences, as well as for summarizing the queries in a kind of a frequency list.

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[5] Still the balanced subcorpus is smaller than eg. the Corpus of Contemporary American English (450 million words), not to mention the Oxford English Corpus (2 billion words).

[6] Poliqarp allows for restricting the query only to certain parts of speech, however we gave up this possibility because some rare adjectives which we were looking for, were incorrectly labeled by the tagger.

The results were manually checked, so as to reject obvious spelling mistakes, as well as words not being adjectives. Although this procedure interferes in the integrity of the data, it is necessary especially in studies on word formation, as a considerable number of hapax legomena is made of typesetting errors[7]. Words not conformant with the grammatical rules, but seemingly intentionally shaped, were still taken into consideration.

5. Results

5.1. Variants

-*utki* is by far the most frequent of the four suffixes. One notices that adjoining this suffix often results in alternation in the base (cf. Kowalik 1977: 178)... In case of *bielutki/bialutki* 'white' (cf. *biały*) there are 89 occurrences with alternation (a ~ o) and 20 occurrences with no alternation. *Bledziutki/bladziutki* 'pale' (cf *blady*) shows 52 occurrences with alternation and 19 with no alternation. In contrast to these two pairs, in case of *zieloniutki/zieleniutki* 'green' (cf. *zielony*), the variant preserving the phonetic shape of the basic adjective is more frequent (12 vs. 4). We also notice an alternation *leciutki/lekutki* 'light'. Finally, *majutki* 'small', which is mimicry of child speech[8], is also worth mentioning.

There is only one base which forms two variants with -*uteńki*: *mokruteńki* and *mokrzuteńki* 'wet' with 1 and two occurrences accordingly.

In case of -*eńki* we shall notice two occurrences of *kochaneńki* (apart from 65 *kochanieńki* 'beloved'), *słabeńki* (instead of *słabieńki* 'weak' both occurring twice), as well as *stareńki* (110 occurrences against two occurrences of *starzeńki*), and *złoteńki* vs. *złocieńki* (four and two occurrences respectively).

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[7] In case of this very study the number of misspellings (including intended ones) was rather low – altogether 14 types.

[8] To be very precise, let us note one occurrence of *nowutki* 'new' instead of expected *nowiutki*. Theoretically the lack of the letter *i* in the spelling of the former marks the lack of palatalization i.e. /novutki/ instead of /nov^{j}utki/. In fact I cannot say if it is only a spelling mistake or a deliberate choice of the author. Seeing some spelling variants occurring in the corpus both interpretations are possible. We shall also notice two unexpected forms *nieduziutki* (instead of *niedużutki* 'small' cf *nieduży*) and *raniutki* (instead of *ranniutki* 'morning' cf. *ranny*). Although they are attested in novels by Wiesław Myśliwski – they are not essential for this paper.

5.2. Quantitative analysis of the productivity of the four WFRs

The results of the query are shown in Table 1. For the list of words see the appendix.

	types	tokens	hapaxes	TTR	P	percent-age of hapaxes
-utki	118	13060	24	0.009	0.00184	20%
-uteńki	45	423	14	0.106	0.03310	31%
-usieńki	40	343	12	0.117	0.03499	30%
-eńki	24	4549	7	0.005	0.00154	29%

Table 1. Productivity of WFRs

If we adopt the first interpretation, that is P(ttr), then by far *-utki* is the most productive suffix, followed by *-uteńki* and *-usieńki*. The WFR *-eńki* is over four times less productive then *-utki*. In terms of number of tokens *-utki* again is much more frequent than all the others. Actually, in terms of types and in term of tokens, *-utki* is more frequent than the cumulative number of the three other suffixes.

Now, in the case of the suffixes in question, the distribution in the lexicon (i.e. the number of types) and the distribution in texts (tokens) differ to a great extent. However, *-eńki* is a special case, for *maleńki* 'small' makes 93% of the tokens containing this suffix. If this word was not included in the count, the TTR would rise to 0.07. Even then, after all, P(ttr) and P(type) arrange the WFRs in different hierarchies.

As far as our data are concerned P(ttr) and P(hapax) hierarchize WFRs in the same way. We underline this fact, because as stated above, Baayen and Lieber (1991) has shown that TTR may be in some cases misleading.
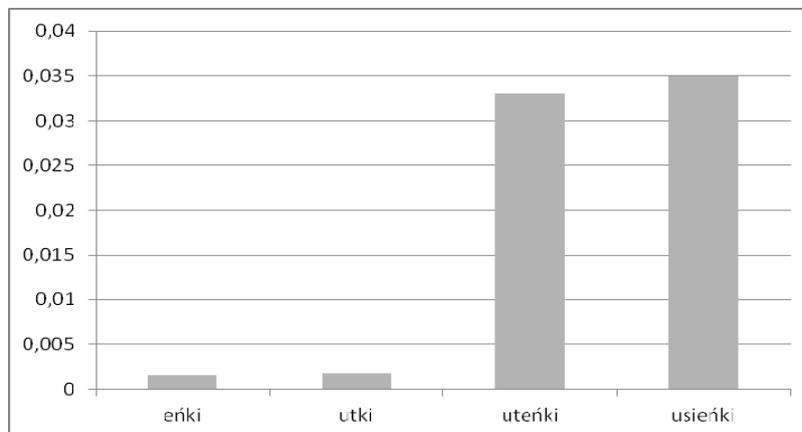
Figure 1. Productivity of WFRs

Figure 1 shows that *-eńki* and *-utki* show low productivity, *-uteńki* and *-usieńki* are highly productive.

5.3. Distribution of suffixes over words

The suffixes in question show diverse preferences for base words. We adopt a score widely used in the study of collocations, namely Mutual Information (abbreviated as MI)[9]. Church and Hanks (1990: 23) – who elaborate its use in lexicography – describe MI as follows: "Informally, mutual information compares the probability of observing x and y together (the joint probability) with the probabilities of observing x and y independently (chance). If there is a genuine association between x and y, then the joint probability P(x,y) will be much larger than chance P(x) P(y), and consequently I(x,y) >> 0. If there is no interesting relationship between x and y, then P(x,y) P(x) P(y), and thus, I(x,y) ~ O. If x and y are in complementary distribution, then P(x,y) will be much less than P(x) P(y), forcing I(x,y) << 0." The score is computed with a formula:

$$MI(x,y) = \log_2 \frac{P(x,y)}{P(x)P(y)}$$

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[9] There are over 60 different scores used for collocation retrieval, each giving different results. Mutual Information is considered rather reliable.

Here we treat the derived word as a collocation, the base as a node, and the suffix as a collocate. Having these three we compute the score. The higher it is, the bigger the collocational strength. Note, however, that if we treat the base as a node we have to sum up the frequency of both variants of a derived word (e.g. the cumulative frequency of *bielutki* and *białutki*).

Let us start with the analysis of the most frequent WFR namely *-utki*. Of all 118 words formed with this suffix the top ten adjectives with highest value of MI are (the MI score of each of them follows in the brackets): *cieniutki* 'thin' (11.77), *skubaniutki* 'tricky, sly bastard' (10.52), *wąziutki* 'narrow' (10.46), *cichutki* 'quiet' (10.32), *pulchniutki* 'plump' (10.15), *chudziutki* 'thin' (10.13), *tłuściutki* 'fatty' (9.96), *przesłodziutki* 'sweet' (9.96), *malutki* 'small' (9.49), *tyciutki* 'tiny little' (9.41). All these adjectives (with two exceptions: *skubaniutki* and *przesłodziutki*) describe shapes. The two exceptions are in fact very rare examples (5 and 1 accordingly).

On the other extreme we find: *chorutki* 'ill' (0.46), *ciemniutki* 'dark' (0.40), *jedyniutki* 'the only' (0.36), *każdziutki* 'every' (-0.18), *gotowiutki* 'ready' (-0.31), *wszyściutki* (-0.66), *bliziutki* (-0.73), *piękniutki* 'beautiful' (-0.99), *pewniutki* 'certain' (-2.66), *ostatniutki* 'last' (-2.76). They describe no shapes; in fact (with the exception of *piękniutki*) they do not describe physical features at all.

The top (in terms of MI) 10 words formed with *-uteńki* are: *siwiuteńki* 'gray (hair)' (12.49), *goluteńki* 'nude' (11.55), *cieniuteńki* 'thin' (11.24) *świeżuteńki* 'fresh' (10.69), *trzeźwiuteńki* 'sober' (10.43), *cichuteńki* 'quiet' (9.98), *czyściuteńki* 'clean' (9.30), *króciuteńki* 'short' (9.02), *równiuteńki* 'even, smooth' (9.02), *leciuteńki* 'light' (8.99).

Note that they do not replicate the top 10 of *-utki*. Most of them describe features which are perceivable by the senses, but not necessarily shapes. The bottom ten is: *pełniuteńki* 'full' (4.35), *młodziuteńki* 'young' (4.30), *staruteńki* 'old' (4.22), *czarniuteńki* 'black' (3.83), *niziuteńki* 'low' (3.78), *bliziuteńki* 'close' (3.21), *złociuteńki* 'golden' (2.33); note the last 3 words with lowest MI which are derived from pronouns: *takuteńki* 'such' (1.78), *każdziuteńki* (1.48), *wszyściuteńki* 'all' (1.45).

What was said about -uteńki WFR, can be repeated about *-usieńki*. The top ten *nagusieńki* 'nude' (12.64), *golusieńki* 'naked' (12.04), *cieniusieńki* 'thin' (11.02), *rodzoniusieńki* 'one's own (relative)' (11.00), *kruchusieńki* 'crumbly, tender' (10.93), *szczuplusieńki* 'slim' (10.26),

bialusieńki / bielusieńki 'white' (9.51), *równiusieńki* 'eaven, smooth' (9.10), *marniusieńki* 'poor, paltry' (9.08), *malusieńki* 'small' (9.01)

The adjectives with *-usieńki* with lowest MI are: *żółciusieńki* 'yellow' (5, 97), *cieplusieńki* 'warm' (5, 94), *nowiusieńki* 'new' (5, 62), *pełniusieńki* 'full' (5, 23), *młodziusieńki* 'young' (5, 01), *samiusieńki* 'alone' or 'very' (4, 98), *podobniusieńki* 'similar' (4, 79), *prościusieńki* 'even, smooth' (3, 95), *starusieńki* 'old' (2, 93), *jedniusieńki* 'unique' (0, 92).

The picture changes in the case of *-eńki.* Since there are only 24 words formed by this WFR from 19 bases we shall list them all: *maciupeńki* 'small' (16,83), *maleńki* 'small' (10,97), *chytreńki* 'wily, sly' (10,59), *kochaneńki* 'beloved' (9,81), *niemądreńki* 'silly' (6,80), *parszyweńki* 'rotten (bastard)' (6,78), *stareńki* 'old' (6,01), *mileńki* 'nice, dear' (5,82), *łysieńki* 'bald' (5,41), *biednieńki* 'poor' (4,82), *drogieńki* 'dear (person)' (4,79), *chudzieńki* 'slim' (4,62), *słabeńki/słabieńki* 'weak' (3,39), *choreńki* 'ill' (2,57), *szareńki* 'gray' (2,33), *grubeńki* 'fat' (2,32), *bieleńki* 'white' (1,46), *złoteńki/złocieńki* 'golden' (0,49), *jedyneńki* 'only' (0,29).

What is common for these adjectives is that they usually describe human beings or body parts[10].

There are altogether three bases which are common for all four WFRs (*mały* 'small', *biały* 'white', *stary* 'old'), compared to 27 bases combining with three suffixes, and 29 with two suffixes. In case of 65 expressive adjectives the base combines with only one suffix. This means that in almost half of the cases at least two expressive adjectives can be formed by different WFRs. Still, if we look at these figures from a different point of view, the data reveal, combine with some suffixes better than with others.

6. Conclusion

The data from the National Corpus of Polish show that the WFR *-utki* produces the largest number of types. Types with *-uśki* and *-uteńki* are much less numerous. Again *-eńki* forms half as many types as the two former. It seems that the phenomenon can be explained by two factors. First is the length of the morpheme. Regardless of what status we assign

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[10] This does not hold for *maleńki* 'small'. *Niemądreńki* and *parszywieńki* are hapax legomena, so one should not attach great significance to these two lexical items, still they describe personality traits, so their meaning tally with the meaning of other top-score words with *-eńki*.

to the *-uteńki* and *-usieńki* (an infix+suffix, or single morpheme, see section 1), it is considered by a native speaker as something "additional" or superfluous compared to bare *-eńki*.This explanation, however, would wrongly predict that *-eńki* outnumbers *-usieńki*. It seems that the much lower number of types formed with this WFR (*-eńki*) compared to the other three WFRs is caused by other reasons: the former shows some phonological restrictions (see section 1).

There is no discrepancy between the two other approaches to productivity: both P(ttr) and P(hapax) indicate that *-utki* and *-eńki* are much less productive than *-uśki* and *-usieńki*. This proves that none of the four WFRs is obsolete.

What is interesting – the two extreme WFRs in terms of the number of types (that is *-utki* with 116 types and *-eńki* with only 24 types) are very similar as far as P(hapax) is concerned. In case *-utki* it is caused by large number of well established words. In the case of *-eńki* the reason is slightly different. Recall that productivity in the sense of P(hapax) is to be understood as the chance that the next word formed by a given WFR is a neologism. Now, in case of *-eńki* it is *maleńki* which is most likely to be the next word ending with *-eńki* in a text, thereby the chance that the next word in the corpus (regardless whether a neologism or not) would be anything else than *maleńki* is small. On the other hand there are no dramatic differences between all four WFRs as to percentage of hapax legomena compared to the entire number of types.

The analysis of co-occurrence of the base and the derivational morpheme proved to be useful – under certain conditions – also in word-formation studies. It allows for picking up derived words which are not necessarily most frequent in absolute terms but exhibit a relatively strong tendency to combine with a certain base. In other words these are the most typical representatives of words formed by a certain WFR. It shows that these words share specific semantic invariants which are different for different WFR thus indicating that they are not fully synonymous. Although the non-synonymy of WFRs was postulated a long time ago, we would rather suggest that the difference between them is not that they add a different meaning to the same base. The difference is rather that they select disparate sets of basic words. Certainly a deeper study of the collocations of adjectives formed by a certain WFR would also explain the differences between them. However, most of the adjectives are too rare to exhibit clear collocations.

Finally let us remark that it is often said that corpus linguistics shifts the dichotomy acceptable vs. unacceptable towards more vs. less probable. The corpus gives evidence of (let us call it informally) "strange" words, like *jedyniutki*. If we take into consideration only a list of types and neglect frequency, there are no means of accounting for words which are not typical, yet attested.

REFERENCES

Baayen, R. H. 1991. "Quantitative aspects of morphological productivity". In: Booij, G. E. and J. van Marle (eds), Yearbook of morphology. Dordrecht: Kluwer Academic Publishers. 109-149.

Baayen, R. H. 1992. "On frequency, transparency, and productivity". In: Booij, G. E. and van Marle, J. (eds), Yearbook of morphology. Dordrecht: Kluwer Academic Publishers. 181-208.

Baayen, R. H. and R. Lieber. 1991. "Productivity and English derivation: A corpus-based study" Linguistics 29(5). 801-843.

Bogusławski, A. 1991. "Polski sufiks -*utki*" Poradnik Językowy 5/6. 174-179.

Church, K. W. and P. Hanks. 1990. "Word association norms, mutual information, and lexicography" Computational Linguistics 16(1). 22-29.

Kallas, K. 1998. "Przymiotnik [The adjective]". In: Grzegorczykowa, R., R. Laskowski and H. Wróbel. Gramatyka współczesnego języka polskiego: Morfologia. [Descriptive grammar of modern Polish: Morphology]. Warszawa: Wydawnictwo Naukowe PWN. 469-523.

Kowalik, K. 1977. Budowa morfologiczna przymiotników polskich [Morphological structure of Polish adjectives]. Wrocław: Ossolineum.

Nagórko, A. 2001. Zarys gramatyki polskiej (ze słowotwórstwem) [An outline of Polish morphology (including word-formation)]. Warszawa: Wydawnictwo Naukowe PWN.

Plag, I. 2006. "Productivity". In: Bas A. and A. McMahon (eds), Handbook of English linguistics. Oxford: Blackwell. 537-556.

Przepiórkowski A., R. L. Górski B. Lewandowska-Tomaszczyk and M. Łaziński. 2008. "Towards the National Corpus of Polish". In: Proceedings of the 6th Language Resources and Evaluation Conference. Marrakesh.

Przepiórkowski, A., R. L. Górski, B. Lewandowska-Tomaszczyk, and M. Bańko. 2012. Narodowy Korpus Języka Polskiego [The National Corpus of Polish]. Warszawa: Wydawnictwo Naukowe PWN.

Szymanek, B. 2010. A panorama of Polish word-formation. Lublin: Wydawnictwo KUL.

APPENDIX

Words formed with the suffix -*utki*:

koffffaniutki (1), bielutki (89), bialutki (20), biedniutki (27), bledziutki (52), bladziutki (19), bliziutki (2), brązowiutki (3), calutki (122), chorutki (2), chudziutki (131), ciaśniutki (8), cichutki (428), ciemniutki (1), cieniutki (893), cieplutki (102), cwaniutki (1), czarniutki (7), czerwoniutki (2), czulutki (1), czyciutki (246), delikatniutki (5), drobniutki (364), fajniutki (7), gęściutki (1), gładziutki (37), głupiutki (126), golutki (12), gotowiutki (1), grubiutki (8), grzeczniutki (11), jaśniutki (22), jedyniutki (3), każdziutki (10), kiepściutki (5), kochaniutki (16), krąglutki (5), króciutki (588), kruchutki (14), kusiutki (1), leciutki (327), lekutki (5), lichutki (10), ładniutki (63), łagodniutki (2), łatwiutki (5), łysiutki (2), malutki (4408), majutki (1), marniutki (15), mierniutki (1), mięciutki (142), milutki (242), mizerniutki (6), młodziutki (1449), mokrutki (1), nagutki (1), naiwniutki (4), niebieściutki (15), nieduziutki (4), niemłodziutki (1), niziutki (107), nowiutki (579), nowutki (1), okrąglutki (64), ostatniutki (1), ostrożniutki (1), pełniutki (13), pewniutki (1), piękniutki (1), pijaniutki (5), płaściutki (2), płyciutki (21), pokorniutki (2), powolutki (2), prędziutki (2), prościutki (142), przesłodziutki (1), przeslicniutki (1), pulchniutki (35), puściutki (26), pyszniutki (9), raniutki (1), równiutki (111), różowiutki (121), rzadziutki (7), samiutki (69), siwiutki (29), skromniutki (111), skubaniutki (5), słabiutki (333), słodziutki (126), smaczniutki (1), spokojniutki (12), starutki (11), suchutki (12), szczuplutki (100), szybciutki (9), śliczniutki (1), świeżutki (239), taniutki (26), tłuściutki (87), tyciutki (6), ubożutki (1), wąziutki (277), wątlutki (17), wesolutki (62), wolniutki (4), wszyciutki (7), zdolniutki (1), zdrowiutki (15), zgrabniutki (15), zieloniutki (12), zieleniutki (4), złociutki (50), żółciutki (34), żywiutki (6).

Words formed with the suffix -*uteńki*:

bieluteńki (8), bladziuteńki (1), bliziuteńki (1), caluteńki (27), cichuteńki (11), cieniuteńki (20), czarniuteńki (1), czyściuteńki (16), drobniuteńki (13), fajniuteńki (1), gładziuteńki (2), goluteńki (21), jaśniuteńki (5), jednakowiuteńki (1), każdziuteńki (1), króciuteńki (30), leciuteńki (12), maluteńki (31), młodziuteńki (3), mokrzuteńki (2), mokruteńki (1), niziuteńki (1), nowiuteńki (54), pełniuteńki (2), pijaniuteńki (4), prościuteńki

(7), puściuteńki (5), raniuteńki (1), równiuteńki (7), samiuteńki (41), siwiuteńki (43), skromniuteńki (1), słodziuteńki (2), staruteńki (3), suchuteńki (1), świeżuteńki (19), takuteńki (3), tłuściuteńki (1), trzeźwiuteńki (5), wąziuteńki (5), wolniuteńki (2), wszyściuteńki (1), zdrowiuteńki (4), złociuteńki (2), zimniuteńki (1).

Words formed with the suffix -*usieńki*:

bielusieńki (40), bledziusieńki (1), calusieńki (24), cichusieńki (2), cieniusieńki (14), cieplusieńki (1), czyściusieńki (4), drobniusieńki (3), gładziusieńki (1), golusieńki (24), jedniusieńki (1), króciusieńki (9), kruchusieńki (4), leciusieńki (3), malusieńki (83), marniusieńki (1), mięciusieńki (3), milusieńki (3), młodziusieńki (4), mokrusieńki (2), mokrzusieńki (1), nagusieńki (41), nowiusieńki (21), pełniusieńki (3), pijaniusieńki (4), płaściusieńki (1), podobniusieńki (2), prościusieńki (2), puściusieńki (4), rodzoniusieńki (1), równiusieńki (6), samiusieńki (15), słabiusieńki (2), starusieńki (1), suchusieńki (1), szczuplusieńki (5), świeżusieńki (2), wąziusieńki (1), zdrowiusieńki (2), żółciusiueńki (1).

Words formed with the suffix -*eńki*:

bieleńki (2), biednieńki (5), bieduleńki (2), choreńki (3), chudzieńki (1), chytreńki (19), drogeńki (7), grubeńki (1), jedyneńki (1), kochanieńki (65), kochaneńki (2), łysienieńki (1), maciupeńki (37), maleńki (4266), mileńki (12), niemądreńki (1), parszyweńki (1), słabeńki (2), słabieńki (2), stareńki (110), starzeńki (2), szareńki (1), złoteńki (4), złocieńki (2).

ROBUST MORPHOLOGICAL SEGMENTATION WITHIN THE FRAMEWORK OF THE SLIM THEORY OF LANGUAGE

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ABSTRACT

While we may live in the best of all possible linguistic worlds, circumstances are still far from being perfect. Unfortunately, this applies in particular to textual data. Accumulated with ardent zeal, the erroneous content of corpora reflects human imperfection. While some tools tend to assume flawless input data, it is essential for a morphological parser to cope with defective data. The new version 2.1 of JSLIM can now correct simple spelling mistakes automatically on the basis of the Damerau-Levenshtein (Damerau 1964) distance.

Keywords: morphology, left-associative grammar, error correction

1. Introduction

JSLIM is a system for the development of natural language grammars and can be used both for morphological and syntactic analysis (Weber et al. 2010). Its theoretical foundations lie within the SLIM theory of language (Hausser 1999, 2006) and it is based on the algorithm of time-linear LA-grammar (Hausser 1992). Lexicon entries and grammar rules are written using a declarative and intuitive rule scheme (Handl et al. 2009) allowing easy compilation of a grammar.

JSLIM has recently been used to build larger morphologies for several languages including German (Reihl 2010; Jaegers 2010), Italian (Weber 2010), French (Pepiuk 2009) and Polish (Niedobijczuk 2009). The JSLIM

version 2.1 features a robust segmentation algorithm which enables the system to detect and analyze misspelled words. This paper sketches the algorithm as well as the results obtained when applying it to the French and Polish morphology described in Pepiuk (2009) and Niedobijczuk (2009), respectively.

2. Segmentation

In contrast to a compiler of a programming language, JSLIM does not employ a finite state automaton and whitespace delimiter for tokenization (Aho et al. 1977), but performs a series of lookups in a trie (Fredkin 1960) in order to determine the borders of the word form segments. This is due to the fact that a word form normally comprises more than one segment with no delimiter.

```
table A_woda: [sur]      => [sur,cat,sem]
      /(.+)oda/          => /$1od/      (stem)     (sg fem) ;
                         => /$1odzi/    (stem1)    (sg fem) ;
                         => /$1ód/      (pg)       (pl fem) .
```

Figure 1. Generation of the allomorph lexicon

Figure 1 shows an *allo-table* which is used to generate the stem allomorphs of some Polish nouns, for example, to generate the stem allomorphs *wod, wodzi and wód* of the noun *woda*. The table *A_woda* takes a feature structure with a *sur*-attribute as its argument and returns three feature structures with the additional attributes *cat* and *sem* as its output.

The first line defines the attributes of the original and of the resulting feature structures, each following line determines the specific attribute values within the results. While the prerequisites for an application are specified by the values on the left side of the implication arrow, the values on the right side of this arrow either constitute the literal values to add or the change to apply to an existing value. For example, the table *A_woda* changes the *sur*-attribute by applying the regular expression. In each line the pairs of regular expressions enclosed in slashes specify a substitution. In contrast, the *cat*- and the *sem*-values are set independent of the original feature structure. The *cat*-attribute of the stem allomorph *wod* is the list value *(stem)* while its *sem*-attribute is the list value *(sg fem)*.

a) elementary lexicon entry
    [sur: woda]
    [allo: A_woda]
    [combi: C_woda]

b) resulting entries in the allomorph lexicon
    [sur : wod   ] [sur : wodzi   ] [sur : wód   ]
    [cat : (stem)] [cat : (stem1)] [cat : (pg)   ]
    [sem : (sg fem)] [sem : (sg fem)] [sem : (pl fem)]
    [allo : A_woda] [allo : A_woda   ] [allo : A_woda]
    [combi: C_woda] [combi: C_woda   ] [combi: C_woda]

Figure 2. Entries of the allomorph lexicon

Figure 2 shows the result of applying the allo-table *A_woda*, namely, the entries in the allomorph lexicon for the three stem allomorphs *wod, woddzi* and *wód*. As the attributes *allo* and *combi* are not referenced in the table *A_woda,* they remain unchanged.

The entries of the trie used for segmentation are those of the allomorph lexicon, the latter being generated (see Figure 1 and 2) from the elementary lexicon before runtime (Hausser 1999: 255-256) by means of allo-tables. Evidently, the absence, insertion, mutation or transposition of letters makes a correct segmentation impossible though a native reader may easily detect the typo and recognize the intended form.

3. The Damerau-Levenshtein distance

As in many spelling checkers, e.g., *ispell*, the presented robust segmentation algorithm is based on the Damerau-Levenshtein distance (Gusfield 1997: 216). If a normal segmentation fails, the algorithm either permits the deletion/insertion of a single character or the transposition of two adjacent characters to achieve a segmentation of a complete word form. As a word form may comprise more than two segments, it is essential that the parsing states of the morphological analysis bear the information of a performed correction step. Besides, this knowledge is required to distinguish the respective results of a corrected from an original well-formed input.

4.   New algorithm

Normally, this kind of check performs reasonably not only for typos, but also for some grammatical mistakes, at least in languages where the allomorphs differ in one single letter. The results obtained when applying this simple approach to the French morphology were quite encouraging. Apart from typos, several typical kinds of mistakes could be detected, e.g., missing diacritical marks, incorrect application of hyphens, or the use of a wrong stem. In most of the cases, the correct word form was among the suggestions.

However, the quality of the results is significantly worse for the Polish morphology, as several allomorphic phenomena result in an edit distance greater than one. For example, when parsing an incorrect form of the Polish noun *woda* (water), namely **wode*, many possibilities were shown, but not the potential candidate *wodzie*, which would be the correct form for dative or locative. Obviously, the edit distance between *wode* and *wodzie* is three, though it might be the consequence of a single error, namely the selection of the wrong stem allomorph.

For a better handling of this type of error, we extended the algorithm so that it also tries different allomorphs of the same morpheme if no well-formed analysis can be found. The required allomorphs could be created with the same rules used to generate the allomorph lexicon so that no additional work was required from the grammar developer. Consequently, forms with a different allomorph stem were also among the suggestions.

```
function correct(stem,suffix){
    lemma = get_lemma(stem)
    for stemx in get_stems(lemma){
        if(stemx != stem){
            try_combine(stemx,suffix)}}}
```

Figure 3. Additional correction step

Figure 3 shows the algorithm used for recognizing word forms with an incorrect stem allomorph. We use the function *get_lemma* to determine the elementary entry of a stem allomorph and generate the alternative stem allomorphs by applying the function *get_stems* to this entry. As each elementary entry references an allo-table in its *allo*-attribute, it bears the

information which is necessary to generate all the allomorphic variants of this stem. If one of the investigated stem allomorphs differs from the original one, we try to combine it with the original suffix. The function *try_combine* performs a normal combination step but does not try any further substitution of a stem allomorph and marks a potential result as corrected.

5. Conclusion

Integrating a robust segmentation algorithm into JSLIM is of interest for the following reason: apart from the benefit for a robust morphological analysis which is a prerequisite for a syntactic analysis, it opens new fields in which the integrated linguistic knowledge can be adopted to improve results, e.g. spell checking.

REFERENCES

Aho, A. V., R. Seth and J. D. Ullman. 1977. Principles of compiler design. Boston: Addison-Wesley Longman Publishing.

Damerau, F. J. 1964. "A technique for computer detection and correction of spelling errors" Communications of the ACM 7(3). 171-176.

Fredkin, E. 1960. "Trie memory" Communications of the ACM 3(9). 490-499.

Gusfield, D. 1997. Algorithms on strings, trees, and sequences: Computer science and computational biology. Cambridge: Cambridge University Press.

Handl, J., B. Kabashi, T. Proisl and C. Weber. 2009. "JSLIM-Computational morphology in the framework of the SLIM theory of language". In: Mahlow, C. and M. Piotrowski (eds), The state of the art in computational morphology. Workshop on systems and frameworks for computational morphology. Heidelberg/New York: Springer. 10-27.

Hausser, R. 1992. "Complexity in left-associative grammar" Theoretical Computer Science 106(2). 283-308.

Hausser, R. 2001. Foundations of computational linguistics, human-computer communication in natural language (2nd ed.). Berlin/New York: Springer.

Hausser, R. 2006. A computational model of natural language communication: Interpretation, inference, and production in database semantics. Berlin/Heidelberg: Springer.

Jaegers, S. 2010. Komposition des Deutschen im Rahmen der SLIM-Sprachtheorie [Composition in German within the SLIM theory of language]. Master thesis. Erlangen-Nürnberg: Friedrich-Alexander-Universität.

Niedobijczuk, K. 2009. Implementierung eines automatischen Wortformerkennungssystems des Polnischen in JSLIM [Implementing a computational morphology for Polish with JSLIM]. Master thesis. Master thesis. Erlangen-Nürnberg: Friedrich-Alexander-Universität.

Pepiuk, S. 2009. Implementierung eines automatischen Wortformerkennungssystem des Französischen mit dem Programm JSLIM [Implementing a computational morphology for Polish with JSLIM]. Master thesis. Master thesis. Erlangen-Nürnberg: Friedrich-Alexander-Universität.

Reihl, S. 2010. Derivation des Deutschen im Rahmen der SLIM-Sprachtheorie [A German derivational morphology within the framework of the SLIM theory of language]. Master thesis. Erlangen-Nürnberg: Friedrich-Alexander-Universität.

Weber, C. 2010. Das italiano-Projekt: Morphologie des Italienischen mit JSLIM [The italiano-project: Italian morphology with JSLIM]. Technical Report. Erlangen-Nürnberg: Friedrich-Alexander-Universität.

Weber, C., J. Handl, S. Reihl and P. Greiner. 2010. JSLIM 2.1-Dokumentation: Morphologie, Syntax und formale Sprachen [The JSLIM 2.1 Documentation: Morphology, syntax, and formal languages]. Erlangen Nürnberg: Friedrich-Alexander-Universität.

AUTOMATIC RECOGNITION OF ABBREVIATIONS AND ABBREVIATIONS' EXPANSIONS IN ELECTRONIC TEXTS: DEVELOPMENT AND IMPROVEMENT

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ABSTRACT

Abbreviations are rapidly growing, but neither paper nor online dictionaries are published or updated frequently enough to cover new ones among their entries. The scope of this paper is to present the development and improvements of the algorithm for automatic recognition of abbreviations and abbreviations' expansions in electronic texts. The acquired data is then used for (semi)automatic production of a dictionary of abbreviations. Such approach represents the future of electronic lexicography.

Keywords: abbreviations, algorithm, automatic recognition

1. Introduction

Abbreviations, a shortened form of a word or a phrase, are difficult to deal with (Gabrovšek 1994: 164) and are present in all languages. Papers or/and online dictionaries (monolingual, bilingual, specialised) are not published or updated frequently enough to cover new abbreviations among their entries, and excluding specialised abbreviations dictionaries, abbreviations are not covered extensively in monolingual or bilingual dictionaries.

Online dictionaries such as *Slovarček krajšav*,[1] *Evroterm*,[2] *Acronym Finder*,[3] *The Free Dictionary*,[4] and others represent an alternative to paper ones and are easily updated. Unfortunately, abbreviations in online dictionaries are acquired mainly manually, which is still time consuming and not precise enough. The solutions are algorithms for automatic recognition of abbreviations and abbreviations' expansions. The scope of this article is to present the development and improvement of the algorithm for automatic recognition of abbreviations and abbreviations' expansions in electronic texts.

The pioneers in the field of automatic recognition of abbreviations and abbreviations' expansion are Taghva and Gilbreth (1999). Their approach, where acronyms are uppercased words of three to 10 characters and expansions must be adjacent to acronyms and only the first letters of definition words can participate, was followed and latter improved by Yeast (1999), Larkey et al. (2000), Park and Byrd (2001), Chang et al. (2002), and Schwartz and Hearst (2003). A detailed description of the approaches is seen in Table 1. A new approach was discovered by Zahariev (2004). He works on the so called universal algorithm taking in consideration also some exotic languages such as Chinese, Japanese, and others.

Author (year)	Characteristics of acronyms	Characteristics of expansions
Taghva and Gilbreth (1999)	– uppercase words of three to 10 characters	– must be adjacent – only first letters of definition words can participate
Yeates (1999)	– uppercase words	– must be adjacent – first three letters of definition words can participate
Larkey et al. (2000)	– need some uppercase letters – maximum size of nine characters	– pattern *acronym (definition)* or *definition (acronym)* – cue e.g. also known as
Schwartz and Hearst (2003)	– a word between parentheses or adjacent to parentheses	– pattern *acronym (definition)* or *definition (acronym)*
Byrd and Park (2001)	– at least one capital – from two to 10 characters	– parentheses pattern or linguistic cue (also known as, short for etc.)

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[1] http://bos.zrc-sazu.si/kratice.html

[2] http://www.sigov.si/evroterm

[3] http://www.acronymfinder.com

[4] http://acronyms.thefreedictionary.com

Chang et al. (2002)	– at least one capital – from two to 10 characters	– parentheses pattern or linguistic cue (also known as, short for etc.)
Chang et al. (2002)	– one word between parentheses	– adjacent on the left of the parenthesis
Zahariev (2004)	– a word between parentheses of adjacent to parentheses	– pattern *acronym (definition)* or *definition (acronym)*

Table 1. Extraction methods

2. Methods

In my research, I use some guidelines written by Taghva and Gilbreth (1999) and I limit myself only to acronyms, abbreviations formed from the initial components in a phrase or a word, and abbreviations written in capital letters, e.g. *NATO,* or e.g. *BETI* composed of the first two letters *NAMA NArodni MAgazin*. The reference is the Slovene newspaper *Delo* from 2007 (online version). In the very first step, I used words of five capital letters in brackets as candidates for abbreviations. I excluded proper names, names of places and all abbreviations not written in capital letters. To recognize expansions, four types of abbreviations were used and left context was observed. The first type is the so called "covered abbreviations". In this type, letters match the words in the left context, e.g. *FF* with the expansion *Filozofska fakulteta*. The second type is abbreviations with expansions containing prepositions and conjunctions, e.g. *FDV Fakulteta za družbene vede*. The third type concerns abbreviations composed of the first two letters, e.g. *NAMA Narodni magazin*. The fourth type covers abbreviations with prepositions, e.g. *DZU Družba za upravljanje*, where prepositions appear in the abbreviation and also in the expansion.

3. Results

Considering the above-mentioned criteria, 1,800 expansions matched the abbreviations, but several problems were observed, such as the occurrence of cases in expansions, the multiple occurrences of the same abbreviation-expansion pair and foreign abbreviations with Slovene expansions did not match. In the second stage, the number of letters in the abbrevia-

tions was extended to ten, and all four types of patterns were observed, e.g. *(abbreviation) expansion, (expansion) abbreviation, abbreviation (expansion), expansion (abbreviation)*. Lexicalized abbreviations were excluded. Such abbreviations are well-known and are included in the algorithm via the dictionary of abbreviations *Slovarček krajšav*. All abbreviations with no expansion were automatically excluded.

Although at first sight, the algorithm seems to be working well, some improvements were provided. Randomly selected texts rich in abbreviations (from the website *24ur.com*) were used in order to observe how the algorithm behaves. Problems occurred mainly in examples containing abbreviations *e.g. RS* in the expansions. Prepositions *za* and *v* represented a problem as well because at the present stage, the algorithm was able to consider just one preposition or additional word in the expansion. Problems occurred also in some copy-pasted examples, e.g. *Urada za varstvo konkurence (UVK)*, recognized when retyped. Patterns composed of a foreign abbreviation and a Slovene expansion, e.g. *Združenje evropskih avtomobilskih proizvajalcev (ACEA)* are also an interesting issue, but such patterns were not observed in the present article and will be recognized in the future. Improvements concerning the presence of abbreviations in expansions, more than one preposition or conjunction in the expansion, were applied to the software and the final filtration gave results that are more precise. After applying modifications and improvements, the software was enlarged in order to be able to filter larger amounts of data. A larger corpus composed of 60 million words (newspaper *Delo* from 2005 to 2009) was used. The algorithm filtered the corpus in 30 minutes and gave 5,820 abbreviation-expansion pairs. The obtained pairs were manually revised, verified and transferred into *Termania*[5] editing software. Among the revised and verified pairs, four per cent of false pairs occurred, e.g. *PO predstavljenih odatkih, IN in novincev*. The precision of the algorithm is 96%. Automatic recognition of abbreviations and abbreviations' expansion gives the possibility to create a (semi)automatic dictionary of abbreviations. Due to a simple structure of the dictionary article, composed mainly of the abbreviation and the abbreviations' expansion, as seen in Example 1, such article is created entirely automatically, using an algorithm for automatic recognition of abbreviations and abbre-

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[5] http://www.termania.net/. *Termania* is an interface for editing dictionary entries. The transferred pairs are not available for public.

viations' expansion. The dictionary article could also be more complex, composed of source language and translation, as seen in Example 2. In such case, the algorithm gives the possibility to create a (semi)automatic dictionary of abbreviations.

Example (1)
NATO *North Atlantic Treaty Organization*

Example (2)
NATO *angl.: North Atlantic Treaty Organization:*
Organizacija severnoatlantskega pakta

4. The future

The future aim of the algorithm is to be able to recognise abbreviations in other foreign languages. The algorithm will focus on abbreviation-expansion pairs where abbreviations occur in one language and expansions in another, e.g. *NATO*. Special kind of abbreviations, such as *UNICEF, UNRRA, SARS*, etc. occur and are used in one language (usually foreign), while the expansion is usually translated and is not in the language of the abbreviation. The algorithm is able to recognise just the abbreviation-expansion pair *NATO, North Atlantic Treaty Organization,* but in the future, it will focus on the possibility to recognise translations too. As these cases are common in texts, in the future, the algorithm will focus on the possibility to recognize translations and will provide the following data, e.g. *NATO*, the original expansion, e.g. *North Atlantic Treaty Organization* and the translation, e.g. *Organizacija severnoatlantskega pakta*.

5. Conclusion

The paper presented how abbreviations and abbreviations' expansions can be recognised automatically using the algorithm for recognition. It showed the main steps in building such algorithms, the structure of the rules, the first testing version and its results, the development of the rules and software for recognition and the final filtration. The author addressed

the problems of the future development and shows, in brief, how the analyses will expand in the future and which elements will be observed. The algorithm gives the possibility to create a (semi)automatic dictionary of abbreviations. A (semi)automatically produced dictionary of abbreviations is up-do-date and represents the future of electronic lexicography. An automatic recognition of abbreviations and abbreviations' expansion is an important and useful discipline that needs future development. Algorithms for automatic recognition of abbreviations present the link between the text and the semi or entirely automatic production of a dictionary of abbreviations. That is why the production and further development of such system is essential and useful.

REFERENCES

Acronym Finder. [URL: www.acronymfinder.com], (accessed: 21st May 2011).

Chang, J. T., H. Schütze and R. B. Altman. 2002. "Creating an online dictionary of abbreviations from MEDLINE" Journal of American Medical Informatics Association 9(6). 612-620.

Evroterm. [URL: http://evroterm.gov.si/index.php?jezik=angl], (accessed: 21st May 2011).

Gabrovšek, D. 1994. "Kodifikacija angleškega jezika v specializiranih enojezičnih slovarjih: Too much of everything? [Codification of English language in specialised monolingual dictionaries: Too much of everything?]" Vestnik 28(1/2). 150-180.

Larkey, L. S., P. Ogilvie, A. M. Price and B. Tamilio. 2000. Acrophile: An automated acronym extractor and server. Dallas: University of Massachusetts.

Park, Y. and R. J. Byrd. 2001. Hybrid Text mining for finding abbreviations and their definitions. New York: IBM Thomas J. Watson Research Center.

Schwartz, A. S. and M. A. Hearst. 2003. A simple algorithm for identifying abbreviation definitions in biomedical texts. Proceedings of the Pacific Symposium on Biocomputing. Berkeley: University of California.

Slovarček krajšav. [URL: http://bos.zrc-sazu.si/kratice.html], (accessed: 21st May 2011).

The Free Dictionary. [URL: http://acronyms.thefreedictionary.com], (accessed: 21st May 2011).

Taghva, K. and J. Gilbreth. 1998. "Recognizing acronyms and their definitions" International Journal on Document Analysis and Recognition 1(4). 191-198.

Yeates, S. 1999. Automatic extraction of acronyms from text. Proceedings of the Third New Zealand Computer Science Research Students' Conference. New Zealand: University of Waikato.

Zahariev, M. 2004. A (Acronyms). Unpublished Ph.D. dissertation. Surrey: School of Computing Science, Simon Fraser University.

VIEW-ORIENTED LEXICON DESIGN TO AVOID LEXICAL AMBIGUITY

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ABSTRACT

Depending on their morphological context, lexicon entries often have the same surface but a different grammatical function. This paper presents a view-oriented approach towards the structuring of the lexicon that avoids unnecessary lexical ambiguities. The implementation rests on a system for the morphological analysis of German (Handl et al. 2009; Weber et al. 2010) which uses Left-Associative Grammar (Hausser 1992) as its algorithm and flat, non-recursive feature structures called *proplets* (Hausser 2009) as its data structure.

Keywords: lexicon design, morphology, ambiguities, run-time, allomorphs

1. Introduction

An example for a surface to be shared by several morphemes is the string "er", which in German can have five different grammatical functions (Eisenberg 2006):

- Inflectional suffix, e.g. "groß**er**" (big)
- Epenthesis, e.g. "Kind**er**garten" (nursery school)
- Derivational suffix for the formation of substantives, e.g. "Spiel**er**" (player)
- Derivational suffix for the formation of verbs, e.g. "geist**ern**" (to haunt)
- Derivational prefix for the formation of verbs, e.g. "**er**forschen" (to explore).

Besides, there also exists a personal pronoun with the same surface. To avoid lexical ambiguity, it is preferable to merge all these lexicon entries into one entry. However, designing and coding manually an entry in this way is error-prone and unnecessarily complicated.

2. Methods

Our system relies on an allomorph lexicon to achieve a segmentation of an input into its allomorphs. The allomorph lexicon is not hand-crafted, but generated automatically from an elementary lexicon before runtime (Hausser 2001: 255-256). Our idea is to add a second preprocessor step to fuse entries with the same surface into one lexicon entry without loss of information. Figure 1 illustrates the preprocessor step.

The merged proplet comprises the whole grammatical information of the original proplets. The values of the attributes **cat** and **sem** mark the proplet as a personal pronoun. The attribute **flxs** with the value (**na**) indicates that the entry can also be used as an inflectional suffix for nouns (**n**) or adjectives (**a**). In contrast, the value (**v**) of the attribute **pfxv** allows the proplet to be used as a verb prefix. The attributes **sfxn** and **sfxv** restrict the potential bases when used as a derivational suffix (of a noun or a verb)[1], while the attributes **dern** and **derv** contain the resulting inflectional class.[2] The attribute **gra** flags the proplet as a possible epenthesis.

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[1] The derivational suffix for the word formation of substantives can be combined with noun ("Spieler"), verb ("Sammler") and adjective ("Hunderter") stems (Fleischer and Barz 1992: 151-156). The derivational suffix for the word formation of verbs can be combined with noun ("gliedern") and verb ("glimmern") stems.

[2] E.g., the derivative "geistern" (verb) does not have the same inflectional properties as the original form "Geist" (noun).

Inflectional suffix

$$\begin{bmatrix} \text{sur:} & \text{er} \\ \text{flxs:} & \text{(na)} \end{bmatrix}$$

Epenthesis

$$\begin{bmatrix} \text{sur:} & \text{er} \\ \text{gra:} & \text{(fug)} \end{bmatrix}$$

Noun suffix

$$\begin{bmatrix} \text{sur:} & \text{er} \\ \text{sfxn:} & \text{(nva)} \\ \text{dern:} & \text{C\_Spieler} \end{bmatrix}$$

Merged Propet

$$\begin{pmatrix} \text{sur:} & \text{er} \\ \text{cat:} & \text{(s3)} \\ \text{sem:} & \text{(perspo)} \\ \text{flxs:} & \text{(na)} \\ \text{pfxv:} & \text{(v)} \\ \text{dern:} & \text{C\_Spieler} \\ \text{derv:} & \text{C\_wildern} \\ \text{sfxn:} & \text{(nva)} \\ \text{sfxv:} & \text{(nv)} \\ \text{gra:} & \text{(fug)} \end{pmatrix}$$

Verb suffix

$$\begin{bmatrix} \text{sur:} & \text{er} \\ \text{sfxv:} & \text{(nv)} \\ \text{derv:} & \text{C\_wildern} \end{bmatrix}$$

Verb prefix

$$\begin{bmatrix} \text{sur:} & \text{er} \\ \text{pfxv:} & \text{(v)} \end{bmatrix}$$

Pronoun

$$\begin{bmatrix} \text{sur:} & \text{er} \\ \text{cat:} & \text{(s3)} \\ \text{sem:} & \text{(perspo)} \end{bmatrix}$$

Figure 1. Fusion of the lexicon entry

3. Results

The Tables 1 and 2 show the results of our view-oriented lexicon design. We extracted nouns with the ending *-er* and verbs with the beginning *er-* of the NEGRA and the LIMAS corpora, two well-known German corpora with 355.096 respectively 1.000.000 tokens, and compared the recognition rate (*rate*), the ambiguity rate (*ambig.*) and the analyzed word forms per second (*wf/s*) with and without merging the lexicon entries.

Types	With merging		
	rate	ambig.	wf/s
Nouns with ending *-er* (2 135)	1 832 85.81%	2.96	204
Verbs with beginning *er-* (304)	296 97.37%	1.73	453

Table 1. Ambiguity rates and run-times – NEGRA Corpus

Types	With merging		
	rate	ambig.	wf/s
Nouns with ending *-er* (2 135)	4 000 88.38%	2.82	211
Verbs with beginning *er-* (304)	500 95.06%	1.74	429

Table 2. Ambiguity rates and run-times – LIMAS Corpus

The recognition rates of both of the corpora are nearly the same. Further debugging and optimizations will lead to identical rates. The ambiguity rates and the run-times for every analyzed word form are now improved significantly with our merged entries. For verbs with the beginning *er-* we are able to analyze more than thrice of the word forms in one second. For nouns with the ending *-er* the ambiguity rate is decreased drastically in both corpora. Further tests on other corpora will support our observations.

4. Conclusion

The explained design has a wide range of advantages. Thereby, the most important is the prevention of ambiguities during morphological analysis while preserving the readability and maintainability of the lexicon. Also the lexicon size decreases, as many entries may be treated this way. In addition, this approach can also be motivated from a linguistic point of view because the resulting proplet codes the complete grammatical information whereas the original proplets represent its respective functions.

REFERENCES

Eisenberg, P. 2006. Grundriss der deutschen Grammatik: Das Wort (3rd ed.). Stuttgart: Metzler.

Fleischer, W. and I. Barz. 1992. Wortbildung der deutschen Gegenwartssprache. Tübingen: Niemeyer.

Handl, J., B. Kabashi, T. Proisl and C. Weber. 2009. "JSLIM-Computational morphology in the framework of the SLIM theory of language". In: Mahlow, C. and M. Piotrowski (eds), The state of the art in computational morphology. Workshop on systems and frameworks for computational morphology. Heidelberg/New York: Springer. 10-27.

Hausser, R. 1992. "Complexity in Left-Associative Grammar" Theoretical Computer Science 106(2). 283-308.

Hausser, R. 2001. Foundations of computational linguistics, human-computer communication in natural language (2nd ed.). Berlin/New York: Springer.

Hausser, R. 2009. "Modeling natural language communication in database semantics". In: Kirchberg, M. and S. Link (eds), Proceedings of APCCM 2009 (Vol. 96). Wellington: Australian Computer Society. 17-26.

Weber, C., J. Handl, S. Reihl and P. Greiner. 2010. JSLIM 2.1-Dokumentation: Morphologie, Syntax und formale Sprachen [The JSLIM 2.1 Documentation: Morphology, syntax, and formal languages]. Erlangen-Nürnberg: Friedrich-Alexander-Universität.

ENGLISH BORROWINGS IN FARSI:
A LEXICOGRAPHIC AND CORPUS-BASED STUDY

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ABSTRACT

Farsi is believed to have borrowed more than fifty percent of its vocabulary. The aim of this article is to present English borrowings in the Modern Persian language. Firstly, the Iranian language policy towards borrowings will be presented. Then, English loanwords in Farsi will be described. Finally, a corpus and lexicographic study of one group of loanwords, namely technical loanwords, will be presented in order to evaluate the successfulness of the Iranian language policy towards English loanwords.

Keywords: loanwords, language policy, corpus, purism, lexicography

1. Introduction

The Iranian language policy is characterised by linguistic purism. Before the Islamic Revolution in 1979 there existed two language academies (Farhangestane Zaban-e Iran), established in 1935 and 1969, respectively. Their main task was to purify the Persian language of foreign elements. The main target of their activities was the Arabic language. This tendency changed after the victory of the Islamic Revolution in 1979. The Constitution of the Islamic Republic of Iran, which was approved in October 1979, discusses in its articles 15 and 16 the position of Persian and Arabic

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in the Islamic Republic of Iran. Article 15 of the Constitution of the Islamic Republic of Iran states that:

> The official language and script of Iran, the lingua franca of its people, is Persian. Official documents, correspondence, and texts, as well as text-books, must be in this language and script. However, the use of regional and tribal languages in the press and mass media, as well as for teaching of their literature in schools, is allowed in addition to Persian (The Constitution of the Islamic Republic of Iran).

This article confirms the importance and superiority of Farsi as a national language. Article 16 of the Constitution confirms the use and importance of the Arabic language:

> Since the language of the Qur'an and Islamic texts and teachings is Arabic, and since Persian literature is thoroughly permeated by this language, it must be taught after elementary level, in all classes of secondary school and in all areas of study (The Constitution of the Islamic Republic of Iran).

Thus Arabic, which had so far been the target of the purists' activities, officially became the recognized language in 1979, an indispensable part of the Iranian education system and, therefore, of Iranian life.

The Third Language Academy (Farhangestan-e Sevvam) was established after the Third Supreme Council of the Iranian Revolution in 1990. Its main task has been to purify Farsi from Western, particularly English, loanwords. So far, Farhangestan-e Sevvam (the Third Language Academy) has prepared 7 volumes of a Collection of Terms Approved (Farhangestan Zaban va Adab Farsi 2008). These are, as the name itself suggests, lists of Persian terms that should be used instead of loanwords.

In 2006 the Iranian president, Mahmoud Ahmadinejad, ordered that the government and all official Iranian bodies use only Persian words approved by the Academy of Language instead of foreign words. The changes introduced by Ahmadinejad are obligatory for all schoolbooks, documents and newspapers (Dujardin 2006).

2. English loanwords in Farsi

English borrowings in Farsi are the most recent borrowings in that language. Bashiri estimated about 300 borrowings (1994: 109f.), but this

tendency is developing and the number of borrowings has grown rapidly. The total number of loanwords described here is 568 – they were generated on the basis of the *Dictionnaire des Mots Européens en Persan*, which was compiled in 1993 by Mahshid Moshiri.

English borrowings in Farsi can be divided into the following semantic fields: food, sport, vehicles and car devices, education, kitchen devices, technology, medicine, months, and taboo. What follows are examples of each semantic field:

- food: پودینگ [pudding] 'pudding', چیکن [čiken] 'chicken', کیک [keyk] 'cake',
- sport: کریکت [keriket] 'cricket', گلر [goler] 'goalkeeper', والیبالیست [vālibāl-ist] 'volleyball player',
- vehicles and car devices: اتوکار [otokār] 'autocar', تراموا [terāmvā] 'tram', جک [jak] 'jack',
- education: ام.اس [em-es] 'Master of Science', بتکست بوک [tekst-buk] 'textbook', اسکول [eskul] 'school',
- kitchen devices: تندرایزر [tenderāyzer] 'tenderiser', چاپ استیک [čāp-estik] 'chopsticks', ماکروویو [mākro-veyv] 'microwave',
- technology: آی.سی [āy-si] 'integrated circuit', بایت [bāyt] 'byte', بلبرینگ [bolbering] 'ball-bearing',
- medicine: آی.سی.یو [āy-si-yu] 'intensive care unit', اودیپ [odip] 'Oedipus complex', اورولوژیست [orologist] 'urologist',
- months: جولای [julāy] 'July', جون [jun] 'June', مارچ [mārč] 'March',
- taboo: ویسکی [wiski] 'whiskey', کلایمکس [kelāymaks] 'climax', آی.یو.دی [āy-yu-di] 'intra-uterine device'.

This classification shows that English loanwords in Farsi belong to various semantic fields. The Iranian language policy towards English loanwords is characterised by heavy linguistic purism, i.e. "a desire on the part of a speech community (or some section of it) to preserve a language form, or rid it of, putative foreign elements or other elements held to be undesirable" (Thomas 1991: 12). The Third Language Academy, an official Iranian body, is responsible for purifying Farsi of such undesirable elements, including English lexical borrowings and for proposing their Farsi equivalents (Zarnikhi 2010).

3. Methods

The Iranian language policy tries to purify Farsi of English loanwords. In order to evaluate the Iranian language policy towards English loanwords, a corpus-based and lexicographic study of English loanwords from the technical domain was done. Firstly, a list of ten technical English loanwords and their Farsi counterparts as proposed by the Third Academy was prepared. These are *computer, digital, file, site, data, freezer, printer, user, lens* and *fax*. These words were generated on the basis of the *Dictionnaire des Mots Européens en Persian* and on *A Collection of Terms Approved by the Academy of Persian Language and Literature.* Then the dictionary was searched for all English loanwords and a list of these words was prepared. Finally, *A Collection of Terms* was studied in order to see which of the English loanwords generated from the dictionary have their Farsi counterparts as proposed by the Academy.

The study relies on a corpus and lexicographic analysis. The corpus used is the Farsi Linguistic Database (FLDB), prepared by Professor Seyyed Mostafa Assi (Assi 2007). It consists of 56 million words (Ghayoomi et al. 2010: 18).

Two online and one traditional, paper dictionary were used. The online dictionaries are *FarsiDict* (www.farsidic.com) and *Aryanpour* (www.aryanpour.com). *The Persian-English Concise Dictionary* was used as an example of a traditional dictionary. It is a semi-bilingual dictionary from 2008, published by Aryanpur. It was prepared by Manoocherhr Aryanpur Kashani with the collaboration of Professor Seyyed Mostafa Assi. The dictionary has 35 0000 English entries.

4. Results and discussion

The aim of the study has been to verify the success of the Iranian language policy towards English loanwords, and in particular towards technical English loanwords. The criteria for this verification were corpus frequency and presence in the selected dictionaries. Table 1 presents the occurrences of technical English loanwords and their Farsi counterparts in the Farsi Linguistic Database. In each pair the first English loanword and then its Farsi counterpart are presented:

No	Studied term	PLDB hits	No	Studied term	PLDB hits
1.	کامپیوتر [kāmpyuter]	111	6.	فریزر [frizer]	25
	رایانه [rāyāne]	304		یخ زن [yakh zan]	0
2.	دیجیتل [dijital]	0	7.	پرینتر [printer]	0
	رقمی [raqmi]	65		چاپگر [čāpgar]	9
3.	فایل [fāil]	46	8.	یوزر [yuzer]	1
	پرونجا [parvanjā]	0		کاربر [kārbar]	65
4.	سایت [sāyt]	229	9.	لنز [lenz]	15
	ایستگاه [istgāh]	119		عدسی [adasi]	7
5.	دیتا [deytā]	3	10.	فاکس [fāks]	62
	داده [dādeh]	2605		دورنگار [durnagār]	0

Table 1. Number of hits in the PLDB

When comparing hits, it can be observed that for words such as *computer, file, freezer, printer, lens*, and *fax*, the English loanwords have an advantage over their Farsi counterparts; examples of *digital, data, site* and *user* show the advantage of Farsi words.

   When it comes to the lexicographic part, the online dictionaries do not contain the following English loanwords: *digital, file, site, data, freezer, printer, user, lens,* and *fax*. However, they do not contain the Farsi equivalents for *digital, site, file*, and *fax* as well. The traditional *Aryanpour Dictionary* contains such English loanwords as *computer, file, freezer, printer, lens* and *fax*. For the Farsi lexemes, *computer, data, use*r and *lens* appear in the paper dictionary. Interestingly, the English loanword *printer* appears in the traditional dictionary and is defined *via* its Farsi counterpart, which does not have a separate dictionary entry.

   At this point it can be observed that, so far, the Iranian purification process has been successful in cases where an already existing Farsi word extended its meaning, e.g. رقمی [raqmi] 'digital'. In other situations, namely when a Farsi word has been coined in order to substitute an English borrowing, the latter has proved to be more frequently used.

   Moreover, those loanwords which have already fit into the Farsi morphological system have an advantage over their Farsi counterparts, i.e. loanwords which add various Farsi suffixes, e.g. کامپیوترسازی [kāmpyuteri sāzi] 'computerisation'. What is more, English loanwords are more frequently used than their Farsi counterparts when they appear in clusters,

e.g. فاكس فرستادن [fāks ferestādan] 'to send a fax' or كامپیوترشخصی [kām-pyuter-e shaxsi] 'personal computer'. Therefore, it may be predicted that those loanwords which have undergone the process of persianisation will be more resistant to replacement.

5. Conclusion

The study was to evaluate the successfulness of the Iranian language policy towards technical English loanwords. It can be stated that so far the Iranian language policy towards technical English borrowings has not been particularly successful. As the present study has shown, the frequency advantage of English loanwords over their Farsi counterparts as approved and propagated by the Academy is rather significant. What is more, English loanwords have an advantage over their Farsi equivalents in two cases:

- when they are contrasted with a newly coined Farsi word
- when they have already fit into the Persian morphological system, e.g. through suffixation.

Although this paper does not comprise everything that could be said about the nature of English borrowings in Farsi, it does draw certain conclusions that could be used as a starting hypothesis in the study of other groups of English loanwords in Farsi.

REFERENCES

Aryanpour Dictionary. 2009. [URL: www.aryanpour.com], (accessed: 20th April 2009).
Assi, S. M. 1997. "Farsi Linguistic Database (FLDB)" International Journal of Lexicography 10(3). 5.
Bashiri, I. 1994. "Russian loanwords in Persian and Tajiki languages". In: Marashi, M. (ed.), Persian studies in North America: Studies in honor of Mohammad Ali Jazayery. Bethesda: Iranbooks. 109-140.
Dujardin, G. 2006. "Elastic loaves! Get yer fresh hot elastic loaves!". [URL: http://dujardin.blogspot.com/2006/07/elastic-loaves-get-yer-fresh-hot.html], (accessed: 1st March 2009).

Farhangestan Zaban va Adab Farsi. 2004. A collection of terms approved. Tehran: Farhangestan Zaban va Adab Farsi.

FarsiDict. [URL: www.farsdic.com], (accessed: 10th April 2009).

Farsi Linguistic Database. [URL: http://pldb.ihcs.ac.ir/], (accessed: 13th March 2009).

Ghayoomi, M, S. Momtazi and M. Bijankhan. 2010. "A study of corpus development for Persian" International Journal on Asian Language Processing 20(1). 17-33.

Kashani, M. Aryanpur. 2008. The Aryanpur progressive Persian-English dictionary. Tehran: Computer World.

Moshiri, M. 1993. Dictionnaire des Mots Européens en Persian. Tehran: Alborz Publications.

The Constitution of the Islamic Republic of Iran. 1979.

Thomas, G. 1991. Linguistic purism. New York: Longman.

Zarnikhi, A. 2010. "Terminological activities at the academy of Persian language and literature". In Heine, C. and J. Engberg (eds), Reconceptualizing LSP. Online proceedings of the XVII European LSP Symposium 2009.

LANGUAGE & MEANING

CULTURAL EXPLANATIONS FOR RECURRENT LEXICO-SEMANTIC ASSOCIATIONS: THE 'PUPIL OF THE EYE' REVISITED

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ABSTRACT

The fact that the 'pupil of the eye' is denominated in many geographically and structurally diverse languages with reference to a small human being (such as a girl, a doll, a child, a little man) has left puzzled both linguists and anthropologists. This article sketches an alternative explanation to the prevailing assumption that the reflection of oneself in the interlocutor's eye is in itself a sufficient explanation for the widespread occurrence of this phenomenon.

Keywords: lexicology, typology, anthropological linguistics, language-culture interface

1. Terms for the 'pupil of the eye' cross-linguistically

The fact that the 'pupil of the eye' is designated in many languages with reference to a small human being, for instance a girl, a doll, a child, a little person etc., has been noted early on (Seligmann 1910: 72; Schuchardt 1917: 157), presumably since examples are found in well-known European languages (e.g. Latin *pupilla*, which is a diminutive of *pupa* 'doll', Ancient Greek *korē*, which designates both 'girl' and 'pupil of the eye' and Spanish *niña del ojo,* literally 'girl of the eye'), as well as in many Oriental languages. Later studies (Taglivani 1949; Brown and Witkowski 1981) show that the pattern does not only occur in Europe. A more recent balanced survey of the world's languages (Urban 2012) confirms the globality of the

phenomenon. It occurs in about 25% of sampled languages for which data are available, in languages as diverse as Berik (Tor family, Indonesia), Buli (Niger-Congo family, Ghana), Carrier (Na-Dene family, Canada) and Toba (Guaicuruan family, Argentina), to name just a few.

Scholars have expressed their surprise that this denomination strategy is so widespread. Schuchardt (1917: 157), for one, comments that "[e]ines der merkwürdigsten Bilder, die sich überhaupt in unsern Sprachen festgesetzt haben, ist das, auf dem der Name der Pupille beruht [one of the strangest images which have taken hold in our languages at all is the one on which the name of the pupil is based]", and Blank (2003: 55) freely admits that this common metaphor seems "at first glance […] somewhat strange" (Blank 1997: 177, vacuously, simply states that these similarities must be based on dispositions innate to all humans). Brown and Witkowski (1981: 606), like others before them, propose that the association is based on "the minute human image reflected in the center of the eye", which is no doubt correct, but does not dispel the bewilderment that comes with the high cross-linguistic frequency of the phenomenon.

2. The soul as a miniature human being residing in the eye cross-culturally

A possibly rewarding idea to arrive at a better understanding of the motivation of this linguistic phenomenon is to look at culture, given that the lexicon is probably the subsystem of language most prone to be influenced by cultural factors. In fact, "a number of peoples have thought the free soul resided in the eye in the form of a homunculus" (Bremmer 1983: 17fn11), as established in a seminal article by Monseur (1905).[1] The following section presents the relevant evidence, some, but not all, mentioned in previous literature; a merit of the ensuing discussion is therefore to assemble it all concisely.

The Chinese writer Pu Songling authored a story entitled the 'The talking pupils', which has the scholar Fang Tung's pupils talking and leaving the eyeball. The translator (and Sinologist) Giles (1880: 8, fn3) comments that "[t]he belief that the human eye contains a tiny being of the human shape is universal in China."

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[1] See also Deonna (1965: 28-38) for a condensed overview of associations between eye and soul.

There is evidence from Rome that this tiny being represents the soul: Pliny has it that the eyes are a mirror of the soul, and that, when a person is sick, there is no danger of death as long as one's reflection in the patient's eye remains visible (Bostock and Riley 1855: 52-53, 1856: 299). Smith (1902: 296) reports that disappearance of the reflection in the eye was held to be a "sure sign of impeding doom". Likewise, the poet Babrius has it that "[t]he souls of the dying are in their eyes" (Perry 1965: 118-119). Ovid, in the *Amores*, describes the sorceress Dipsas as having two pupils from which light flashes. This is the so-called *pupula duplex*. One interpretation (though not the only one proposed, cf. Smith 1902; Seligmann 1910: 70) is that a person with a pupula duplex has magical powers or is possessed because that person's own pupil-soul is superseded by another demonic one controlling it (Smith 1902: 299).

For Greece, "the double meaning of *korē* as 'girl' and 'pupil of the eye' may be a survival" of the conception of the soul in the form of the homunculus, suggested by descriptions of the *eidolon* in Homer (Bremmer 1987: 17fn11, 73).[2]

The presence of a manikin which resides in the pupil of the eye and held to represent the soul in the Vedic literature is amply discussed in Arbman (1927). It was, matching the evidence so far discussed, held to leave the body at death. The relevant term *puruṣa* urns up elsewhere with the meaning 'man, human being', so Arbman reasonably assumes this to be the core meaning.

Further evidence for the pervasiveness of the association is reported for the Macushi (Im Thurn 1883: 343), the Maori (Taylor 1870: 352), peoples of the Celebes (Arbman 1927: 147), the people of San Cristoval (Fox and Drew 1915: 169; Sumner and Keller 1927), and the German-speaking area of Europe (Grimm 1835: 606; Bächtold-Stäubli 2006 [1927]).

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[2] Moreover, on the so-called Cup of Cambridge (depicted in Böhlau 1900), an eye-cup (a type of vase from the 6th century BC, the bodies of which are characteristically painted with largish eyes), the pupils are not formed by a black spot, but by a so-called Gorgoneion, the head of the Gorgon Medusa, able to petrify her victims with her gaze. Deonna (1957: 71) interprets this to the effect that the face shown on the Cup of Cambridge is not that of a man, as is usual, but rather that of the Medusa herself. Thus, the Gorgoneion found on the Cup of Cambridge would represent the soul of the Medusa (which, like in humans, is a smaller version of its possessor, but otherwise identical in appearance). Deonna (1957: 71) further points out that the belief may have been present in the medieval South American Chimu Empire, as purportedly evidenced by a Chimu mask shown in Kelemen (1956). However, these pupils resemble monkeys more than they do humans.

3. Discussion: Relating the linguistic and cultural evidence

The notion that the soul resides in the body in the form of a small being is, as the discussion above has shown and as Frazer (1915) and Arbman (1927) have noted before, attested in many cultures (whether people actually *believe* this or whether it is simply a piece of folklore is not crucial). Now, the pupil of the eye, due to its property of reflecting the image of a small being, is on physiological grounds probably a quite salient location to be associated with the manikin-soul. This would explain the similar or even identical beliefs in diverse cultures. It is then natural to assume that this conception is mirrored linguistically by the universal tendency to have analogous expressions for the 'pupil'.[3]

REFERENCES

Arbman, E. 1927. "Untersuchungen zur primitiven Seelenvorstellung mit besonderer Rücksicht auf Indien [Investigations concerning the primitive conception of the soul with special reference to India]" Le Monde Oriental 21. 1-185.

Bächtold-Stäubli, H. 2006 [1927]. Handwörterbuch des deutschen Aberglaubens [Concise dictionary of German superstitions] (CD-ROM). Berlin: Directmedia Publishing.

Blank, A. 1997. Prinzipien des lexikalischen Bedeutungswandels am Beispiel der Romanischen Sprachen [Principles of lexical semantic change using the example of Romance languages]. Tübingen: Niemeyer.

Blank, A. 2003. "Words and concepts in time: Towards diachronic cognitive onomasiology". In: Eckardt, R., K. von Heusinger and C. Schwarze (eds), Words in time: Diachronic semantics from different points of view. Berlin/New York: De Gruyter. 37-65.

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[3] A parallel cultural explanation might be available for the association between 'muscle' and small animals, such as a mouse, as in Latin *musculus*, which is a diminutive of *mus*, 'mouse' (see Brown and Witkowski 1981 for cross-linguistic data). Also similarly, Blank (1997: 165) expresses difficulties to recover the basis of this metaphor. Vilkunen (1956), writing on beliefs of rural Finland, provides a clue to a deeper cultural explanation: when a calf had just been slaughtered and its flesh was still vellicating, one thought that this is due the invisible ghost of the "life-mouse". When the flesh did not stop vellicating in a particular spot, the butcher would cut it open, because it was a considered a sign that life (in the form of the life-mouse) did not want to leave the cadaver (see also Toivonen 1944: 80-93 for relevant discussion).

Böhlau, J. 1900. "Die ionischen Augenschalen [The ionic eye-cups]" Athenische Mittei-lungen 25. 40-99.

Bostock, J. and H. T. Riley. 1855/1856. Pliny the Elder. The natural history (Vols. III and V). London: Henry G. Bohn.

Bremmer, J. 1983. The early Greek concept of the soul. Princeton: Princeton University Press.

Brown, C. H. and S. R. Witkowski: "Figurative language in a universalist perspective" American Ethnologist 8(3). 596-615.

Deonna, W. 1957. "L'âme pupilline et quelques monuments figurés [The pupil-soul and some figurative monuments]" L'Antiquité Classique 26. 59-90.

Deonna, W. 1965. Le symbolisme de l'œil [The symbolism of the eye]. Paris: Éditions E. de Boccard.

Fox, C. E. and F. H. Drew. 1915. "Beliefs and tales of San Cristoval (Solomon Islands)" Journal of the Royal Anthropological Institute of Great Britain and Ireland 45. 131-185; 187-228.

Frazer, J. G. 1915. The golden bough: A study in magic and religion. London: Macmillan.

Grimm, J. 1835. Deutsche Mythologie [German mythology]. Göttingen: Dieterichsche Buchhandlung.

Im Thurn, E. F. 1883. Among the Indians of Guiana: Being sketches chiefly anthropo-logic from the interior of British Guiana. London: K. Paul, Trench & Co.

Kelemen, P. 1956. Medieval American art; Masterpieces of the New World before Co-lumbus. New York: Macmillan.

Monseur, E. 1905. "L'âme pupilline [The pupil-soul]" Revue de l'histoire des religions 51. 1-23.

Perry, B. E. 1965. Babrius and Phaedrus. Newly edited and translated into English, to-gether with an historical introduction and a comprehensive survey of Greek and Latin fables in the Aesopic tradition. Cambridge: Harvard University Press.

Pu, S. 1880. Strange stories from a Chinese studio. Translated and annotated by Herbert A. Giles. London: Thos. de la Rue & Co.

Schuchardt, H. 1917. "Zu den romanischen Benennungen der Milz [About the Romance denominations of the spleen]" Sitzungsberichte der Königlich Preußischen Akademie der Wissenschaften 8. 156-170.

Seligmann, S. 1910. Der böse Blick und Verwandtes: Ein Beitrag zur Geschichte des Aber-glaubens aller Zeiten und Völker [The Evil Eye and congeners: A contribution to the history of the superstitions of all times and peoples] (Vol. I). Berlin: Barsdorf.

Smith, K. F. 1902. "Pupula duplex". In: Studies in honour of B.L. Gildersleeve. Balti-more: Hopkins Press. 287-300.

Sumner, W. G. and A. G. Keller. 1927. The science of society (Vol. II). New Haven: Yale University Press.

Tagliavini, Carlo. 1949/1982. "Di alcuni denominazioni della 'pupilla' (studio di ono-masiologia, con speciale riguardo alle lingue camito-semitiche e negro-africane) [On some denominations of the 'pupil' (an onomasiological study, with special reference to the Hamito-Semitic and Black African languages]". In: Tagliavini, C. Scritti minori. Bologna: Patron. 529-568.

Taylor, R. 1870. Te Ika a Maui, or New Zealand and its inhabitants (2nd ed.). London: Wertheim and Macintosh.

Toivonen, Y. H. 1944. Sanat puhuvat: Muutamien sanojen ja kuvitelmien historiaa [The words speak: The history of words and conceptions]. Porvoo/Helsinki: Werner Söderström Osakeyhtiö.

Urban, M. 2012. Analyzability and semantic associations in referring expressions: A study in comparative lexicology (working title). Dissertation. Leipzig/Leiden: Max Planck Institute for Evolutionary Anthropology/Universiteit Leiden.

Vilkuna, A. 1956. Das Verhalten der Finnen in 'heiligen' (pyhä) Situationen [The behavior of Finns in 'holy' (pyhä) situations]. Helsinki: Suomalainen Tiedeakatemia/Academia Scientiarum Fennica.

"MIND THE (LEXICAL) GAP!": HE BILINGUAL DICTIONARY AS A BRIDGE BETWEEN LANGUAGES AND CULTURES

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ABSTRACT

This paper will deal with the cross-cultural dimension of bilingual dictionaries. In order to illustrate the culture-specific elements of lexicon, we will focus on equivalence and will try to outline a typology of lexical gaps. Taking the anisomorphism of languages as a starting point, we will develop the concept of cultural load.

Keywords: lexicography, lexical gaps, equivalence, connotation, cultural load

1. Introduction

Why mind the lexical gaps? First of all, they are *revealing*. They are points of discontinuity in the text (or, better still, the *texture*) of the dictionary and shed some light upon its very nature.

The bilingual dictionary rests upon a central postulate, which is about lexical equivalence, or *equal value*. Zgusta (1984: 147) puts it as follows: "The dictionary should offer not explanatory paraphrases or definitions, but real lexical units of the target language". Lexicographical practice shows that things are often far more complicated than that: as a matter of fact, lexical gaps openly break this postulate. Furthermore, an *optimum* concept of equal value is taken for granted by the average reader, who will naively tend to read the text of a bilingual dictionary as if it was

based on a relationship of meaning (in the translation, decoding or passive side) or denomination (in the production, encoding or active side)[1].

Lexical gaps are then *symptomatic* because, through their recourse to explanatory glosses, paraphrases or symbols indicating only a partial overlapping between the lemma and the equivalent, they show how groundless presuppositions of *meaning* and *denomination* in bilingual dictionaries are.

The main hindrance to the transparency of equivalence is the factor Zgusta (1971) labels as "anisomorphism of languages". Lexical networks are structured in different ways in L1 and L2; it is evident to both linguists and foreign language learners. We will only stress the fact that the experience of the speaking community is shaped idiosyncratically, along different semantic lines, and some parallels can be drawn between linguistic expressions (mainly lexical, but also grammatical[2] and syntax-based[3]) and corresponding speech communities.

2.   Referential and semantic gaps

A comprehensive analysis of the subject is proposed by Duval (2008). The matter can be reduced to two basic questions: "Does the real exist or not in the culture of the speakers of a particular language? Does the word which describes the real exist or not in the language of these speakers?" (2008: 274). In the first case, we will deal with referential gaps, in the second we will talk about semantic gaps.

Even if an equivalent lexical item does exist, it might happen that "the reality it points to does not belong to the cultural universe of the target language speakers". Then, Duval goes on, "perfect equivalence demands equal levels of denotation, i.e. reference to the same element of the real, and equal levels of connotation" (2008: 275). It goes without saying that such a level of equivalence is quite rare and it basically applies to terminology (see Snell-Hornby 1987).

Referential gaps, as we have seen, indicate the lack of the referent in one of the two speech communities, L1 or L2. It is comparatively easy to

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[1] See Rey-Debove (1991).
[2] Wierzbicka (1988a); Fourment Berni-Canani (2003).
[3] Enfield (2002).

find privileged fields in which such gaps occur more frequently. There has been a wealth of research into this (Al-Kasimi 1983; Schnorr 1986; Šarčević 1989), who identified the fields of clothing, food, folklore, kinship, education, festivities, etc. as particularly problematic.

From a semantic point of view, referential gaps question the very identity of bilingual dictionaries: the classic linguistic vs. extralinguistic dichotomy becomes fuzzier[4], and "dictionaries of language" become very close to "dictionaries of things"[5].

3. Connotations in meaning, or cultural loads

Although the definition of connotation is still controversial, we can affirm that connotations are "socially constructed" and "socially shared" and that their value is grafted onto a denotational pattern. We will adopt Galisson's terminology: he preferred speaking of "cultural load", rather than connotation[6], and defined it as "the product of the relationship the sign had with its users" (Galisson 1987: 137[7]). He also made explicit reference to pragmatics and cultural anthropology as key domains to approach the study of cultural loads.

We will now briefly analyse one case, in order to show how cultural loads are (mis)represented in bilingual dictionaries. The flower of mimosa in Italian culture is strongly connoted or, better still, "culturally loaded". It triggers precise associations in a native speaker. These flowers are given to women on International Women's Day; on March 8th, they are sold in the streets, and young ladies wear them in their hair etc. In France, such a tradition does not seem to exist. The French-Italian dictionaries we examined merely propose a lexical (and homographic) equivalence (Italian *mimosa* = French *mimosa*); they do not provide any encyclopaedic information and not even contextualizing examples. We do not find it helpful for French readers or translators, who can be at a loss for understanding an Italian text in which a woman receives a mimosa. It is clearly an issue of non-shared cultural loads between two languages.

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[4] See Rey (1977: 70) and Rey-Debove (1991).
[5] See Bauer (2005).
[6] Defined as a "cover-all notion" (Galisson 1987: 135), encompassing factors like diaphasic variation and idiosyncrasies.
[7] Our translation.

Let us now analyse the French term *provincial* (i.e., 'a person who lives in the provinces'). We believe that, in this case, reference to extralinguistic data is essential in order to grasp the meaning. A basic equivalence French *provincial* = Italian *provinciale* is provided by the dictionaries we examined; only one adds the following gloss: 'personne qui vit en province' [a person who lives in the provinces]. If we turn to a reference monolingual French dictionary, Le Petit Robert 2011, the entry *provincial* includes several examples and idioms. Some prove particularly interesting to grasp the meaning of the lemma:

– *Péj*. [Derogatory] *Avoir des manières provinciales*, un peu gauches, qui ne sont pas à la mode de Paris [*to have provincial manners*, a bit awkward, not in Paris fashion]
– *Les provinciaux et les Parisiens* [the provincials and the Parisians]
– "Des provinciaux dont la principale occupation est de démontrer aux Parisiens l'existence, l'esprit et la sagesse de la province" (Balzac) ["Provincials whose main occupation is to show Parisians the existence, the spirit and the wisdom of the provinces"].

Thus, through a well-chosen idiom, an example and a literary quotation, the lexicographer shows us that the term *provincial* is frequently used as opposed to "person from Paris". Of course you can translate the term into the Italian *provinciale*, but you must bear in mind that the two words carry very different connotations. In short, *provinciale* in Italian is someone from a small town, while, at least in the strong, "Parisianly" biased, version a *provincial* is someone who is not from Paris, just as a barbarian was merely a non-Greek for Greeks living in the Classical age.

4. Conclusion

The examples we quoted show a good deal of semantic and cultural discrepancy in the translation process, which the dictionaries in question do not account for. We cannot but plead for a better marking of such discrepancies in bilingual dictionaries. "Cultural boxes" and literary quotations may provide a solution in such cases. In particular, literary excerpts can be valuable in order to convey the unity of form and content that lexemes carry and that can be easily lost without a meaningful context, placing

them in a definite cultural setting. In short, we propose that an integrated system of signalling should be implemented[8], giving information for key culture elements, pointing out idiomatic connotations and cultural loads – simply, providing landmarks to the foreign user, grappling with a language-culture whole where it is often difficult to find one's bearings.

Thus, bilingual dictionaries could really be helpful to translators, students and all users and become tools for "cross-cultural communication and cross-cultural understanding" (Wierzbicka 1988b: 179). In conclusion, we believe that dictionaries cannot fill interlinguistic gaps, but they can point to them, thereby building an "intercultural bridge" (Rey 2007), which facilitates communication between two communities, through their languages and across their cultures.

REFERENCES

Al-Kasimi, A. 1983. Linguistics and bilingual dictionaries. Leiden: E.J. Brill.

Bauer, L. 2005. "The illusory distinction between lexical and encyclopedic information". In: Gottlieb, H., J. E. Mogensen and A. Zettersten (eds), Symposium on Lexicography XI. Tübingen: Niemeyer. 111-115.

Duval, A. 2008. "Equivalence in bilingual dictionaries". In: Fontenelle, T. (ed.), Practical lexicography: A reader. Oxford: Oxford University Press. 273-282. Enfield, N. 2002. "Ethnosyntax: Introduction". In: Enfield, N. (ed.), Ethnosyntax: Explorations in grammar and culture. Oxford: Oxford University Press. 3-30.

Fourment Berni-Canani, M. 2003. "Structures linguistiques à portée culturelle dans les dictionnaires bilingues français-italien [Culture-bound linguistic structures in French-Italian bilingual dictionaries]". In: Szende, T. (ed.), Les écarts culturels dans les dictionnaires bilingues. Paris: Champion. 87-100.

Galisson, R. 1987. "De la lexicographie de dépannage à la lexicographie d'apprentissage: Pour une politique de rénovation des dictionnaires de FLE à l'école [From stopgap lexicography to learning lexicography: For a new policy about pedagogical 'French as a foreign language' dictionaries] " Cahiers de lexicologie 51(I/II). 95-118.

Gouws, R. 2002. "Equivalent relation, context and cotext in bilingual dictionaries" Hermes 28. 195-209.

Rey, A. 1977. Le lexique: Images et modèles. Du dictionnaire à la lexicologie [Lexicon: Images and models. From dictionary to lexicology]. Paris: Colin.

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[8] See Gouws (2002).

Rey, A. 2007. "Le pont interculturel [The intercultural bridge]". In: Dotoli, G. (ed.), L'architecture du dictionnaire bilingue et le métier du lexicographe: Actes des Journées Italiennes des Dictionnaires. Fasano: Schena. 7-21.

Rey-Debove, J. 1991. "La métalangue dans les dictionnaires bilingues [Metalanguage in bilingual dictionaries]". In: Hausmann, F. J., O. Reichmann, H. E. Wiegand and L. Zgusta Wörterbucher/Dictionaries/Dictionnaires. Ein internationales Handbuch zur Lexikografie/An International Encyclopedia of Lexicography/ Encyclopédie internationale de lexicographie (Vol. 3). Berlin/New York: De Gruyter. 2859-2865.

Šarčević, S. 1989. "Lexicography and Translation Across Cultures". In: Snell-Hornby, M. (ed.), Translation and Lexicography. Amsterdam: John Benjamins. 211-221.

Schnorr V. 1986. "Translational equivalent and/or explanation? The Perennial Problem of Equivalence" Lexicographica 2. 53-60.

Snell-Hornby, M. 1987. "Towards a learner's bilingual dictionary". In: Cowie, A. (ed.), The dictionary and the language learner. Tübingen: Niemeyer. 159-170.

Wierzbicka, A. 1988a. The semantics of grammar. Amsterdam: John Benjamins.

Wierzbicka, A. 1988b. "The semantics and lexicography of 'natural kinds'". In: Hyldgaard-Jensen, K. and A. Zettersten (eds), Symposium on Lexicography III. Tübingen: Niemeyer. 155-182.

Zgusta, L. 1974. Manual of lexicography. The Hague: Mouton.

Zgusta, L. 1984. "Translational equivalence in the bilingual dictionary". In: Hartmann, R. (ed.), LEXeter '83. Tübingen: Niemeyer. 147-154.

CONCRETENESS OF ABSTRACT CONCEPTS: OBJECTIFICATION AS AN EMERGENT FEATURE OF METAPHOR

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ABSTRACT

This paper proposes an adjustment in metaphor typology within Contemporary Theory of Metaphor (Lakoff 1993) to accommodate for insight drawn from the theory of objectification (Szwedek 2002, 2007, 2011) and embodied experience. It is the aim of this paper to investigate the abstract/concrete distinction in a manner that will provide insight with regard to the role of tangibility in human cognition and identify one possible consequence of embodied experiential grounding.

Keywords: objectification, conceptual metaphor, feature emergence, embodiment, grounding

1. Introduction

The original work on conceptual metaphor by Lakoff and Johnson (1980) evolved into what is known as the Contemporary Theory of Metaphor or CTM (Lakoff 1993) in the course of a decade. From the beginning these theories faced a number of critical comments. Some of these issues, such as the distinction between abstract and concrete concepts (Szwedek 2002, 2011), the role of embodiment (Vervaeke and Kennedy 2004), or the structure and typology of metaphor are yet to be adequately addressed. It is clear that there is much development to be expected in the field of CTM (Ruiz de Mendoza and Hernandez 2011: 161). In view of the growing tendency toward interdisciplinary research, CTM would benefit from

a focus on the experiential basis of metaphor that results in a streamlined metaphor typology both conducive to empirical research and attractive to researchers from a variety of scientific fields.

While Lakoff and Johnson state that "conceptual metaphors reflect the structure of thought" a number of commentators noted that this claim is effectively unfalsifiable, that is, in its current form it cannot be empirically proven incorrect (cf. Vervaeke and Kennedy 1996). Consider an expression identified as incoherent with a dominant conceptual mapping (e.g. LOVE is a JOURNEY), such as *She is having an affair*. Although one can prove its incoherence with the mapping, this fact cannot be interpreted as evidence against the theory itself. Quite the reverse: the expression in question may be used as evidence for the existence of a different conceptual mapping, such as LOVE is a POSSESSION, or perhaps LOVE is a MEAL. In this way CTM is effectively unfalsifiable (Vervaeke and Kennedy 2004: 214).

Providing a coherent framework in which to establish metaphor typology and prevent post hoc explanations of this kind may be a step in the right direction – a purpose to which the theory of objectification, as put forward by Szwedek (2002, 2007, 2011), lends itself exceedingly well.

2.   Objectification and feature emergence

Arguably, the connection between explicit expressions and implicit metaphors can be "interpreted in multiple ways" (Ritchie 2003: 126). Since source and target domains are implicit, the criteria on the basis of which they became parts of the mapping are not identified easily.

Vervaeke and Kennedy (2004: 218) argue that any two concepts "share an infinity of properties". Therefore, in order to explain the selection of target and source domains one would have to assume the existence of premetaphoric structure of concepts (cf. Glucksberg 2001), which would provide constraints for feature mapping. Consequently, one would arrive at a means of explanation for the fact that, while indeed all mappings are possible only some of them are cognitively useful and used.

In a similar vein of inquiry, Szwedek set out to identify "the source of source domains" (2002, 2007), or the ultimate experiential basis of metaphor. Since "many (...) families of metaphors (...) trace the underlying metaphor to a literal concept based on embodied physical experience"

(Ritchie 2003: 133) the domain of the physical is where one should start looking for evidence of experiential grounding, or the stipulated premetaphoric structure. It is not uncommon to see metaphor described as "a conceptual mapping (...) from a source domain (...) to a target domain (...). The source is less abstract (i.e. more accessible to sense perception) than the target" (Ruiz de Mendoza and Hernandez 2011: 162), where concreteness is a vaguely described function of sensual experience. In order to narrow down the notion of "concreteness" Szwedek takes this discussion further, and arrives at the conclusion that experiential grounding for metaphor is based on density, as experienced by touch (for full discussion see Szwedek 2002, 2007). In contrast to the vague notion of "concreteness", "objectification", which is ontological metaphorisation from concrete (physical) to abstract (phenomenological) objects, is rooted in the physical sensation of touch. This hypothesis lends itself to testing using a variety of experimental designs.

The notion of emergence of meaning from the operation of complex systems is recognised as an important process in a number of studies on metaphor comprehension. Feature emergence is said to occur when a non-salient feature of the target and the vehicle becomes highly salient in the metaphor (Utsumi 2005). In search for a basic but implicit process, such as objectification, one must investigate whether indeed abstract notions are understood in terms of concrete objects, and if this process is metaphorical in nature. Feature emergence provides a method of tapping into implicit metaphors and their features via explicit expressions and, as such, is particularly valuable for research on concept concreteness.

3. Experiment

The aim of the experiment was to investigate whether the tangibility of a concept is more salient at the metaphor level than at the word level by testing if participants rated abstract concepts in metaphorical expressions as more tangible than concepts without any context. Should this prove to be the case, objectification could be studied as an emergent feature of concrete to abstract metaphorisation, with possible insight regarding the experiential grounding of metaphor.

Seventy nine participants, all Polish undergraduate extramural students aged 19-45 were interviewed for this study.

Twenty one words denoting abstract concepts, and forty two metaphorical sentences were used as stimuli in the experiment. For each word two sentences constructed that included the concept in a metaphorical context, and were based on a concrete to abstract nominal conceptual metaphor. For example, the abstract concept MIŁOŚĆ [LOVE] was put in the context of the LOVE is ALCOHOL INTOXICATION. The sentences were to exemplify the metaphor but not explicitly so:

– Tak był spragniony miłości, że logował się na portale randkowe.
  [He was so thirsty for love that he used online dating sites]
– Biegł przez park upojony miłością.
  [He ran through the park drunk with love]

The stimuli was pre-tested for familiarity and conventionality. It was then used to construct questionnaires, which contained tasks related to the words without context, sentences as well as unrelated „dummy" words and sentences.

The questionnaire consisted of two tasks: grading words outside of context and words put in metaphorical sentences. Following the work of Becker (1997) grading was conducted on a seven-point valuation scale (1 – feature is not relevant, 7 – feature is extremely relevant). The scales included the target scale (tangibility) and three distractor scales.

Participants were divided into two groups and given one of the two versions of the questionnaire. They were then asked to rate the words and expressions on the provided forms. Questionnaires were collected and the results analysed.

4.   Results and discussion

Analyses of variance (ANOVAs) of mean numbers were performed, with metaphoric stimulus as the only within subject factor. The analyses revealed significant differences between the context and non-context categories $F(2,32) = 15.5$ p <0.001. Post hoc Tukey's pairwise comparisons (p $< .001$) indicated that concreteness was judged as a feature of an abstract concept in a metaphorical setting significantly more often than out of context, suggesting that it may be considered as an emergent feature of concrete to abstract metaphorisation.

The result of the present study may be considered a modest contribution toward the development of objectification theory and establishing its validity in the framework of CTM. Models of metaphor relying on emergent feature analysis are still a potent field of study, ripe with opportunity for follow up experiments.

REFERENCES

Becker, A. 1997. "Emergent and common features influence metaphor interpretation" Metaphor and Symbol 12(4). 243-259.

Glucksberg, S. 2001. Understanding figurative language. Oxford: Oxford University Press.

Lakoff, G. 1993. "The contemporary theory of metaphor". In: Ortony, A. (ed.), Metaphor and thought. Cambridge: Cambridge University Press. 202-251.

Lakoff, G. and M. Johnson. 1980. Metaphors we live by. Chicago: University of Chicago Press.

Ritchie, D. 2003. "Categories and similarities: A note on circularity" Metaphor and Symbol 18(2). 49-53.

Ruiz de Mendoza Ibáñez, F. J. and L. Pérez Hernández. 2011. "The contemporary theory of metaphor: Myths, developments and challenges" Metaphor and Symbol 26(3). 161-185.

Szwedek, A. 2002. "Objectification: From object perception to metaphor creation". In: Lewandowska-Tomaszczyk, B. and K. Turewicz (eds), Cognitive Linguistics Today. Frankfurt am Main: Peter Lang. 159-175.

Szwedek, A. 2007. "An alternative theory of metaphorisation". In: Fabiszak, M. (ed.), Language and meaning: Cognitive and functional perspectives. Frankfurt am Main: Peter Lang. 312-327.

Szwedek, A. 2011. "The ultimate source domain" Review of Cognitive Linguistics 9(2). 341-366.

Terai A. and M. Nakagawa. 2008. "A corpus-based computational model of metaphor understanding incorporating dynamic interaction". In: Kurkova, V., R. Neruda and J. Koutnik (eds), ICANN 2008. Berlin Heidelberg: Springer-Verlag. 443-452.

Utsumi, A. 2005. "The role of feature emergence in metaphor appreciation" Metaphor and Symbol 20(3). 151-172.

Vervaeke, J. and J. M. Kennedy. 1996. "Metaphors in language and thought: Falsification and multiple meanings" Metaphor and Symbolic Activity 11(4). 273-284.

Vervaeke, J. and J. M. Kennedy. 2004. "Conceptual metaphor and abstract thought" Metaphor and symbol 19(3). 213-231.

MORE THAN SWEET MELODIES: ON THE STRUCTURAL DIVERSITY OF NON-LITERARY SYNAESTHETIC METAPHORS IN POLISH AND ENGLISH

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ABSTRACT

Most works on synaesthetic metaphors focus on the structure most commonly associated with this type of metaphor – a simple noun phrase such as *sweet melody*. The present paper discusses examples of less conventional structures discovered when analysing synaesthetic metaphors extracted from Polish and English music reviews. The rather significant proportions of other structures (ca. 19% for Polish and 25% for English) show that the non-literary register also uses varied metaphorical expressions typically attributed to highly innovative and literary texts.

Keywords: synaesthetic metaphors, music reviews, structural diversity, Polish, English

1. Introduction

The present paper concerns synaesthetic metaphors, i.e. metaphors in which the target and source domains are associated with different sensory modalities. The vast majority of works discussing synaesthesia in language quote only examples of the structure most commonly associated with this type of metaphor – a simple noun phrase with the noun as the target term and the adjective in the premodifier position as the source term, such as *sweet melody*.

The seminal study of synaesthesia in language by Ullmann (1957) is based on an analysis of as many as 2009 examples of synaesthetic meta-

phors found in the works of various British, French, and Hungarian poets. Despite the impressive size of Ullmann's collection, all of the discussed examples are simple noun phrases. Another large-scale study is by Day (1996), including 1269 examples from English and German literature. Here as well all metaphors are of the most common structure. Similarly, Shen's (1997) study based on 130 metaphors from Hebrew poetry quotes only examples of the *sweet melody* form. A more recent study based on 125 metaphors found in various types of texts in Jakartan Indonesian by Shen and Gil (2008) also fails to note any other structures.

More complex structures are sometimes quoted in analyses of literary synaesthesia, for example in Yu (2003), who focuses on the works of one particular Chinese novelist Mo Yan known for his innovative use of language. Complex structures are generally treated as peculiar to highly innovative and literary texts, and thus not expected to appear in everyday language. Such presentations convey an oversimplified and ill-informed view of synaesthetic metaphors, at the same time suggesting that non-literary synaesthesia employs mostly conventional structures.

The present paper discusses examples of more varied structures discovered in significant numbers in non-literary texts, namely music reviews written in Polish and English.

2. Methods

The present study is based on an analysis of 500 non-literary synaesthetic metaphors with the target domain of sound. They include 250 examples each from Polish and English collected from music reviews gathered in 2009-2010. The reviews come from various Internet websites (both general information sites that include sections devoted to music as well as specialised sites focusing on particular types of music), mainly of music releases but also live performances, spanning various musical genres, and – in the case of English – written by both British and American authors.

3. Results

The analysis of the structure of the gathered metaphors reveals that while simple NPs do dominate, other structures tend to appear in significant numbers.

structure	Polish	English
N	18	22
N is Adj	13	21
V	6	11
V + AdvP	3	5
others	7	4
TOTAL	47 = 18.8%	63 = 25.2%

Table 1. Occurrences of the less conventional structures in Polish and English

As shown in Table 1, out of the 250 English synaesthetic metaphors, 63 were different structures, which amounts to 25.2%. In the case of the 250 Polish metaphors, 47 were different structures, amounting to ca. 19%.

The most common group of the less conventional structures are one-word noun phrases, as in (1) – (4). In (1), the tactile quality of the melodies is first of all expressed by the noun *textures,* additionally modified by the adjective in the attributive position also related to the tactile modality, strengthening the effect of the music feeling soft to the touch. (3) and (4) are examples of Polish genitival constructions that render the music's synaesthetic quality.

(1)   melodies with **soft textures**
(2)   indie pop with a psychedelic **sheen**
(3)   **opary** post-rocka
         'vapours of post-rock'
(4)   **ostrość** i **suchość** brzmienia
         'the sharpness and dryness of the sound'

The second most numerous group comprises semantic equivalents of the most common simple NPs in the form of N is Adj, as exemplified by (5) – (8):

(5)   the songs are **warm** and **fuzzy**
(6)   higher instruments are **smooth** and **creamy**
(7)   brzmienie jest niekiedy **chropowate**, **brudne**, **szorstkie**
       'the sound is at times course, dirty, and rough'
(8)   brzmienie jest **soczyste**
       'the sound is juicy'

Examples of the next two groups are shown in (9) – (13). These include structures where the verb referring to the action the subject performs, or to the activity they engage in suggests the synaesthetic quality of the subject, as in (9) – (11), or of the object, as in (12). Other examples include structures where the verb is modified by an adverb suggesting a different sense modality than that implied by the verb, as in (13).

(9)   the guitar **shimmers** and explodes
(10)   the guitars **soften** around the edges
(11)   miejsca, w których (…) emocje chcą rosnąć jak lawina, a pasaże **skrzyć się**
       'places where (…) emotions want to grow like an avalanche and passages want to sparkle'
(12)   Diane znowu **przyciemnia** głos.
       'Diane darkens her voice again.'
(13)   The trombones acquire new dimensions in this album, sounding **softly**, subtle, **weightless**.

The last group includes individual occurrences of varied composite structures, often combined with other types of metaphors and similes.

4. Discussion and conclusions

The analysis of the structure of the gathered Polish and English synaesthetic metaphors shows that non-literary synaesthesia does not only use the most conventional form of the simple NP as in the oft-quoted examples of *sweet melody* or *soft voice*. If the more varied structures are believed to be typical of literary synaesthetic metaphors, then the present study shows that non-literary synaesthesia is not necessarily structurally much different from poetic synaesthesia, which also suggests that the general dissimilarity between the two is smaller than some suggest.

However, there remains the question of why all studies of synaesthetic metaphors that focus on literary texts (e.g. Ullmann 1957, Day 1996, and Shen 1997) make no mention of any less conventional structures. It is unclear whether the researchers decided to ignore such examples because they turned out to constitute only marginal cases in literary texts, or perhaps because they are generally nonexistent in literature, appearing only in the works of individual authors. This issue requires further investigation.

REFERENCES

Day, S. 1996. "Synaesthesia and synaesthetic metaphor" Psyche 2(32). [URL: http://psyche.cs.monash.edu.au/v2/psyche-2-32-day.html].

Shen, Y. 1997. "Cognitive constraints on poetic figures" Cognitive Linguistics 8(1). 33-71.

Shen, Y. and D. Gil. 2008. "Sweet fragrances from Indonesia: A universal principle governing directionality in synaesthetic metaphors". In: Auracher, J. and W. van Peer (eds), New beginnings in literary studies. Newcastle: Cambridge Scholars Publishing. 49-71.

Ullmann, S. 1957. The principles of semantics. Oxford: Blackwell.

Yu, N. 2003. "Synesthetic metaphor: A cognitive perspective" Journal of Literary Semantics 32(1). 19-34.

SUBJECTIVE VS. OBJECTIVE VIEWING OF *THINK* IN ENGLISH

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ABSTRACT

Subjectivity in language and the process of subjectification have been widely discussed over the last few decades in cognitive grammar. By means of the Langacker's subjectification theory the author analysed the subjective and objective viewing of the English mental verb *think*. The present study corroborates the hypothesis that in English the act of thinking is conceptualised mainly in such a way that the speaker is objectified by putting himself on stage.

Keywords: subjectification, subjectivity, objectivity

1. Introduction

Each speaker acts as a conceptualiser and, hence, has inexhaustible possibilities to construe a scene in a chosen way. Subjective/objective viewing is one of the construal operations, as understood in the cognitive approach to semantics and discourse analysis, which give the speaker such an opportunity (Langacker 1990: 5). The disparity between the objective and subjective viewing, and the process of subjectification, have been widely discussed by linguists over the last few decades. Athanasiadou et al. (2006: 1) point out that among those who first considered the notion of subjectivity were European linguists such as Bréal ([1900] 1964) and Bühler ([1934] 1990). Afterwards it was Benveniste ([1958] 1971) who went on to claim that subjectivity is one of the most obvious and, hence,

ubiquitous functions of language. In his research, he distinguished be-
tween "sujet d'enouncé", the syntactic subject and "sujet d'énonciation"
understood as the speaking subject. However, the approach to subjectivity
in language which has recently gained great popularity and, thus, cannot
go unmentioned is that of Langacker's.

2. Langacker's subjectification theory

Contrary to what might be expected, Langacker's view of subjectivity
does not refer to the meaning which is based on the speaker's subjective
opinion. For him, the notion of subjectivity is related to "the relative posi-
tions of the *subject and object of conception*" (Langacker 1999: 149). The
subject of conception, as understood by Langacker, is the conceptualiser
of the scene, while the scene or entity which is conceptualised constitutes
the object of conception. Langacker (1990: 7) juxtaposes two basic view-
ing arrangements: the optimal and the egocentric. In the case of the for-
mer, the boundary between the conceptualiser and what is conceptualised
is definite and the subject of conception is "totally absorbed in apprehend-
ing the onstage situation" (Langacker 2006: 18). However, this does not
always have to be the case. It is possible for a conceptualiser to linguisti-
cally profile himself. In such a case, he becomes part of the scene which
is conceptualised. In such egocentric viewing arrangement the inherent
boundaries between the subjective speaker and the objective scene blur
and the speaker, as part of the object of conception, is construed objec-
tively (Langacker 1990: 8).

Langacker (1990: 6f.) provides an example in order to demonstrate the
way the scene may be construed either subjectively or objectively in a
real-life situation. When a man wears glasses, he may take them off, put
them on the table and look at them carefully. In this case, their construal is
maximally objective. The man (who serves as the subject of conception)
is fully detached from the scene. The glasses, on the other hand, function
only as the object of perception. This arrangement, however, may easily
be modified, resulting in the *optimal viewing arrangement* evolving into
the *egocentric viewing arrangement*. When the man wears the glasses,
they become "part of the perceiving apparatus" and, simultaneously, any
other object may be observed. In such a case, the function of the glasses is
to be a part of the subject of conception.

The process of subjectification refers to the relationship between the optimal viewing arrangement and the egocentric viewing arrangement. As Kövecses explains, "the construal of a situation depends on whether an element of the speech event (subjective construal) or an objective element (objective construal) is utilised in describing a scene" (2006: 238). Hence, the presence of the pronouns such as *I* or *me* in a particular sentence puts the speaker on stage and makes the conceptualiser linguistically profiled. The fact that the scene gains subjectivity and the speaker is conceptualised in a more objective way cannot nevertheless be referred to as subjectification, as understood by Langacker. Subjectification can only be achieved when the speaking subject is present in the construal but is not profiled linguistically.

3.   Subjectification theory in application

Langacker's theory of subjectification inspired the author to conduct a study concerning the subjective and objective viewing of the English verb *think*. In other words, subjectivity and subjectification theories served as a tool to disclose any regularities and tendencies in the level of subjectivity of the conceptualisation of the act of thinking. The analysis has been fully presented in Korpal (2011) and, due to word limit imposed, the present description constitutes only a tentative adumbration of the topic and a summary of the main results.

The author predicts that in the case of psychological verbs objectification of the speaker prevails. Hence, the instances of use of the verb *think* with the 1st person should outnumber the instances of its use with the 3rd person. When the mental verb *think* is the predicate of a given sentence, then it is likely that the speaker would objectify himself by putting himself on stage. In other words, focusing on oneself when construing the act of thinking is a pragmatic convention. This was the author's hypothesis which was to be corroborated in the study.

A thousand of examples of the use of the verb *think* have been chosen at random from the British National Corpus and analysed in order to examine whether it is true that the verb is mainly used with the 1st person subject. The results of the analysis are summarised in Table 1.

1st person sg/pl	2nd person sg/pl	3rd person sg/pl
609 (541/68)	158	233

Table 1. The frequency of the occurrence of the possible subjects of *think* (from Korpal 2011: 18)

The comparison of the figures from Table 1 confirms the author's hypothesis. In the statistically significant majority of the instances analysed, the verb *think* is used with 1st person. Out of 1000 clauses with the verb *think* as a predicate 541 contained the pronoun *I* as the subject. Hence, it is more natural in English to say *I think* than to say *He/She thinks*. When conceptualising the mental process, there is a strong tendency for a speaker to treat himself as the object of conception (Korpal 2011). Goddard (2003: 132) is of the opinion that this is no coincidence, since "*I think* serves a range of conventionalised conversational and illocutionary functions – e.g. to make suggestions or mitigate disagreement".

Nevertheless, the question is: can we talk about the typological approach to subjectivity in language? Uehara's (2006: 76ff.) comparative analysis of English and Japanese corroborates the claim that there exist cross-language differences in the conceptualisation. This would suggest that the typological approach to subjectivity in language appears relevant. Uehara states that languages may be placed on the subjectivity scale, depending on explicitness or implicitness of the subject. He examines the issue of conceptualisation of mental acts in both English and Japanese. He is of the opinion that in Japanese the subjective construal prevails since "the first person pronoun subject of internal state predicates is usually omitted in Japanese discourse" (Uehara 2006: 104). Due to the lack of obligatoriness of the subject Langacker's full subjectification can be achieved in most instances. In comparison, in English the subject has to be explicitly expressed. The conceptualiser is profiled linguistically and maximal linguistic subjectivity cannot take place. As Uehara (2006: 111) concludes, "Japanese appears to represent the subjective frame (or speaker-oriented) language type and English the objective frame type". Uehara's analysis, hence, manifests that the typological approach to grammar should be applied (Korpal 2011).

However, it should again be made clear that the description of the results presented here constitutes a condensed summary of a much more

complicated issue. The extensive coverage of the issue of Langacker's full subjectification, when the conceptualiser is unselfconscious, has been given in Korpal (2011). Some other issues, i.e. the notion of pragmatic strengthening of the *I think* expression (Traugott 1995: 38f.), the comparison of English and Polish mental verbs and further details concerning the typological approach to subjectivity in language, have also been touched upon therein.

REFERENCES

Athanasiadou, A., C. Canakis and B. Cornillie. 2006. "Introduction". In: Athanasiadou, A., C. Canakis and B. Cornille (eds), Subjectification: Various paths to subjectivity. Berlin: Mouton de Gruyter. 1-13.

British National Corpus. 2010. [URL: http://corpus.byu.edu/bnc], (accessed: 11th March 2010).

Goddard, C. 2003. "Thinking across languages and cultures: Six dimensions of variation" Cognitive Linguistics 14(2/3). 109-140.

Korpal, P. 2011. Do we think subjectively or objectively? On the subjectification of mental verbs in English and Polish. Unpublished thesis. Poznań: Adam Mickiewicz University.

Kövecses, Z. 2006. Language, mind and culture: A practical introduction. Oxford: Oxford University Press.

Langacker, R. 1990. "Subjectification" Cognitive Linguistics 1(1). 5-38.

Langacker, R. 1999. "Losing control: Grammaticization, subjectification, and transparency". In: Blank, A. and P. Koch (eds), Historical semantics and cognition. Berlin: Mouton de Gruyter. 147-175.

Langacker, R. 2006. "Subjectification, grammaticization, and conceptual archetypes". In: Athanasiadou, A., C. Canakis and B. Cornille (eds), Subjectification: Various paths to subjectivity. Berlin: Mouton de Gruyter. 17-40.

Traugott, E. C. 1995. "Subjectification in grammaticalisation". In: Stein, D. and S. Wright (eds), Subjectivity and subjectivisation: Linguistic perspectives. Cambridge: Cambridge University Press. 31-54.

Uehara, S. 2006. "Toward a typology of linguistic subjectivity". In: Athanasiadou, A., C. Canakis and B. Cornille (eds), Subjectification: Various paths to subjectivity. Berlin: Mouton de Gruyter. 76-117.

LANGUAGE, MIND & BRAIN

SPEECH PERCEPTION AND AUDITORY LATERALITY: DICHOTIC LISTENING STUDIES

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ABSTRACT

In this article I review research in our laboratory on speech perception and auditory laterality, using dichotic listening (DL) to consonant-vowel (CV) syllables. In this context, DL means presenting two different syllables at the same time, one in the right and one in the left ear. Despite the simplicity of the situation, the DL task causes a strong bottom-up driven advantage in healthy subjects to reproduce the right ear stimulus with greater accuracy than the left ear stimulus. This right ear advantage (REA) is caused by the preponderance of the contralateral auditory pathways, and the asymmetry of speech processing, favoring the left hemisphere, and the right ear stimulus. By instructing the subjects to pay attention to and explicitly report either the right or left ear stimulus, top-down driven modulation of the bottom-up driven REA can be studied, thus introducing how cognitive factors modulate a built-in perceptual REA. The article provides examples of applying the top-down modulated DL paradigm to clinical conditions including dyslexia, ADHD, schizophrenia and others. It is suggested that top-down cognitive processes, like attention and executive functions have profound effects on low-level perceptual processes like lateralization of speech sound processing, and that the dichotic listening paradigm can be a useful tool in the identification of language-related problems in children and adults.

Keywords: dichotic listening, auditory laterality, speech perception, fMRI, right ear advantage

1. Introduction

Humans have a unique ability to decode the phonetic information in an acoustic signal, and to merge units of perception to meaningful words, sentences and discourse. Clinical studies of aphasia and similar conditions have demonstrated that phonological decoding has a neuronal correlate in the upper posterior region of the left temporal lobe, in the peri-Sylvian region and including Heschl's gyrus and the planum temporale area just posterior to the Heschl's gyrus. Clinical studies are however fraught with the disadvantage that the brain has a lesion and is damaged which will confound studies of underlying principles and mediating factors. To study the asymmetry of speech perception to the left hemisphere in the healthy subjects, revealing general principles, we have therefore adopted a simple behavioral technique, dichotic listening (DL) (see Hugdahl 1984; Hugdahl et al. 2009). DL means presenting two different syllables at the same time, one in the right and one in the left ear. Typically low-level consonant-vowel (CV) syllables are presented, building the dichotic pairs from the six stop-consonants paired with the vowel/a/, thus presenting pairs of CV-syllables of the type /ba/ − /pa/, /da/ − /ka/ etc., using all possible combinations of the six basic syllables (originally introduced by Studdert-Kennedy and Shankweiler 1970). Despite the simplicity of the situation, the DL task causes a strong bottom-up driven advantage in healthy subjects to reproduce the right ear stimulus with greater accuracy than the left ear stimulus. This right ear advantage (REA) is caused by the preponderance of the contralateral auditory pathways, and the asymmetry of speech processing, favoring the left hemisphere, and the right ear stimulus. Figure 1 illustrates the principles behind the REA in dichotic listening (see also Kimura 1967).

Figure 1. REA principle

Brain imaging studies with functional magnetic resonance imaging (fMRI) have validated the left hemisphere neuronal basis for the behavioral REA, with stronger activation in the left peri-Sylvian region to dichotic presentations of CV-syllables while the subject is in the MR scanner. This is shown in Figure 2.
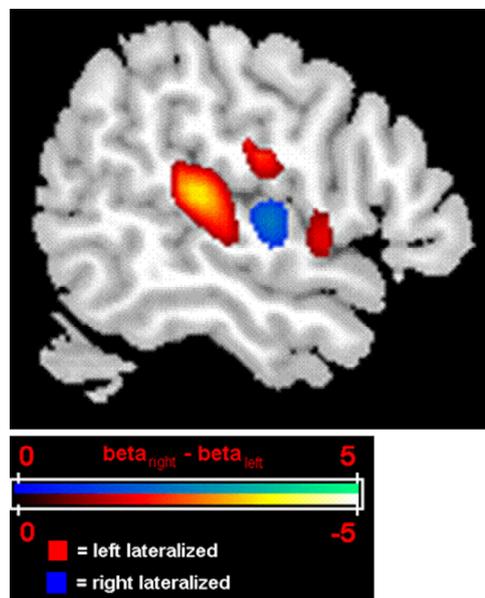

Figure 2. fMRI validation

The Bergen dichotic listening test has been translated to close to 10 different languages, and we have established a database with data from 1782 subjects, covering the entire age range, males and females, right- and left-handers. The test is available for interested users either as a CD or as a PC program (run in E-prime), and comes together with a manual in English and with norms for different age-groups, sex and handedness. The interested researcher or clinician can get the test by sending an email to hugdahl@psybp.uib.no. In 2011 we also launched the test as an iPhone app that can be downloaded for free from the App Store, and run from an iPhone, iPod or iPad. The app is listed under the category "Education", and can also be searched for under the name "iDichotic". Data are sent to a secure ftp-server at the University of Bergen after approval by the individual subject (a updated version will be launched later in 2012 which also allow the researcher to directly download data from the iPhone).

2.   Top-down modulation of the REA

By instructing the subjects to pay attention to and explicitly report either the right or left ear stimulus, top-down driven modulation of the bottom-up driven REA can be studied, thus introducing how cognitive factors modulate a built-in perceptual REA. The possibility to study how cognitive factors like attention modulate the REA is an important extension of traditional approaches to speech perception since it provides an experimental analogue to the real-life everyday situation with more than one stimulus source at the same time, as in the well-known "cocktail party" phenomenon. Speech perception would be chaotic for the brain whenever there is multiple input sources if it did not have a mechanism to filter out irrelevant and to focus on relevant aspects of the acoustic input. This mechanism is attention focus and attention and the ability to re-focus attention to a competing source of input. When instructed to pay attention to the right side in auditory space, and focusing on the right ear stimulus, the REA is increased, because in this situation the bottom-up advantage and the top-down instruction act in concordance. However, when instructing the subjects to focus attention on the left ear stimulus, the REA yields to a left ear advantage (LEA) in the same subjects. This situation can be considered an executive or cognitive control situation with a processing conflict between the bottom-up tendency to report the right ear stimulus,

and the top-down tendency to report the left ear stimulus. Figure 3 shows data from the Bergen DL database (N = 1872, from age 5 to 89) for the three attention instruction conditions typically employed in our experiments, a non-forced (NF) condition with no instruction of attention focus, in order to establish a bottom-up lateralized REA, a forced-right (FR) condition with attention focused on the right ear stimulus, and a forced-left (FL) condition with attention focused on the left ear stimulus. The data in Figure 3 are plotted as scatter-plots in what has been called "dichotic listening response space" where each small dot represents a single individual, and the larger the "blobs", the more subjects cluster on the same co-ordinates within the response. The diagonal line represents the 45° symmetry-line with subjects falling along the line showing a no-ear advantage, and subjects falling below the line showing a REA and above the line showing a LEA (see Hugdahl et al. 2009 for further details).
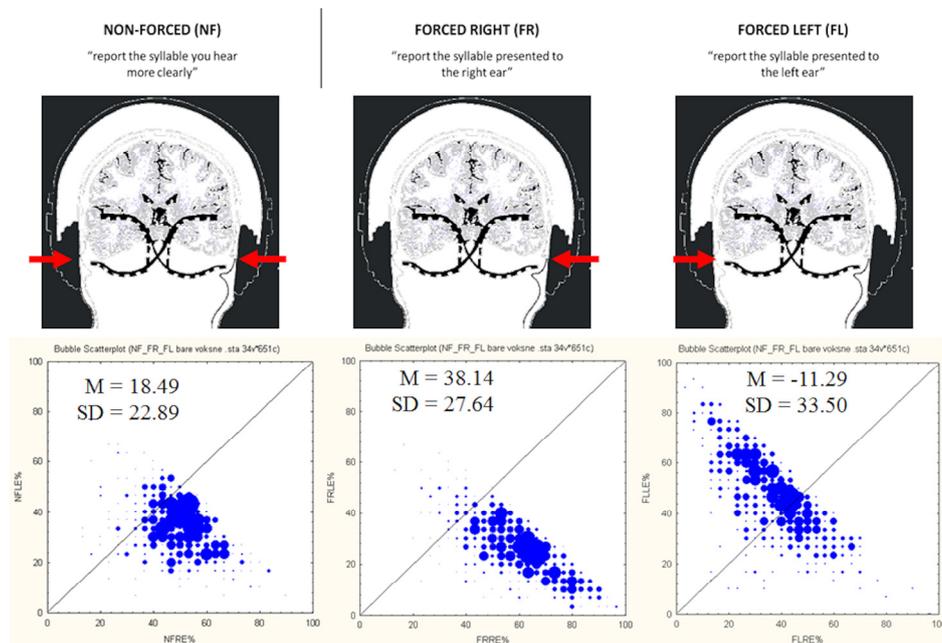

Figure 3. NF, FR and FL

3.   Applications of top-down modulations

Over the years the dichotic forced-attention paradigm that was originally developed in its current version by Hugdahl and Andersson (1986) has been applied to a number of clinical conditions and states with remarkable similar findings across diagnostic categories. These studies have been conducted in numerous laboratories and clinics worldwide and only a brief summary of the findings will be given here. Patients with psychosis, such as schizophrenia fail to reverse the REA to a LEA when instructed to pay attention to the left ear stimulus, which can be understood as a failure of executive control caused by deficient prefrontal lobe functioning. Interestingly, the same effect is seen in patients with PTSD, Alzheimer's disease, and ADHD, to give a few examples. These disorders have very little, if anything in common when it comes to etiology and diagnostic criteria, while they all may share a commonality across diagnosis when it comes to prefrontal executive cognitive deficits. Similarly, child language disorders, like dyslexia, specific language impairment, and auditory processing deficit all share an inability across groups to reveal a LEA when instructed to attend to the left ear stimulus, again, understood as impairment of executive control. In all these instances, the lateralized bottom-up perceptual REA still dominates in all these groups despite instructions to de-attend from the right ear stimulus. The forced-attention DL paradigm has the advantage of its experimental simplicity and easy task demands, which makes it possible to compare patients from many different clinical conditions on the same paradigm, yielding direct comparable results. This overcomes a general disadvantage with traditional neuropsychological and linguistic tests that also differ between themselves in degree of processing demands and task difficulty, making it hard to interpret e.g. failure on a test by a demented patient, if this is due simply to failure of understanding the demands of the task itself.

4.   Bottom-up modulation of the REA

The REA is however also modulated through acoustico-phonetic features like the combination of voiced- versus unvoiced syllable pairs, with the right and left ear stimuli having different voicing features. Voicing is a term in phonetics to denote the difference in onset time for the pulsing of

the glottis from the onset of the consonant segment when pronouncing a stop-consonant syllable. Unvoiced CV-syllables, like /pa/, /ta/, /ka/ have long voice-onset time (VOT, 75-80 ms) compared to voiced CV-syllables, like /ba/, /da/, /ga/ (20-25 ms). Combining an unvoiced syllable in the right ear and a voiced in the left ear of the dichotic pair produces a large REA while the reversed combination, an unvoiced syllable in the left ear and a voiced syllable in the right ear produces a left ear advantage (LEA), i.e. better performance to the left ear stimulus. The two conditions with equally voiced syllables, either unvoiced – unvoiced, or voiced – voiced, in the left and right ears, respectively, produce intermediate sized REAs.

5. Applications of bottom-up modulations

The voicing, or VOT, manipulation has been applied to study development of phonological awareness in children with the assumption that the ability to modulate the REA as a consequence of the exact combination of voiced and unvoiced syllables is a very low-level manipulation of phonetic features of speech sounds. The ability to modulate the size and direction of the ear advantage in DL can therefore be regarded as a marker of basic phonological "awareness". Alternatively, the VOT effect can be seen as a sub-phonetic manipulation of acoustic features of the signal, e.g. the slope of onset of the consonant segment of the syllable in its initiation. Seen as an acoustic manipulation the VOT effect can be regarded as a prerequisite for phonetic processing. Figure 4 shows the development of ability to modulate the REA as a function of voicing or VOT (data from Westerhausen et al. 2010) in children that were followed from the age of five to the age of eight years (tested annually).
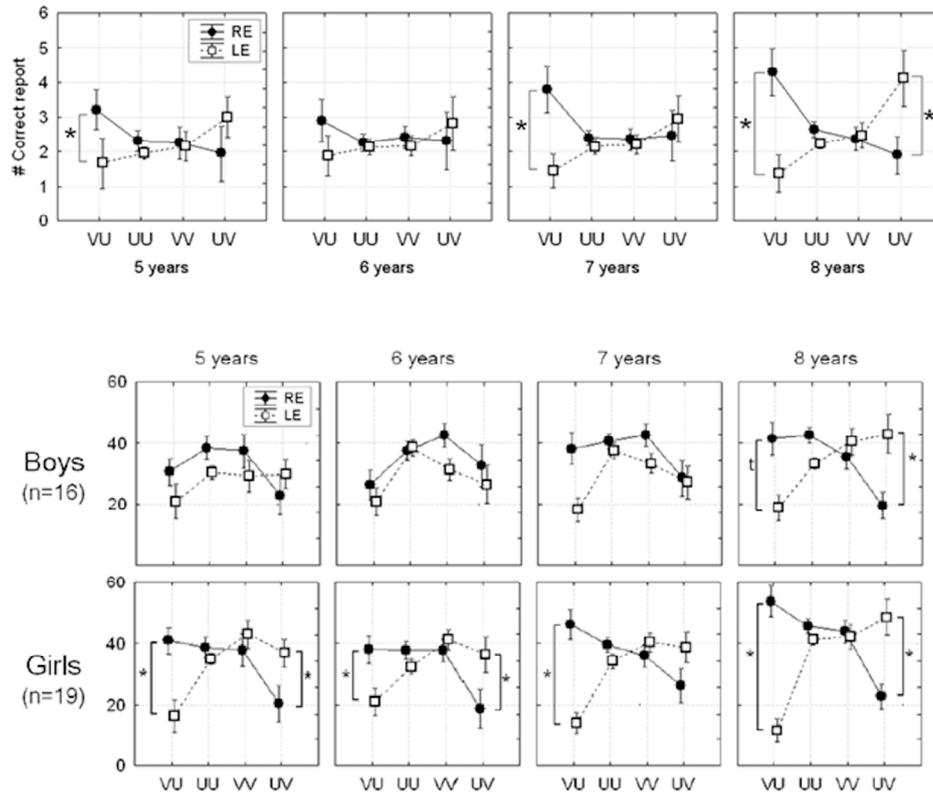
Figure 4. VOT effect in children

As can be seen in Figure 4, there is a clear developmental effect across age for the ability to modulate the REA to unvoiced-voiced combination for the right and left ear stimuli, respectively (seen to the left in the graphs) with a full effect seen first at the age of 8 years. More interesting data are perhaps seen in the lower graphs of Figure 4, where the data in the upper graph are split for boys and girls. This shows that the effect seen in the upper panel is mainly driven by the earlier maturation for the girls, with the boys lagging about two years compared to the girls. These results may provide an explanation for why girls are more advanced in acquiring literacy compared to boys, especially in the ages six to seven. Thus, by studying the ability to modulate the REA in dichotic listening, which is a low-level perceptual/phonetic task, it is possible to unravel the underlying mediating mechanisms of the circuitry necessary for successful literacy

and reading ability. Unpublished data from our laboratory show that children at risk for developing dyslexia fail to show the LEA to the syllable combination with an unvoiced syllable in the left ear and voiced syllable in the right ear, as control subjects did, even at the age of eight years. Thus, the VOT data show that a) dyslexia involves an inability of decoding the phonological structure of syllables and words, and b) that this may be a risk factor for dyslexia if identified at an early age. The data from our laboratory show that failure of showing an expected VOT effect in the dichotic situation appears at an early age before literacy.

6. Combining a bottom-up and top-down manipulation

We have recently initiated a new line of research where we simultaneously manipulated bot bottom-up and top-down features of the DL task (see e.g. Westerhausen et al. 2010). The bottom-up manipulation in this line of research has been changing the stimulus intensity of the right or left ear stimulus in a gradual way. In these studies, the intensity of, e.g. the right ear stimulus is gradually increased from 70dB to +21dB in steps of three dB at a time, and similar for the left ear stimulus. This produces a linear increase in the number of correctly reported items from the right or left ear as the intensity is linearly increased. If the subject is instructed to attend to either the right or left ear stimulus, this will produce either a very strong bottom-up and top-down conflict if, e.g. the intensity is increased +21dB in the right ear and the subject instructed to report the left ear stimulus, and vice versa, or a very easy task if the intensity is similarly increased but the subject is instructed to also attend to report the right ear stimulus. By systematically varying interaural intensity differences between the ears, it is possible to express a cognitive construct (the REA) in physical terms (dB), thus creating a psychophysical situation, where a complex mental concept can be operationally defined in objective dB terms.

7. Applications of a combined bottom-up and top-down manipulation

We have now began studying how various clinical groups cope with using top-down processes to modulate a bottom-up perceptual effect when the task gradually becomes more and more difficult to solve. So far we have

preliminary data showing that patients with schizophrenia seem to be vulnerable for the intensity manipulation. We also predict that children with reading and other language-related problems, and children with delayed language development are especially vulnerable to the intensity manipulation in the sense that they fail to use attention to overcome the intensity increase at relatively low levels of inter-aural differences compared to adults and children without reading problems. An interesting prediction that can be made is also that bilingual individuals, and in particular professional interpreters working in environments like the UN and EU Parliament should be better that monolingual individuals to cope with increasing inter-aural intensity differences for the right and left ear DL stimuli, since they should have enhanced capacity for executive functioning, being able to switch between the two syllables of the dichotic pairs despite one of them being of greater intensity. The ability of bilingual individuals to switch to the LEA when instructed to focus on and report from the left ear in the standard top-down situation with equal intensity for the two stimuli was recently shown in a study by Soveri et al. (2011) with significantly enhanced reports from the left ear in bilinguals compared to monolinguals.

8.   Conclusions

In this article I have provided a selective review of our dichotic listening research at the University of Bergen during the last 20 years, highlighting bottom-up and top-down interactions when it comes to processing of simple speech sounds, like CV-syllables. Because of the wiring of the auditory pathways and the asymmetry of speech perception, favoring the left hemisphere, the dichotic signal input provides an ideal experimental situation for studying the bottom-up ad top-down interaction. The influence of top-down cognitive factors like attention and executive functions are often ignored in theories and models of speech perception and speech sound processing, arguing instead that such low-level processing is devod of cognitive influences. Our research, as reviewed on the previous pages, shows that this is not the case, instead attention also profoundly influences low-level acoustic-phonetic processes. In the article I also show that the forced-attention dichotic listening paradigm can be a useful tool for the identification of language-related problems in both adults and children, a kind of experimental "diagnosis".

REFERENCES

Hugdahl, K. and B. Andersson. l984. "A dichotic listening study of differences in cerebral organization in dextral and sinistral subjects" Cortex 20(1). l35-l4l.

Hugdahl, K. and L. Andersson. l986. "The 'forced-attention paradigm' in dichotic listening to CV-syllables: A comparison between adults and children" Cortex 22(3). 4l7-432.

Hugdahl, K., R. Westerhausen, K. Alho, S. Medvedev, M. Laine and H. Hämäläinen. 2009. "Attention and cognitive control: Unfolding the dichotic listening story" Scandinavian Journal of Psychology 50(1). 11-22.

Kimura, D. 1967. "Functional asymmetry of the brain in dichotic listening" Cortex 3(2). 163-68.

Soveri, A., M. Laine, H. Hämäläinen and K. Hugdahl. 2011. "Bilingual advantage in attentional control: Evidence from the forced-attention dichotic listening paradigm" Bilingualism, Language and Cognition 14(3). 371-378.

Studdert-Kennedy, M. and D. Shankweiler. 1970. "Hemispheric specialization for speech perception" Journal of the Acoustical Socitey of America 48(2B). 579-594.

Westerhausen, R., T. Helland, S. Ofte and K. Hugdahl. 2010. "A longitudinal study of the effect of voicing on the dichotic ear advantage in boys and girls at age 5 to 8" Developmental Neuropsychology 35(6). 752-761.

WHERE IN THE BRAIN DO METAPHORS BECOME METAPHORIC? RESEARCH ON THE FUNCTIONAL NEUROANATOMY OF NONLITERAL LANGUAGE

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ABSTRACT

This chapter gives a short overview on why the brain´s functional neuroanatomy of nonliteral language is an interesting topic for several research disciplines. A short introduction of brain lesion research and functional magnetic resonance imaging research on metaphor, metonymy, proverbs, idioms, irony and sarcasm is presented, with a literature index on seminal papers for further reading. A model for the role of brain regions during nonliteral language comprehension is presented.

Keywords: brain, metaphor, metonymy, irony, proverb, nonliteral

1. Introduction

Nonliteral expressions (like metaphors, proverbs, irony, sarcasm or metonymy) are an interesting linguistic phenomenon, since their comprehension process is a challenge for the brain. Many cognitive operations are involved before a reader's brain is able to identify that a sentence meaning is intended as metaphoric or ironic: there are for example processes identical to literal language (like word recognition), meaning selection processes, decision between figurative and literal meaning, suppression of the incorrect meaning, integration of context and general world knowledge, and theory of mind processes. During the last decade, knowledge on

the functional neuroanatomy (that is: the brain regions involved in this comprehension process) has increased dramatically by the publication of more than 50 new studies. These studies stem from researchers from different backgrounds and disciplines. As one example, a significant proportion on the brain processes of irony comprehension was implemented not by linguists, but instead by researchers interested in "Theory of Mind" processes. Theory of Mind relates to the ability to attribute mental states of others – a process that is necessary to understand irony (Happe 1996; Blasko and Kazmerski 2006).

The case of nonliteral language is a fascinating example how a linguistic problem grows into other disciplines like neurology, psychiatry and neuroanatomy. It was more than 100 years ago that psychiatrists began to realize that patients with a certain mental ilness (like schizophrenia or stroke) had (often severe) difficulties in the comprehension or interpretation of metaphors and proverbs – although other language functions were much better preserved (Wegrocki 1940; Rapp 2009; Rapp and Schmierer 2010). Hence, many psychiatrists became interested in (neuro)linguistics – and vice versa.

2. Nonliteral language - a diagnostic tool in medicine and psychology?

It is perhaps astonishing for young linguists to read that nonliteral expressions played (and still play) a role as a diagnostic tool in medicine and psychology. For more than 50 years, interpretation of proverbs and metaphors was used as a diagnostic tool. Especially in American psychiatry of the 1950's and 1960's it was a widely known phenomenon that patients with schizophrenia – a severe mental illness, often with hallucinations and delusions – have difficulties with nonliteral expressions. A popular theory was (and still is) that schizophrenia goes along with a *cognitive bias* towards literal interpretations of nonliteral expressions. More than 100 studies have investigated this phenomenon so far (see picture 1, Rapp 2009; Rapp and Schmierer 2010), and it is out of question that some (but not all) patients show the phenomenon. However, the importance of proverbs in schizophrenia assessment has clearly decreased during the last
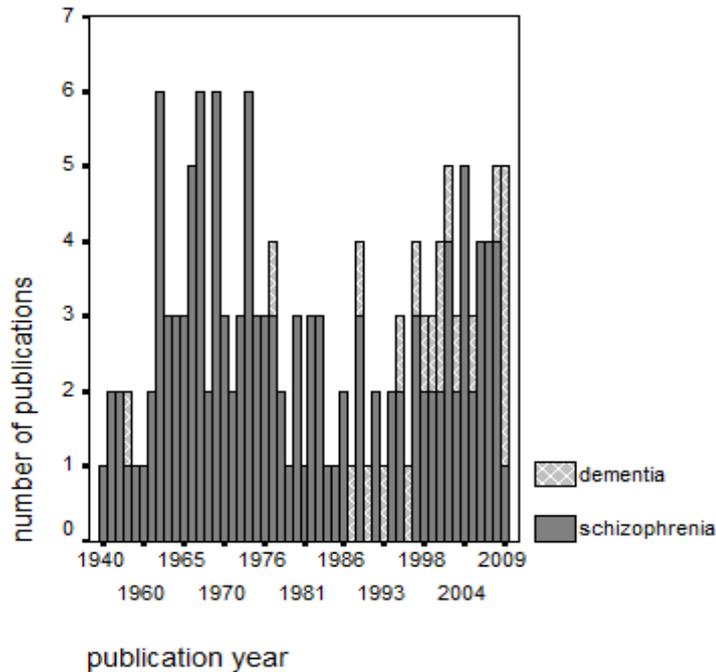
Figure 1. Timeline of published experimental studies on nonliteral language/year for schizophrenia and dementias

three decades, presumably due to problems with diagnostic reliability (Andreasen 1977). In neurology, nonliteral expressions played some role in the assessment of right hemisphere lesions (RH battery), however nowadays lesions in the microstructure of the brain can be diagnosed quickly and with high accuracy with brain imaging techniques like computed tomography and magnetic resonance imaging. However, structural brain imaging is much less helpful in diseases were the deficit is more in the microstructure of the brain. Patients with such disorders (autism and schizophrenia are among them) mostly show normal structural brain scans, but may still have severe cognitive deficits. In the case of autism, deficits in understanding or producing nonliteral expressions are mentioned as a diagnostic hint by many experts. However, "nonliteral diagnostics" in psychiatry is often poorly operationalized. In other words, it is recommended to test the comprehension of nonliteral expressions, but insufficient advice is often given on how to perform and interpret this kind of test for clinicians (see Rapp and Wild 2011). Better test instructions for

clinicians would be highly eligible. Table 1 mentions some further reading on nonliteral language impairment in medical diseases.

diagnosis	further reading
autism	Deficit could be more severe than in schizophrenia. Deficits in NL language are recommended as diagnostic hint for the disease by some authors. Happe 1996; Gold and Faust 2010; Wearing 2010
delirium	Some evidence, see Rapp and Wild 2011; the classical paper is Engel and Romano 1959
Dementia / Alzheimer's diasease	see Rapp and Wild 2011 for review
Depression	Some evidence for some impairment, less severe as compared to schizophrenia. Carter 1986, most studies listed in Rapp and Schmierer 2010
Parkinson's disease	e.g. Gutmann 2009
right cerebral hemisphere brain lesions	Winner and Gardner 1977; Lundgren et al. 2010
Schizophrenia	> 100 experimental studies, mostly on proverbs, but also research on metaphor, irony, metonymy. See Rapp 2009; Rapp and Schmierer 2010
Tourette syndrome	e.g. Eddy et al. 2010
traumatic brain injury	e.g. Martin and McDonald 2005
Williams syndrome	e.g. Annaz et al. 2009

Table 1. Psychiatric and neurological diseases with impairments in nonliteral language comprehension

A body of research in the field of nonliteral language investigated the development of the ability to grasp nonliteral language in childhood (Fillippova and Astington 2008; Recchia et al. 2010). Compared to other language functions, the ability to comprehend nonliteral expressions evolves late, with large inter-individual variations and some studies indicating that this process continues up to the age of 12 (Fillippova and Astington 2008). During this period, the brain maturation and the interplay of the

hemispheres (including language lateralization) is still changing. Interestingly, the learning process of NL language can be delayed in neurodevelopmental disorders like autism (Harris and Pexman 2003).

Many researchers assume that the nonliteral language deficits in mental disorders might relate to defective language lateralization (Kircher et al. 2007, see Rapp 2009). As a result of this assumption, some researchers in the field of psychiatry and neurology became interested in the brain's laterality of nonliteral language (Mitchell and Crow 2005; Rapp 2009).

3. Brain Imaging techniques

Traditionally, most evidence on the neural correlates of nonliteral language came from studies on patients with (circumscribed) *brain lesions* (Winner and Gardner 1977) and many researchers label it as the gold standard technology. The principle behind lesion studies is the following: if a patient with a circumscribed brain lesion has a comprehension difficulty, it is likely that it results from his lesion. Brain lesion research thereby enables statements whether a brain region is involved in a task – or not involved. In contrast to most brain imaging techniques mentioned below, brain lesion research is better able to proof that a specific brain region is NOT involved. There are more than 35 lesion studies on nonliteral language, the majority using fossilised expressions like proverbs and metaphors (Burgess and Chiarello 1996; Rapp 2012). A disadvantage of this research tool is that patients with circumscribed lesions of the brain region under investigation are often hard to find. Nowadays, most patients in brain lesion studies suffered a stroke, whereas in past decades the proportion of war wounds was higher. However, the localisation of strokes inside the brain is not random as they occur more often near the borderlines of the supply territories of the brain arteries. As a result, circumscribed lesions are very rare in some brain regions.

A new "variation" is research with *transcranial magnetic stimulation*, where electromagnetic induction induces a functional lesion (with disturbed function of the area) for a short time period or for several minutes (that – of course – recovers completely later on). Like in brain lesion studies, an advantage is that the method is able to document that a brain region is NOT involved. So far, there has been only a rather small number

of studies with this technique with nonliteral stimuli (Oliveri et al. 2004; Rizzo et al. 2007; Fogliata et al. 2007; Pobric et al. 2008).

Most recent studies on the neuroanatomy of nonliteral expressions used *functional magnetic resonance imaging* (fMRI). fMRI does not measure brain function directly, but instead relies on the hemodynamic response of the brain. In a rather simplified way, the principle might be explained the following way: blood flow and magnetic properties of the red blood cells change if many neurons are active in a brain region. This is called the BOLD (blood oxygen level dependent) effect, which starts with a delay and continues for seconds. Magnetic resonance scanners are able to detect the magnetic properties of tissue. Because of the BOLD response, the magnetic properties of brain regions that are "active" are different from ones that are not necessary during an experimental paradigm – and this difference can be measured. The magnetic resonance imaging scanners used for fMRI studies are

technique	principle	Number studies	further reading	Comment
functional magnetic resonance (fMRI)	neural activity induces changes in magnetic properties / BOLD response	>35	Rapp et al. 2004; Rapp et al. 2011; Rapp et al. 2012	> 35 studies on NL language, best spatial resolution
positron emission tomography (PET)	radioactive markers spread to involved brain regions	1	Bottini 1994	only 1 study on NL language
EEG event-related potential (ERP)	neural activity induces changes in electrical activity	>25	Blasko and Kazmerski 2006; Laurent et al. 2006	no current comprehensive review paper available
near-infrared spectroscopy (NIRS)	hemodynamic brain response, optical properties	none	Dieler et al. 2011	no studies on NL language published yet

brain lesion research	functional deficit enables conclusions on functional role	>47	Winner and Gardner 1977; Rinaldi et al. 2004	All types of NL language investigated
transcranial magnetic stimulation	induced deficit enables conclusions on functional role	4	Rizzo et al. 2007; Pobric et al. 2008	Studies on metaphor and idioms

Table 2. Research techniques for neuroanatomy of nonliteral language

the same ones as those used in clinical routine for example in neurology, orthopedy, or sports medicine, although sometimes ones with a higher magnetic field intensity are used. However, as opposed to anatomical measurements, different measurement sequences that are optimized to detect the BOLD effect are needed. This principle makes it clear that the fMRI technique can only picture differences in brain function between cognitive tasks: for example reading metaphors > literal sentences or reading irony > a metaphoric sentence. It is not a quantitative methodology. fMRI study design is susceptible to problems of cognitive subtraction: in the above example, it is assumed that a differential contrast between reading metaphors (condition 1) and literal sentences (condition 2) can be added or subtracted and differences between the conditions reflect differences in the brain's comprehension process. However, this may be a simplification. It is therefore important in fMRI research to equalize as many properties of the stimulus material as possible. Additionally, task instructions and demands should be as equal as possible. Recall that the brain is responsible for so many things: if condition 1 is more difficult, or induces more anxiety, or takes longer to read or requires another behavorial reponse, then all these factors result in neural activity not directly related to the study goal. This makes it clear that fMRI studies have high demands for matching criteria of their stimuli. That might be the reason why there is for example only little research on poetry or the neural correlates of reading Shakespeare – it is hard to find adequate literal control stimuli (matched for grammar, word expectancy effects, etc.).

A somewhat typical example for an fMRI study on nonliteral language is the first published study on metaphor by Rapp and colleagues (Rapp et al. 2004). Novel metaphors (like "the lovers' words are harp sounds") and

literal sentences (like "the lovers' words are lies") were used as stimuli and compared to each other. Also, 15 "baseline" projections (grey background without a sentence) were presented. The comparisons against the baseline will later show all brain regions specifically involved in reading the sentences, while the differential contrast metaphor > literal reveals only the difference between the sentence types. To minimise confounding factors, the authors matched length, syntax structure, number of words, word frequency, emotional connotation, content and tense, and the presentation sequence was pseudo-randomized so that it was unforeseeable for the subject whether a metaphor or a literal sentence would come next. To avoid effects of complex syntax, predominantly short sentences of the form "an A is a B" were chosen as stimuli. However (like in the majority of studies), the authors were not able to eliminate all effects of difficulty: metaphors were rated as more difficult in comparison to their literal counterparts. Some recent studies chose even more sophisticated ways of matching stimuli (see e.g. Desai et al. 2011; Rapp et al. 2011). The majority of studies used sentences without context, although some chose metaphorical words (Lee and Dapretto 2006) or text level (Mashal and Faust 2010) (see Rapp 2012; Rapp et al. submitted for reviews).

Research with *near- infrared spectroscopy (NIRS)* is a new technology which is also based on hemodynamic changes associated with neural activity. It is a spectroscopic method that uses the near-infrared region of the electromagnetic spectrum. Compared with fMRI, it is easier to handle, but has inferior spatial resolution. Research with *event-related brain potentials* has the lowest spatial resolution of all techniques, but by far the best temporal resolution. While there is already a body of research on nonliteral language with this technique, the first studies using near-infrared spectroscopy are ongoing.

4. Brain regions involved in nonliteral language comprehension

What is the main result from studies on nonliteral language with all these techniques? There is no such thing as a "metaphor module" in the brain that "exclusively" processes nonliteral expressions. The same is true for the other types of nonliteral expressions. Rather than that, the brain refers to networks and modules that are involved in the processing of literal language on a sentence level. A predominantly left-lateralised fronto-

temporal network is crucial for understanding nonliteral language. One key region is the left inferior frontal gyrus (Brodmann area 45/47). Figure 2 and Table 2 mention important regions and their possible functional role (see Schmidt and Seger 2009 and Rapp 2012 for reviews; Rapp et al. 2012 for a meta-analysis).
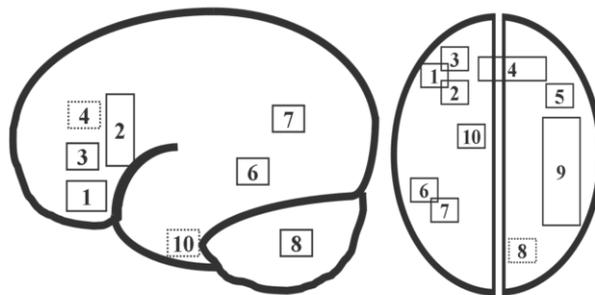
Figure 2. Key brain regions for the comprehension of nonliteral language: [1] anterior-inferior part of the left inferior frontal gyrus, [2] posterior-superior part of the left inferior frontal gyrus, [3] middle frontal gyrus, [4] medial prefrontal cortex, [5] right inferior frontal gyrus, [6] left middle/superior temporal gyrus, [7] temporo-parietal junction/inferior parietal lobule, [8] cerebellum, [9] right cerebral hemisphere [10] parahippocampal gyrus

Cognitive function	Brain region (in Figure 1)
Semantic integration	1, 5, 6, 7, 8, 9
Semantic mapping	1, (2), (3), (10)
world knowledge integration	1, (5), (6)
Decision between alternat. meanings	1, 6, 10
Meaning selection	1, 2
Suppression of irrelevant meaning	4
Motor semantics	2
Theory of Mind	4, 7
Prosody	9
Emotional connotation	10
Context integration	1, 6, 7

Table 3. Cognitive operations during comprehension of nonliteral language and their possible locations in the brain

5. Role of the hemispheres in nonliteral language comprehension

It is evident that right hemisphere contribution is present in most studies of nonliteral language. However, it is less clear which factors contribute to the extent of the right hemisphere's involvement. Rather than "nonliterality" per se, other factors like salience (Giora 2007) or figurativeness (Schmidt and Seger 2010) could play an important role. The exact role of such influencing factors, however, is so far not yet clear. The graded salience hypothesis (Giora 1997) inspired many studies and would predict that especially novel stimuli would enhance the right cerebral hemisphere's contribution. Overall, studies using salient stimuli reported less right hemisphere contribution than novel stimuli (Rapp et al. 2012). However, some inconsistent findings are incompatible with a strong version of the graded salience hypothesis (Rapp et al. 2007; Rapp 2012). Many current findings point towards a central role of the left (and, to a lesser extent, the right) IFG in the comprehension of nonliteral language.

REFERENCES

Andreasen, N. C. 1977. "Reliability and validity of proverb interpretation to assess mental status" Comprehensive Psychiatry 18(5). 465-472.
[Seminal paper on proverb comprehension in schizophrenia]
Annaz, D., J. Van Herwegen, M. Thomas, R. Fishman, A. Karmiloff-Smith, and G. Rundblad. 2009. "Comprehension of metaphor and metonymy in children with Williams syndrome" International Journal of Language and Communication Disorders 44(6). 962-978.
Blasko, D. G. and V. A. Kazmerski. 2006. "ERP correlates of individual differences in the comprehension of nonliteral language" Metaphor and Symbol 21(4). 267-284.
Bottini, G., R. Corcoran, R. Sterzi, E. Paulesu, P. Schenone, P. Scarpa, R. S. Frackowiak and C. D. Frith. 1994. "The role of the right hemisphere in the interpretation of figurative aspects of language: A positron emission tomography activation study" Brain 117(6). 1241-1253.
[Positron emission tomography study with metaphoric study]
Burgess, C. and C. Chiarello. 1996. "Neurocognitive mechanisms underlying metaphor comprehension and other figurative language" Metaphor and Symbolic Activity 11(1). 67-84.
[Older review paper, right hemisphere theory of metaphor comprehension]

Carter, M. L. 1986. "The assessment of thought deficit in psychotic unipolar depression and chronic paranoid schizophrenia" The Journal of nervous and mental disease 174(6). 336-341.

Desai, R. H., J. R. Binder, L. L. Conant, Q. R. Mano and M. S. Seidenberg. 2011. "The neural career of sensory-motor metaphors" Journal of Cognitive Neuroscience 23(9). 2376-2386.

Dieler, A. C., S. V. Tupak and A. J. Fallgatter. 2012. "Functional near-infrared spectroscopy assessment of speech-related tasks" Brain and Language 121(2). 90-109. Eddy, C. M., I. J. Mitchell, S. R. Beck, E. A, Cavanna and H. E. Rickards. 2010. "Impaired comprehension of nonliteral language in Tourette syndrome" Cognitive Behavorial Neurology 23(3). 178-184.

Engel, G. L. and J. Romano. 1959. "Delirium, a syndrome of cerebral insufficiency" Journal of Chronic Diseases 9(3). 260-277.

Filippova, E. and J. W. Astington. 2008. "Further development in social reasoning revealed in discourse irony understanding" Child Development 79(1). 126-138.
[Irony comprehension in children]

Fogliata, A., S. Rizzo, F. Reati, C. Miniussi, M. Oliveri and C. Papagno. 2007. "The time course of idiom processing" Neuropsychologia 45(14). 3215-3222.

Giora, R. 1997. "Understanding figurative and literal language: The graded salience hypothesis" Cognitive linguistics 8(3). 183-206.

Giora, R. 2007. "Is metaphor special?" Brain and Language 100(2). 111-114.
[Introduction to a special issue on the functional neuroanatomy of nonliteral language. The whole issue is advisable as further reading]

Gold, R. and M. Faust. 2010. "Right hemisphere dysfunction and metaphor comprehension in young adults with Asperger syndrome" Journal of Autism and Developmental Disorders 40(7). 800-811.

Happé, F. G. 1996. "Understanding minds and metaphors: Insights from the study of figurative language in autism" Metaphor and Symbol 10(4). 275-295.

Harris, M. and P. M. Pexman. 2003. "Children's perceptions of the social functions of verbal irony" Discourse Processes 36(3). 147-165.

Kircher, T. T., D. T. Leube, M. Erb, W. Grodd and A. M. Rapp. 2007. "Neural correlates of metaphor processing in schizophrenia" Neuroimage 34(1). 281-289.

Lauro, L. J., M. Tettamanti, S. F. Cappa and C. Papagno. 2008. "Idiom comprehension: A prefrontal task?" Cerebral Cortex 18(1). 162-170.
[fMRI study on idiom comprehension of very high quality. One of the few papers on interplay of brain regions during comprehension]

Mashal, N. and M. Faust. 2010. "The effects of metaphoricity and presentation style on brain activation during text comprehension" Metaphor and Symbol 25(1). 19-33.
[fMRI study with nonliteral language on text level]

Martin, I. and S. McDonald. 2005. "Exploring the causes of pragmatic language deficits following traumatic brain injury" Aphasiology 19. 712-730.

Mitchell, R. L. and T. J. Crow. 2005. "Right hemisphere language functions and schizophrenia: the forgotten hemisphere?" Brain 128(5). 963-978.

Oliveri, M., Romero, L. and C. Papagno. 2004. "Left but not right temporal involvement in opaque idiom comprehension: A repetitive transcranial magnetic stimulation study" Journal of cognitive neuroscience 16(5). 848-855.

Pobric, G., N. Mashal, M. Faust and M. Lavidor. 2008. "The role of the right cerebral hemisphere in processing novel metaphoric expressions: A transcranial magnetic stimulation study" Journal of Cognitive Neuroscience 20(1). 170-181.

Rapp, A. M., D. T. Leube, M. Erb, W. Grodd and T. T. Kircher. 2004. "Neural correlates of metaphor processing" Cognitive Brain Research 20(3). 395-402.
[First functional magnetic resonance imaging study on nonliteral language]

Rapp, A. M., D. T. Leube, M. Erb, W. Grodd and T. T. Kircher. 2007. "Laterality in metaphor processing: Lack of evidence from functional magnetic resonance imaging for the right hemisphere theory" Brain and Language 100(2). 142-149.

Rapp, A. 2009. "The role of the right hemisphere for language in schizophrenia". In: Sommer, I. E. and R. S. Kahn (eds), Language lateralization in psychosis. Cambridge: Cambridge University Press. 147-156.

Rapp, A. M. and P. Schmierer. 2010. "Proverbs and nonliteral language in schizophrenia: A systematic methodological review of all studies published 1931-2010" Schizophrenia Research 117(2/3). 422.

Rapp, A. M., D. E. Mutschler, B. Wild, M. Erb, I. Lengsfeld, R. Saur and W. Grodd. 2010. "Neural correlates of irony comprehension: The role of schizotypal personality traits" Brain and Language 113(1). 1-12.
[Review and fMRI study on brain function during irony comprehension]

Rapp, A. M., M. Erb, W. Grodd, M. Bartels and K. Markert. 2011. "Neural correlates of metonymy resolution" Brain and Language 119(3). 196-205.

Rapp A. M. and B. Wild. 2011. "Nonliteral language in Alzheimer dementia: A review. Journal of the International Neuropsychological Society 326(17). 1-13.
[Review on nonliteral language comprehension in dementia and other psychiatric disorders]

Rapp A. M. 2012. "The brain behind nonliteral language: Insights from brain imaging". In: Faust, M. (ed.), Neuropsychology of Language. Advances in the neural substrates of language: Towards a synthesis of basic research and clinical research. London: Wiley-Blackwell. 406-424.
[Review on the neural correlates of nonliteral language]

Rapp, A. M., D. E. Mutschler and M. Erb. 2012. "Where in the brain is nonliteral language? A coordinate-based meta-analysis of functional magnetic resonance imaging studies" NeuroImage 63(1). 600-610. Recchia, H. E., N. Howe, H. S. Ross and S. Alexander. 2010. "Children's understanding and production of verbal irony in family conversations" The British Journal of Developmental Psychology 28(2). 255-274.

Rizzo, S., M. Sandrini and C. Papagno. 2007. "The dorsolateral prefrontal cortex in idiom interpretation: An rTMS study" Brain Research Bulletin 71(5). 523-528.

Schmidt, G. L. and C. A. Seger. 2009. "Neural correlates of metaphor processing: The roles of figurativeness, familiarity and difficulty" Brain and Cognition 71(3). 375-386.

Wearing, C. 2010. "Autism, metaphor and relevance theory" Mind and Language 25(2). 196-216.

Wegrocki, H. J. 1940. "Generalizing ability in schizophrenia: An inquiry into the disorders of problem thinking in schizophrenia" Archives of Psychology 254. 76.
[First experimental study on nonliteral language in schizophrenia]

Winner, E. and H. Gardner. 1977. "The comprehension of metaphor in brain damaged patients" Brain 100. 717-729.
[Seminal study on brain lesion and metaphor]

IDIOM COMPREHENSION IN CHILDREN: THE EFFECTS OF CONTEXT AND SEMANTIC TYPE OF IDIOMS

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ABSTRACT

The aim of this study is to investigate the ability of seven- to ten-year-old children to comprehend idiomatic expressions, focusing on the presence of a linguistic context and the linguistic type of the idioms. The participants (n=197; aged 7 to 10) took part in two experiments: first 30 idioms were used to compile a multiple-choice task without context, and then the idioms were embedded in short stories. The results show that context has a significant effect on older children, whereas the semantic type of the idiom does not have a significant effect on idiom comprehension.

Keywords: idiom, child, idiom comprehension, context

1. Introduction

Idioms are frozen phrases which consist of at least two words and have a noncompositional, nonliteral meaning (Katz 1973). These expressions can usually have both literal and figurative meanings, depending on the context. Hungarian idioms do not form a homogeneous group; they can be distinguished by the levels of semantic analysability of the idiom meaning. The present study is based on the following semantic groups (Forgács 2007): 1. transparent idioms, which are based on metaphors or metonyms and whose figurative meanings are more transparently conveyed by word meanings (Hun. *fordul a kocka* Eng. literally 'the cube is turned', mean-

ing 'turn of the tide'), 2. opaque idioms, where no semantic relation is detectable between the literal and the idiomatic meaning (Hun. *kosarat ad* Eng. literally 'give somebody a basket', meaning 'refuse somebody, decline somebody's offer').

Earlier developmental studies, based on the traditional view according to which idiomatic expressions are units whose meaning is directly retrieved from the mental lexicon (Bobrow and Bell 1973), found that young children interpret idioms literally because they are unable to retrieve the figurative meaning of the expression from the mental lexicon and have to learn them as non-analysable strings of words (Ackerman 1982; Lodge and Leach 1975).

The role of the semantic analysability of idioms has been investigated in a compositional framework (Gibbs 1987, 1991; Levorato and Cacciari 1999; Levorato, Nesi, Cacciari 2004). Gibbs (1991) investigated idiom comprehension in 5- to 9-year-old children and found that younger children understood analysable or decomposable idioms (where the meanings of their parts contributed independently to their overall figurative meanings) better than they did non-decomposable phrases (where there is no relation between a phrase's individual components and the idiom's figurative meaning). Older children, however, could understand these types equally well in idiomatic context.

Levorato and Cacciari (1999) investigated 7- and 9-year olds' comprehension of semantically analysable idioms (which are based on metaphors or metonyms and whose figurative meanings are transparently conveyed by word meanings, the two meanings being similar) and non-analysable idioms (where no semantic relation is detectable between the literal and the idiomatic meaning) in and out of context using a multiple-choice task. Their results showed that the level of semantic analysability of the idiom influenced comprehension. Younger children used both contextual information and the semantic analysability of the idioms, while older children mainly benefited from semantic analysability alone.

In the present study idioms were defined in a similar way, except that the figurative meanings of the analysable idioms were transparent but not necessarily similar to the literal meanings of the idioms.

The specific aims of the present study were two-fold. First, it set out to compare the effects of context for the same children for the same idioms. And second, it compared the performance of the 7- to 10-year-old children on different types of idioms (semantically analysable vs. opaque ones).

2. Methods

2.1. Experiment 1

Participants: 197 Hungarian children participated in the experiment (30 first-graders, aged 7,0-7,11; 58 second-graders, aged 7,11-8,11; 54 third-graders, aged 8,11-9,11; 55 fourth-graders, aged 10,0-11,11), who attended a primary school in Szeged, Hungary.

Materials and procedure

In a previous test, the 30 most well-known of a list of 50 idioms were selected, following the rating of a group of 88 university students. The selected 30 idioms (e.g. Hun. *felveszi a nyúlcipőt* Eng. literally 'put on the rabbit shoes', meaning 'start to run') were presented to the participants without context in a multiple-choice task. The participants were asked the following question: 'What does the expression mean?' Three possible answers were provided: one option consisted of the idiomatic meaning of the idiom string ('start to run', idiomatic answer), another option was the literal meaning ('put on shoes made of rabbit fur', literal answer), while the third option expressed a meaning which was plausible but different from the idiomatic answer ('walk', associative answer).

Before the participants read the task, their attention was drawn to the fact that these were expressions with figurative meanings. The expressions were read out loud with the children following the printed version in front of them. Then the children were invited to choose the most appropriate answer. All children completed the task.

2.2. Experiment 2

Participants: The same 197 children participated in this experiment a few weeks after the first experiment.

Materials and procedure

The same 30 idioms were used, but a short story (1-2 sentences) was prepared for each idiom. Each story was easily comprehensible for the children, and the last sentence of each story contained the idiomatic expres-

sion (e.g. 'Mary got an top grade at shool, so **her mouth reaches her ears**'). The stories were read out loud, with the children following the printed version in front of them. Then they were asked the following question: 'What does the expression ('her mouth reaches her ears') mean in the story?' Three possible answers were provided ('she is smiling', idiomatic; 'she has got a very wide mouth', literal; and 'she is singing', associative). The answers were presented in a random order.

3. Results

The effect of context: The idiomatic answers were the most frequent in each group, irrespectively of context (Table 1). A clear developmental trend could be identified: the 7-year-old children − not knowing the meaning of idioms yet − had the most literal and associative answers in and out of context, while the effect of context did not turn out to be significant at this age (t(27)=1.085; p=0.288). This shows participants often could not benefit from contextual information. Furthermore, an intermediate phase can be identified: in the out of context task, 8-year-olds detached themselves from literal meanings but did not know the exact idiomatic meaning, settling for associative answers. However, their sensitivity towards contextual information clearly increased. Most 9 and 10-year-old children knew the meanings of idioms, so they chose the appropriate answers more often without context as well.

answers age groups	Without context			In context		
	literal	associative	idiomatic	literal	associative	idiomatic
7-year-olds	15.5	19.5	65.0	12.8	14.5	72.7
8-year-olds	6.3	19.2	74.5	2.8	7.3	89.9
9-year-olds	2.3	15.7	82.0	0.4	3.7	95.9
10-year-olds	0.9	10.5	88.6	0.4	2.3	97.3

Table 1. Literal, associative and idiomatic answers without vs. in context, in percentages

Statistically, the effect of context is significant in the age groups of 8-, 9-, and 10-year-olds (8-year-olds: $t(56)=-8.459$, $p<0.001$; 9-year-olds: $t(42)=-7.598$, $p<0.001$; 10-year-olds: $t(48)=-6.874$; $p<0.001$.) See also Figure 1.
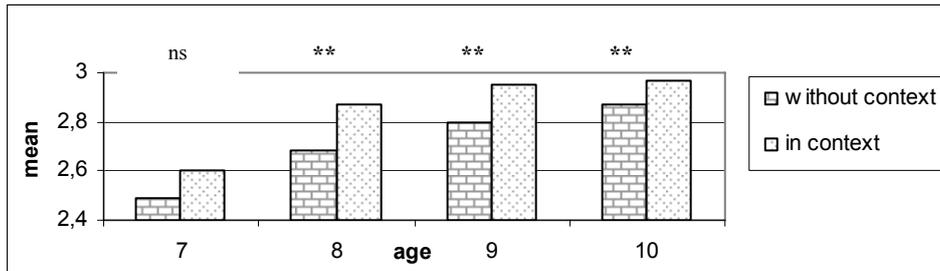
Figure 1. Mean figures for idioms without and in context, in percentages (** $p<0.01$; ns: not significant)

The effect of idiom type: The results are not consistent with the findings discussed above, namely, that children use an interpretive strategy based on semantic analysability (that is, the semantic relation between the words' meaning and the figurative meaning of the idiom). The results of the present study (cf. Figure 2) show that figures for transparent idioms are lower in each group and in both conditions (without and in context).
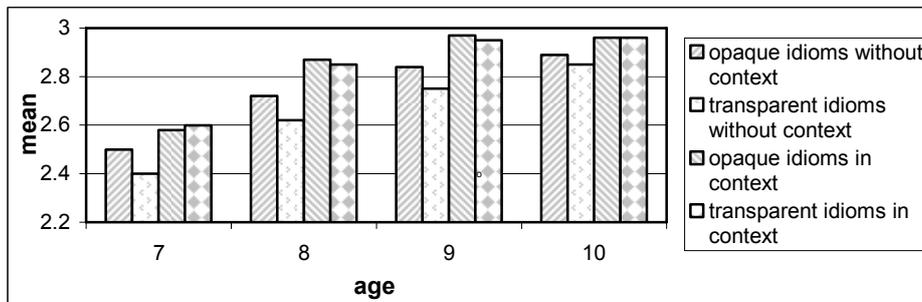
Figure 2. Mean figures for opaque and transparent idioms without and in context, in percentages

Transparent idioms are not more easily comprehensible for children, which suggests that internal semantics of the idiom string (i.e. whether the idiom is semantically analysable or opaque) does not influence interpretation at these ages.

4. Discussion and conclusion

The results show that context plays an important role in idiom comprehension, although not in the early phases of idiom acquisition (7-year-olds), but later (from age 8 on), when children detach themselves from the literal meaning and are able to use contextual information to find the appropriate meaning.

Levorato and Cacciari (1999) suggest that semantic analysability makes figurative interpretation at these ages easier, and children can benefit from it. However, the present study suggests that although the ability to process idioms is greatly influenced by contextual information in both types of idioms, semantic analysability does not play an important role.

The difference between previous findings and the results of the present study may derive from a differential judgment of semantic analysability. However, the results call into question the view according to which the internal semantics of idioms is relevant in the acquisition of idiom comprehension.

REFERENCES

Ackerman, B. P. 1982. "On comprehending idioms: Do children get the picture?" Journal of Experimental Child Psychology 33(3). 439-454.

Bobrow, S. and S. Bell. 1973. "On catching on to idiomatic expressions" Memory and Cognition 1(3). 343-346.

Forgács, T. 2007. Bevezetés a frazeológiába: A szólás- és közmondáskutatás alapjai [An introduction to idioms: The basics of researching sayings and proverbs]. Budapest: Tinta.

Gibbs, W. R. 1987. "Linguistic factors in children's understanding of idioms" Journal of Child Language 14(3). 569-586.

Gibbs, W. R. 1991. "Semantic analyzability in children's understanding of idioms" Journal of Speech and Hearing Research 34(3). 613-620.

Katz, J. J. 1973. "Compositionality, idiomaticity, and lexical substitution". In: Anderson, S. and P. Kiparsky (eds), A Festschrift for Morris Halle. New York: Holt, Rinehart and Winston. 357-376.

Levorato, M. C. and C. Cacciari. 1999. "Idiom comprehension in children: Are the effects of semantic analysability and context separable?" European Journal of Cognitive Psychology 11(1). 51-66.

Levorato, M. C., B. Nesi and C. Cacciari. 2004. "Reading comprehension and understanding idiomatic expressions: A developmental study" Brain and Language 91(3). 303-314.

Lodge, L. and E. Leach. 1975. "Children's acquisition of idioms in the English language" Journal of Speech and Hearing Research 18(3). 521-529.

IRONY COMPREHENSION IN SCHIZOPHRENIA

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ABSTRACT

One of the deficits associated with schizophrenia is the language disorder. While classic analyses of the problem have focused on the traditional linguistic levels (Chaika 1974; Covington et al. 2005), schizophrenic patients have been demonstrated to exhibit deficits in comprehending nonliteral forms of discourse (Brüne and Bodenstein 2004; Sponheim et al. 2003; Rapp et al. 2008). The aim of the present study is to analyse irony comprehension in paranoid schizophrenia. Ten male patients were asked to choose the most appropriate interpretations of ironic and literal scenarios. They chose literal paraphrases significantly more often than a matched control group, which points to the existence of a figurative language comprehension deficit in schizophrenia.

Keywords: schizophrenia, irony comprehension, figurative language

1. Introduction

Schizophrenia is a common and debilitating mental illness (Frith and Cahill 2001). One of the main diagnostic features of the illness is a language disorder (Marini et al. 2008), characterised by a wide array of disturbances that occur at various levels of language. Classic analyses of the phenomenon have focussed on traditional linguistic levels (Chaika 1974; Covington et al. 2005). However, schizophrenic patients have been demonstrated to exhibit deficits that extend beyond the domains of formal linguistics. For example, more recent research has shown that they experi-

ence difficulty in comprehending nonliteral forms of discourse, such as idioms, similes, proverbs, metaphors and metonymies (Brüne and Bodenstein 2004; Sponheim et al. 2003; Rapp et al. 2008). Such patients have also been reported to have problems understanding irony, which is believed to be the most difficult and the least predictable type of figurative language.

In the experiments by Cutting and Murphy (1990) and Drury et al. (1998), schizophrenic patients tended to provide literal rather than figurative interpretations of ironic remarks. Poor performance on irony was demonstrated in the study by Kim et al. (2008), where one of the tasks was the Irony and Metaphor Task. Similar results were obtained by Mo et al. (2008).

One of the few experiments devoted solely to irony comprehension in schizophrenia is a study by Marjoram et al. (2005), in which participants were asked to describe two types of cartoon images, physical ones and ones which required inferring mental states, and to rate them on humour and difficulty (Marjoram et al. 2005). Schizophrenia patients performed significantly worse than a control group in both experimental conditions. The experiment was replicated by Stratta et al. (2007). Here, too, two sets of cartoon images were used to probe the appreciation of irony. In the one set, patients had to be able to infer the mental state of the depicted characters to understand the jokes, while in the other there was no such need, as the pictures contained slapstick humour. Contrary to Marjoram et al.'s (2005) results, Stratta et al. (2007) report a substantial relationship between positive symptoms – symptoms which are not typically experienced by healthy people, e.g. hallucinations and delusions – and the performance on the set which involved mentalising.

2. Methods

The aim of the study was to answer three questions concerning irony comprehension in schizophrenia: (1) whether patients indeed have difficulty understanding ironic utterances, as indicated by studies by Kim et al. (2008) and Mo et al. (2008), (2) whether they exhibit a bias towards interpreting irony literally, and (3) whether the possible problems with

comprehension are evenly represented across the patient group or are they subject to individual variation.

To address these questions, a questionnaire was designed and conducted testing the comprehension of ironic utterances in both schizophrenia patients and healthy control participants. A number of short two-sentence scenarios were designed and then subjected to a thorough pretest in which 40 judges rated them on their ironicity and literalness on a seven point Likert scale, ranging from one (very literal) to seven (very ironic). Only the most salient ironic instances were selected for the experiment. Finally, three short interpretations (figurative, literal, and unrelated) were created for each scenario.

Ten male patients diagnosed with ICD-10 (International Classification of Diseases) paranoid schizophrenia, mean age 26,4 (range 20 to 36) and educational level 12 ± 3 agreed to take part in the experiment and signed a written consent. A control group of ten healthy volunteers was matched for gender (male), age (mean 23,3; range 19 to 30) and level of education (14 ± 3). Exclusion criteria for the control group included past or present mental illness.

The study took place in the psychiatric ward of Karol Jonscher's University Clinical Hospital in Poznań. Each patient was tested individually. The subjects were presented the stimuli on a computer screen and asked to read out a dialogue (see the example below) and imagine a situation in which two people could have had such a conversation. Then, they were to choose – out of the three available interpretations (figurative, literal or unrelated) – the one which best expressed what the second person meant, as shown in the example below:

A: Whenever danger approaches, he is the first one to run away.
B: He is a true hero.
   a) He is courageous.
   c) He is cowardly.
   c) He is a journalist.

No time limit was imposed on the participants.

3. Results

The analysis of responses of the patients and the controls to ironic dialogues reveals that almost half (46.15%) of the responses provided by the patients were incorrect (see Table 1). Moreover, the vast majority of the errors made by the patients were literal.

	TOTAL			
	Schizophrenia group		Control group	
	Nr	%	Nr	%
TOTAL	13	100	13	100
correct	7	53,85	12,4	95,38
incorrect	6	46,15	0,6	4,62
literal	5	38,46	0,5	3,85
unrelated	1	7,69	0,1	0,77

Table 1. The number and percentage of correct, incorrect, literal, and unrelated responses provided by the patient group and the control group

The significance of the literal to unrelated error ratio was tested in the patient group, and the result reached statistical significance (p=0.010; p<0.05). The ratio failed to be significant (p=0.104) in the control group. The overall results in the distracter literal dialogues do not show major differences in the performance of schizophrenics as opposed to controls. However, major individual differences in the performances of the patients were observed: there was one patient who chose literal paraphrases for all ironic dialogues, and another one who made no error on the irony task.

4. Discussion

As was hypothesised on the basis of previous research (Kim et al. 2008; Mo et al. 2008), the schizophrenic patients made more mistakes in the understanding of ironic dialogues than the healthy controls, which points to the existence of a comprehension deficit in the condition. Moreover, the patients tended to choose literal rather than unrelated paraphrases of the ironic utterances. Importantly, this result reached statistical signifi-

cance. Finally, the distribution of the irony comprehension deficit was found to be uneven. Patients varied dramatically with respect to the degree of this deficit, with some being unable to detect irony at all, and others having virtually no problem performing the experimental task.

5. Conclusions

Apart from confirming the existence of an irony comprehension deficit in schizophrenia, the study has pointed to a number of issues that need further research. The experiment should be replicated on a larger population. The individual differences observed indicate that more sociodemographic variables need to be controlled for. The patient group should be more homogeneous – this could be achieved by testing cognitive abilities, the effects of cognitive fatigue, verbal intelligence and immediate memory recall, so as to minimise the influence of individual differences. Also, it would be interesting to test the comprehension of various types of irony, and to use different task types. Such analysis, including both qualitative and quantitative data, could yield interesting results and shed more light on the processes underlying irony comprehension deficit in schizophrenic patients.

REFERENCES

Brüne, M. and L. Bodenstein. 2005. "Proverb comprehension reconsidered: 'Theory of mind' and the pragmatic use of language in schizophrenia" Schizophrenia Research 75(2/3). 233-239.

Chaika, E. 1974. "A linguist looks at 'schizophrenic' language" Brain and Language 1(3). 257-276.

Covington, M. A., C. He, C. Brown, L. Naçi, J. T. Mc-Clain, B. Sirmon Fjordbak, J. Semple and J. Brown. 2005. "Schizophrenia and the structure of language: The linguist's view" Schizophrenia Research 77(1). 85-98.

Cutting, J. and D. Murphy. 1990. "Preference for denotative as opposed to connotative meanings in schizophrenics" Brain and Language 39(3). 459-468.

Drury, V. M., E. J. Robinson and M. Birchwood. 1998. "'Theory of Mind' skills during an acute episode of psychosis and following recovery" Psychological Medicine 28(5). 1101-1112.

Frith, C. and C. Cahill. 2001. "Zaburzenia psychotyczne: Schizofrenia, psychozy afektywne i paranoja [Psychotic disturbances: Schizophrenia, affective psychoses and paranoia]". In: Lazarus, A. A. and A. M. Colman (eds), Psychopatologia [Abnormal psychology]. Poznań: Zysk i S-ka Wydawnictwo 38-62.

Kim, Y. T., B. D. Lee, S. H. Joe and D. H. Kwon. 2008. "Impairments in understanding of irony and metaphor in schizophrenia" European Neuropsychopharmacology 18(Suppl. 4). S462.

Marini, A., I. Spoletini, I. A. Rubino, M. Ciuffa, P. Bria, G. Martinotti, G. Banfi, R. Boccascino, P. Strom, A. Siracusano, C. Caltagirone and G. Spalletta. 2008. "The language of schizophrenia: An analysis of micro and macrolinguistic abilities and their neuropsychological correlates" Schizophrenia Research 105(1/3). 144-155.

Marjoram, D., H. Tansley, P. Miller, D. MacIntyre, D. G. C. Owens, E. C. Johnstone and S. Lawrie. 2005. "A Theory of Mind investigation into the appreciation of visual jokes in schizophrenia" BMC Psychiatry 5(1). 12.

Mo, S., Y. Su, R. C. K. Chan and J. Liu. 2008. "Comprehension of metaphor and irony in schizophrenia during remission: The role of theory of mind and IQ" Psychiatry Research 157(1-3). 21-29.

Rapp, A., M. Hensler, M. Bartels, D. Mutschler, R. Saur and K. Markert. 2008. "Metonymy resolution in schizophrenia: A model for complex semantic language comprehension" Schizophrenia Research 102(1/3: Suppl. 2). 144.

Sponheim, S. R., C. Surerus-Johnson, J. Leskela and M. E. Dieperink. 2003. "Proverb interpretation in schizophrenia: The significance of symptomatology and cognitive processes" Schizophrenia Research 65(2/3). 117-123.

Stratta, P., I. Riccardi, D. Mirabilio, S. Di Tommaso, A. Tomassini and A. Rossi. 2007. "Exploration of irony appreciation in schizophrenia: A replication study on an Italian sample" European Archives of Psychiatry and Clinical Neuroscience 257(6). 337-339.

THE BILINGUAL MENTAL LEXICON AND THE EPISODIC MEMORY: AN EXPERIMENT WITH PSEUDO-VERBS

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ABSTRACT

Results from psycholinguistic studies suggest that lexical representations in L1 and L2 might not have the same nature: if L1 words are stored on a semantic basis, in the semantic memory, novice bilinguals might store L2 words on an episodic basis, creating lexical representations that show close connections with the contexts in which the word is experienced, rather than with more abstract concepts. Thus, in tasks where episodic connections are stimulated, participants should perform better in L2. These insights are investigated through an experiment performed with pseudo-verbs.

Keywords: bilingual lexicon, episodic memory, language acquisition

1. Introduction

According to Kroll and Stewart's (1994) well known hierarchical model, for novice bilinguals, such as adults that study a foreign language in a formal environment, links running from the second language lexicon to the underlying conceptual store would be quite weak, as well as lexical links running in the direction L1→L2, while lexical links running in the direction L2→L1 would be quite strong. Thus, on hearing or reading a word in L2 the bilingual would translate it into the first language lexicon, which is better connected to the conceptual system. This suggests that a priming effect should be observed from L2 to L1 in cross-language experiments. Nonetheless, some findings have failed in finding a strong

priming effect in this direction, with translation tasks, whereas robust priming effects were observed from L1 to L2 (see Jiang and Forster 2001 for a review). A possible explanation suggests that knowledge of L2 words might be represented episodically, for late learners; hence, while performing cognitive tasks that trigger semantic aspects of meaning (such as translation tasks), L1 words would be immediately triggered, producing a strong priming effect on L2 words. On the other side, L2 words wouldn't be immediately activated because their nature is not deeply semantic. At the same time, in episodic recognition tasks L2 representations would be favoured and would prime L1 words (Jiang and Forster 2001).

The episodic memory, originally proposed as a system in which factual knowledge of personal experiences is stored (Tulving 1972), is classically opposed to the semantic – or lexical – memory, although language-related information could be technically stored in both systems (Forster 1985). More recently the episodic memory has been described as a distributed neural system, consciously activated, subserved by a network of brain regions that overlaps with other memory systems (Tulving 2002; Squire 2004), among which the hippocampus plays a critical role (Nyberg 2007). The episodic memory is part of the long term memory, although sometimes it is mistakenly identified with the episodic buffer, a system that would hold temporarily complex and multimodal information, binding the working memory to the long term memory (Baddeley 2007). The difference between episodic and semantic memory is that while the first refers to specific experiences defined in time and context, the latter includes general knowledge about the world, such as concepts, meanings and categories, elaborated and defined by more abstract and interconnected symbols (Almeida 2007; Cardona 2010). According to this definition, new word records framed in the same contexts and associated to the same episodes at the same time might be stored in the episodic memory, being them words in L1 or in L2. Thus, providing learners with words that have never been encountered before (both in L1 and L2), and concepts that are not otherwise lexicalised, would induce them to create episodic links that associate contextually the new words to the designed actions. In particular, we would expect to obtain a similar treatment for L1 items and L2 items, if the paradox observed in the study described above was just a matter of *new* versus *old* linguistic information. Otherwise, if we observe a different treatment that depends on the processed language, we can argue that lexical representations of L1 and L2 items have a different nature.

The experiment reported on here comprehends four parts: a study phase followed by three tasks. The stimuli used are pseudo words in English (L1) and Italian (L2). In order to produce a learning situation for the new words we found common lexical gaps, which were such in both languages.

2. Methods

Thirty male and female university students, in the ages between 19 and 22, who were American-English native speakers and learners of Italian (level A2) took part in the experiment. The pool of pseudo verbs, produced by changing phonemes of existing verbs, was composed of 24 Italian infinitive forms (ending in -ARE) and 24 English forms (preceded by TO). Verb lengths were balanced.

The three tests have been preceded by a study phase, where each participant was provided with 16 slides containing a couple of pseudo verbs (1 English and 1 Italian) associated with an image representing a non-lexicalised action. The actions described involved technical and specific procedures that were not familiar to the participants, such as 'to spray pesticide on plants', 'to step on grapes for making wine', 'to eat with chopsticks', or 'to weave big baskets'. In this way the pseudo verbs didn't contrast with existing words in L1. On each slide the 2 verb forms were distributed randomly in the space around the image. Between one task and the following, the participants were allowed to check the slides of the study phase again, but once they chose to read the instructions for the next task, they couldn't look at those slides anymore. The procedure was the following. In task 1 the 24 Italian pseudo verbs and the 24 English pseudo verbs were shown one by one on a screen for 3 seconds each. The participants had to report whether the verb that they were seeing on the screen was among the verbs of the study phase or not. In task 2 the participants were asked to judge whether or not the word and image appearing together on the screen matched, according to the study phase. In task 3, participants had to name the image appearing on the screen by using one of the 2 pseudo-verbs.

3. Results

The data analysis is mostly based on the calculation of the errors that oc-
curred in the performances. Quantitative and qualitative observations are
hereby reported.

For task 1, more mistakes were produced with the English (L1) pseudo
verbs than with the Italian (L2) ones: of the total amount of "yes/no" re-
sponses (720 for the English stimuli and 720 for the Italian stimuli), the
correct responses with English words were 80% (576 items), and with the
Italian words were 85% (612 items). Chi-square statistics showed that the
difference between the correct responses in L1 and the correct responses in
L2 are statistically significant: χ^2 (df = 1) = 5.892, p = .015.

In task 2 participants had to judge whether the matching between an
image and an associated pseudo-verb was correct. They were presented
with 32 slides; on each slide there was one of the 32 verbs they had studied
(16 in English and 16 in Italian), and an image. Also in this task partici-
pants performed better when the associated verb was in L2, rather than in
L1: correct responses involving a verb in L1 were 90.7% (435 items out of
480) while the correct answers involving a verb in L2 were 96.8% (465
items out of 480). The difference is statistically significant: χ^2 (df = 1)
= 14.951, p = .0001.

Task 3 was the most difficult for all the participants. In particular, out
of 480 total responses, in 21 cases participants left spaces blank; in 38
cases they wrote both of the pseudo verbs. In 5 cases the verb used was
actually a real verb, somehow related with the image (a hyperonym, a tro-
ponym or a verb describing part of the image), and all of these responses
were in English. In 3 cases the verb produced was a perfect morphologi-
cal hybrid between the two forms. In only one case a participant named
an image with a pseudo verb that belonged to another image. These re-
sponses were considered null. Regarding the remaining 413 responses,
49% of them were Italian L2 pseudo verbs (201 items), 42% were English
L1 pseudo verbs (172 items), 6% were Italian pseudo verbs with some
spelling mistakes (26 items) and 3% were English pseudo verbs with
spelling mistakes (14 items). The spelling mistakes included writing dou-
ble consonants when the correct spelling would allow a single one and
vice versa, changing the vowel of the first syllable, adding or changing a
consonant. Summing up the verbs that presented spelling mistakes to
those that were spelled correctly, in L1 or L2, the total amount of written

responses were 186 in English and 227 in Italian. The difference among the responses produced in L1 and L2 is statistically significant: χ^2 (df = 1) = 7.748, p = .005.

4. Discussion

The participants performed better in L2 than in L1 in all of the 3 tasks, which were independent from each other, because the participants were allowed to check the list of the study-phase between one task and another. Thus, the results of task 2 and 3 are not correlated to the mistakes produced in task 1.

Because the learners were non proficient speakers, we would have imagined them preferring and feeling more at ease with pseudo-words in L1, being more familiar with the phonological and orthographical systems of this language. The differences among the treatment of new words in L1 and new words in L2 suggest that the 3 tasks triggered the natural way of processing L2 words, and that this differs from the natural way of processing L1 words. It could be argued that the memory system that was triggered was the same, and the better performance in L2 is due to a greater and more recent exposure of the hippocampal system to learning L2 items, rather than L1 items. Nonetheless, many responses with spelling mistakes produced in L1 show similarities with existing verbs. For example *to sneck*, instead of *to sleck*, is a response associated with an image representing the action of twirling the neck. The spelling mistake is probably influenced by the association of the image to the word *neck*. Another observed response to this image, was *to slack*, an existing verb which means to loosen up, to relax. This kind of interference was not produced when L2 pseudo verbs were used. This fact suggests that English pseudo verbs were recognized as L1 words and therefore stored in the semantic memory, where the items are directly associated to the concepts and the meanings are highly interconnected. For this reason, while the participants retrieved these verbs, in task 3, also L1 words that were conceptually connected to the shown image were triggered. On the other hand, Italian pseudo verbs were recognized as L2 words, and arguably stored according to the episodic links created in the study phase, where words and images were associated. For this reason these verbs were retrieved without encountering semantic interference, but just a few spelling mistakes.

The 3 tasks proposed in this experiment retrace the steps of lexical learning processes: firstly recognizing the word forms as passive vocabulary (task 1), then structuring the meaning (task 2) and finally being able to use the items in a productive way, as active vocabulary (task 3). This last step is classically more difficult than the first two. In all the 3 tasks we obtained a better performance in L2 than in L1 even if the participants were not proficient learners.

The suggested differences among L1 and L2 lexical representations could be more pronounced during the initial stages of vocabulary acquisition. But once established, the episodic links may continue to play a role, even in proficient speakers of L2. In this perspective, the difference between semantic and episodic records of lexical information might resemble the difference between foreign language acquisition and foreign language learning, proposed by Krashen (1988).

5. Conclusion

The results of these pilot experiments open a range of possible developments. In particular, arguing that there is a difference among semantic and episodic lexical representations, suggests that given a word in L1 or in L2, semantic and episodic connections would generate different free lexical associations, according to the triggered language. Moreover, from a cognitive point of view, the distinction between a linguistic and a conceptual level of analysis during language processing, has recently lead a group of scientists to formulate the LASS theory (Barsalou et al. 2008). Here the authors suggest that deep conceptual processing, which happens through the mental simulation of perceptual symbols (Barsalou 1999), peaks only after a linguistic processing, and not in every situation. If, according to the recent findings that support embodied theories of meaning (Barsalou 2008; Glenberg and Gallese 2011), the deep conceptual processing involves mental simulations, these same simulations could be absent in the first stages of L2 processing, which are more language-based (Kroll and Stewart 1994). What kind of information, therefore, would contribute to build up the episodes according to which we store L2 meanings? Could linguistic (syntagmatic) contexts be considered as episodes? This would explain the crucial role of reading for L2 vocabulary learning (Cobb 1997; Walters 2004). In this perspective it would also be interest-

ing to compare word meanings organized in semantic spaces created by foreign learners, to word meanings that emerge from the distributional semantic spaces based on corpus analysis, where the meaning raises from the syntagmatic contexts (see Sahlgren 2006 for a detailed review).

Concluding, the results of this pilot study suggest that new L2 words are memorized as new information on an episodic basis, while new L1 words might tend to be stored in the semantic memory, connected with the other L1 words, and in tasks where the activation of episodic links is stimulated, L2 words would be preferred to L1 ones. The different treatment of L1 and L2 words supports the fact that it is not a matter of new versus old lexical information (otherwise L1 and L2 words were treated at least in the same way, as they were both new). On the contrary, it could be a matter of L1 or L2 words' memorizing mechanisms.

Future research could benefit from these results, and focus on the differences among participants whose competence of the L2 varies, and whose learning process varies (natural or formal environment).

REFERENCES

Almeida, J. 2007. "The semantic/episodic distinction: The case for social information processing" Journal of Experimental Social Psychology 43(5). 842-849.

Baddeley, A. D. 2007. Working memory, thought and action. Oxford: Oxford University Press.

Baddeley, A. D., J. P. Aggleton and M. A. Conway (eds). 2002. Episodic memory: New directions in research. New York: Oxford University Press.

Barsalou, L. W. 1999. "Perceptual symbol systems" Behavioral and Brain Sciences 22(4). 577-609.

Barsalou, L. W., A. Santos, W. Kyle Simmons and C. D. Wilson. 2008. "Language and simulation in conceptual processing". In: De Vega, M., A. M. Glenberg and A. Graesser (eds), Symbols and embodiment: Debates on meaning and cognition. Oxford: Oxford University Press. 245-283.

Cardona, M. 2010. Il ruolo della memoria nell'apprendimento delle lingue [The role of memory in language learning]. Torino: UTET.

Cobb, T. 1997. "Is there any measurable learning from hands-on concordancing?" System 25(3). 301-315.

Forster, K. I. 1985. "Lexical acquisition and the modular lexicon" Language and Cognitive Processes 1(2). 87-108.

Fraser, C. A. 1999. "Lexical processing strategy use and vocabulary learning through reading" Studies in Second Language Acquisition 21(2). 225-241.

Glenberg, A. M. and V. Gallese. 2012. "Action-based language: A theory of language acquisition, comprehension, and production" Cortex 48(7). 905-922.

Jiang, N. and K. I. Forster. 2001. "Cross-language priming asymmetries in lexical decision and episodic recognition" Journal of Memory and Language 44(1). 32-51.

Krashen, S. D. 1988. Second language acquisition and second language learning. New York: Prentice-Hall International.

Kroll, J. F. and E. Stewart. 1994. "Category interference in translation and picture naming: evidence for asymmetric connections between bilingual memory representations" Journal of Memory and Language 33(2). 149-174.

Nyberg, L. 2007. "Structural basis of episodic memory". In: Byrne, J. H. (ed.), Learning and memory: A comprehensive reference. Oxford: Academic Press. 99-112.

Sahlgren, M. 2006. The word-space model: Using distributional analysis to represent syntagmatic and paradigmatic relations between words. Doctoral thesis. Stockholm: University Press.

Squire, L. R. 2004. "Memory systems of the brain: A brief history and current perspective" Neurobiology of Learning and Memory 82(3). 171-177.

Tulving, E. 1972. "Episodic and semantic memory". In: Tulving E. and W. Donaldson (eds), Organization of memory. New York: Academic Press. 381-403.

Tulving, E. 2002. "Episodic memory: From mind to brain" Annual Review of Psychology 53. 1-25.

Walters, J. 2004. "Teaching the use of context to infer meaning: A longitudinal survey of L1 and L2 vocabulary research" Language Teaching 37(4). 243-252.

L1 INHIBITION IN BILINGUAL LANGUAGE SWITCHING

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ABSTRACT

Previous research revealed that low-proficient bilinguals, contrary to high-proficient ones, switch from their L1 to their L2 faster than in the opposite direction, which was considered indicative of L1 inhibition. The present study, whose aim was to trace the exact relationship between L2 proficiency and L1 inhibition, showed that both low- and high-proficient bilinguals took longer to name pictures in their L1 than in their L2. It is assumed, then, that the reasons for L1 naming disadvantage extend beyond the level of proficiency in L2.

Keywords: language switching, bilingualism, inhibition

1. Introduction

A vast proportion of research on bilingualism has shown that both languages of a bilingual are active to varying degrees, despite the intention to use only one of them (see overviews in de Groot 2011). It has been proposed that, as a result, the intended and the unintended language compete for selection and the competition is resolved by suppressing the latter. Green (1998), however, claims that the degree of suppression is higher for L1 than for L2, as the former is the stronger, dominant language which has to be inhibited so that the weaker, non-dominant L2 can be produced. Green's assumptions have been tested in language switching experiments.

In Meuter and Allport's (1999) study, bilinguals naming digits interchangeably in L1 and L2 needed more time to switch from L2 to L1 than in the opposite direction. The asymmetry in switching costs has been interpreted as evidence of L1 inhibition. Costa and Santesteban (2004), though, tested low- and high-proficient bilinguals on picture naming, reporting that the former exhibited asymmetrical switching costs, contrary to the latter, who took longer to respond in L1 than in L2, irrespective of whether switching was involved. The same results were confirmed for highly proficient bilinguals in Costa et al. (2006). The asymmetry in switching costs, interpreted as revealing local inhibition of specific L1 words (Meuter 2005), was ascribed to low-proficient L2 learners, while the general L1 naming disadvantage, considered indicative of global inhibition of the entire L1 language system (Meuter 2005), was attributed to highly proficient bilinguals. Still, in the studies discussed above, the participants' L2 proficiency was not controlled for in any other way than by means of self-assessment. The aim of the present study, then, was to provide a better control of bilinguals' L2 proficiency and to examine whether the relationship between proficiency in L2 and inhibition of L1 would be replicated.

2. Methods

Fifty potential participants were chosen, based on the year of their college studies. They were Polish first-year undergraduate and second-year graduate students enrolled in an English Studies program at the Adam Mickiewicz University in Poznań. The onset of their L2 (English) acquisition, which took place in a language classroom environment, ranged from 3 to 12 years of age. All potential participants were administered the Oxford Placement Test (OPT). On the basis of the test results, 20 first-year students were classified as Group 1, comprising non-proficient L2 users, with an average OPT score of 156 points. Likewise, 20 second-year graduate students were labeled as Group 2, including proficient bilinguals who scored 184 points on average. Ten potential participants, including six undergraduate students with the highest OPT scores and four graduate students with the poorest achievement, were excluded from further participation to maintain a more clear-cut boundary between the proficient

and non-proficient group. In this way, 40 Polish-English bilinguals aged 19-25, including 26 females and 14 males, took part in the experiment that replicated the one by Costa and Santesteban (2004). It was designed and run in E-Prime 2.0 on a laptop integrated with a Serial Response Box and a microphone. The stimuli included ten black-and-white pictures of common objects, organized in lists of 5 to 14 and displayed on the laptop's screen. Participants were asked to name the pictures in their L1 (Polish) or L2 (English), depending on the color of a picture's background – either green or orange – with the color-language correspondence counterbalanced across participants but constant for a given participant throughout the whole experiment. As a result, the lists of pictures included two types of trials: switch trials, in which the language of naming was different than on the previous trial, and non-switch trials, in which the language of naming was the same as on the previous trial. Each participant performed 400 trials, including 120 switch trials and 280 non-switch trials. Also, half of all the switch and non-switch trials required L1 responses, while another half – L2 responses, which makes 200 responses in each language. For all responses, reaction times were measured in milliseconds and recorded in an E-Prime data file. Next, mean reaction times were calculated for every participant individually and analyzed statistically in SPSS 20.0. However, response times on error trials which resulted from either technical failures of the equipment or the participants stuttering, providing incomplete responses or naming a picture in the wrong language were excluded from analysis. Reaction times which exceeded three standard deviations from the mean reaction time of a given participant were also discarded from analysis.

3. Results

ANOVAs were applied to measure both the combined and individual effect that the switching/no switching and first/second language conditions had on the participants' reaction times. Two-way ANOVAs were conducted separately for Group 1 and Group 2. The main variables included "Reaction Time" as the dependent variable and two factors such as "Type of Trial" (switch vs. non-switch) and "Response Language" (L1 vs. L2). In both groups of participants, the main effects of "Type

of Trial" (Group 1: $F(1, 76) = 5.455$; $p < .05$ and Group 2: $F(1, 76) = 10.921$; $p = .001$) and "Response Language" (Group 1: $F(1, 76) = 7.626$; $p < .05$ and Group 2: $F(1, 76) = 8.579$; $p < .05$) were significant. However, no interaction between the two factors was observed in either Group 1 ($F(1, 76) = .162$; $p = .689$) or Group 2 ($F(1, 76) = .078$; $p = .781$), indicating that the switching cost, i.e. the difference between reaction times on non-switch and switch trials, was very similar for both languages. This finding was further confirmed by t tests, applied in each group separately to calculate the exact switching costs for L1 and L2 and determine if they were symmetrical. In Group 1, the mean switching cost for L2 equalled about 53 ms ($t(19) = 7.434$; $p < .001$), amounting to 75 ms for L1 ($t(19) = 6.775$; $p < .001$), with the 22-millisecond difference between the two languages being not significant statistically. In Group 2, the mean switching costs for L2 and L1 equalled nearly 77 ms ($t(19) = 7.999$; $p < .001$) and 65 ms ($t(19) = 6.307$; $p < .001$), respectively, with a marginal, statistically non-significant difference between the two measures.
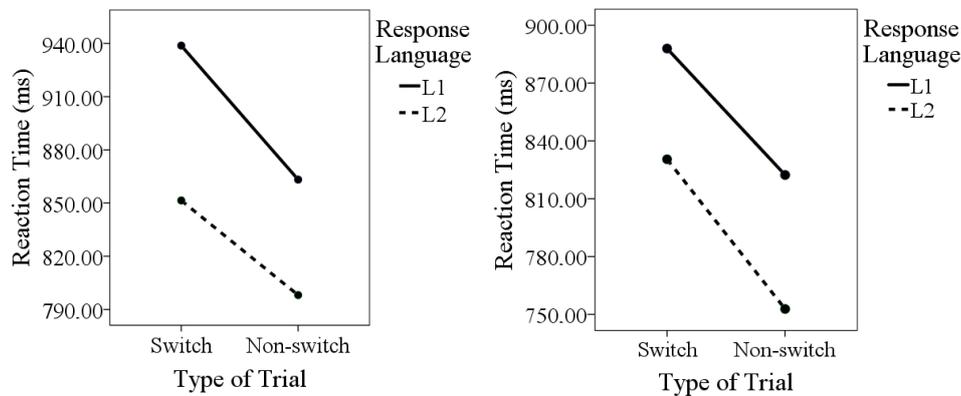
Figure 1. Switching costs in Group 1   Figure 2. Switching costs in Group 2

Although the switching costs were symmetrical, which is observable in Figure 1 and Figure 2, L1 responses were slower than L2 responses. In Group 1, the mean reaction time for L1 was almost 72 ms longer than for L2 ($t(19) = 6.238$; $p < .001$), while in Group 2, L2 advantage over L1 equalled nearly 67 ms ($t(19) = 6.193$; $p < .001$). Thus, it was observed

that both proficient and non-proficient bilinguals needed more time to respond in their L1 than in their L2, irrespective of whether switching between the two was involved or not.

4. Discussion

ANOVA's results demonstrated that in both groups of participants there was no interaction between "Type of Trial" and "Response Language", which indicates symmetrical switching costs for L1 and L2, revealing the lack of local L1 inhibition. The finding is surprising in light of the previous research which reported local L1 inhibition in switching, at least for non-proficient L2 learners. *T* tests, though, showed that, in the non-proficient group, the switching cost was slightly higher for L1 than for L2, suggesting that the performance of non-proficient L2 users could have involved marginal presence of L1 word-specific inhibition. The reason why only marginal switching cost asymmetry was observed in Group 1 can be the fact that the non-proficient participants in the present study were still more proficient than L2 learners tested in the previous studies.

Far more pronounced was the effect of general L1 naming disadvantage, which suggests global inhibition of the participants' L1 language system. Also, it seems that the discrepancy in the L2 proficiency of the two groups was not crucial in this case. Rather, the effect of global L1 inhibition could be attributed to the academic context in which extensive acquisition and active use of the participants' L2 had been taking place. Since the university environment, in which the bilinguals were tested, is associated with a predominant use of their L2, it is possible that the very presence in that environment could have caused them to inhibit their L1 globally.

Most recent studies offer alternative explanations of the dominant language inhibition effect. One of them is the L1-repeat-benefit hypothesis, assuming the absence of language competition in L1 repeat (non-switch) trials, as opposed to L2 non-switch trials, the result of which are faster responses and, consequently, assymetrical switching costs (Verhoef et al. 2009). Other researchers propose that asymmetrical switch costs appear only in cued, experimentally-induced switching but are absent in voluntary switches (Gollan and Ferreira 2009). These explanations appear successful in accounting for the effects of local L1 inhibition. The problem of

global inhibitory mechanisms, though, manifested in general L1 naming disadvantage reported in a number of studies, including this one, remains unresolved and can only be explained by further investigation of the factors playing a role in bilingual language control.

5. Conclusion

The present study examined the relationship between L2 proficiency and L1 inhibition in non-proficient L2 users and proficient bilinguals. In both groups performing picture naming, L1 responses were significantly slower than L2 responses, which suggests that the participants' L1 was globally inhibited. However, it seems that what gave rise to inhibitory control was not so much the level of L2 proficiency as the fact of being tested in an L2 environment.

REFERENCES

Costa, A. and M. Santesteban. 2004. "Lexical access in bilingual speech production: Evidence from language switching in highly proficient bilinguals and L2 learners" Journal of Memory and Language 50(4). 491-511.

Costa, A., M. Santesteban and I. Ivanova. 2006. "How do highly proficient bilinguals control their lexicalization process: Inhibitory and language-specific selection mechanisms are both functional" Journal of Experimental Psychology: Learning, Memory and Cognition 32(5). 1057-1074.

De Groot, A. M. B. 2011. Language and cognition in bilinguals and multilinguals: An introduction. New York: Psychology Press.

Gollan, T. H. and V. S. Ferreira. 2009. "Should I stay or should I switch? A cost-benefit analysis of voluntary language switching in young and aging bilinguals" Journal of Experimental Psychology: Learning, Memory and Cognition 35(3). 640-665.

Green, D. W. 1998. "Mental control of the bilingual lexico-semantic system" Bilingualism: Language and Cognition 1(2). 67-81.

Meuter, R. 2005. "Language selection in bilinguals: Mechanisms and processes". In: Kroll, J. and A. de Groot (eds), Handbook of bilingualism: Psycholinguistic approaches. New York: Oxford University Press. 349-369.

Meuter, R. and A. Allport. 1999. "Bilingual language switching in naming: Asymmetrical costs of language selection" Journal of Memory and Language 40(1). 25-40.

Verhoef, K. M. W., A. Roelofs and D. J. Chwilla. 2009. "Role of inhibition in language switching: Evidence from event-related brain potentials in overt picture naming" Cognition 110(1). 84-99.

LANGUAGE IN THE PRESS

MARKERS OF VERBAL IRONY IN MACEDONIAN AND ENGLISH NEWSPAPER HEADLINES

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ABSTRACT

This paper discusses verbal irony in written discourse. More precisely, it offers an insight into various markers of verbal irony used in newspaper headlines to signal an ironic intent of the writer. Furthermore, the paper aims at comparing the use of various types of markers of verbal irony in both Macedonian and English newspaper headlines and it is directed towards finding similarities and differences in these two languages.

Keywords: irony, markers of verbal irony, newspaper headlines

1. Introduction

One of the genres of written discourse in which verbal irony (VI) is a particularly frequent phenomenon is newspaper headlines. Newspaper journalists use VI purposefully for several distinct reasons, applying various linguistic markers to signal their ironic intent (Vebgalienė 2006: 151). Firstly, they want to create attractive headlines which will attract readers' attention and consequently ensure newspapers' circulation, as "irony makes the news more dramatic… the news itself is shocking and irony makes it explode" (Vengalienė 2006: 152).

Secondly, ironic headlines invite the readership to apply a deeper interpretation to the meaning of headlines and ultimately to discern criticism, ridicule or humour directed towards particular targets (Refaie 2005: 787).

The frequency of VI in newspaper headlines is also heavily dependent on the political-economical situation of a country. Vebgalienė (2006: 152), in that respect, notes that "during times of great political conflict or scandal even quality newspapers and websites begin to make more frequent usage of irony. With the growth of feelings of dissatisfaction, disapproval, or anger the irony gets more acute. Similarly, when there are no big conflicts in the political arena, the number of ironic headlines decreases".

As to the markers used to signal VI in newspaper headlines it has been suggested that the effect of irony can be achieved by using various means such as: rhetoric expressions (personification, simile, metaphor, metonymy, euphemism, antithesis, oxymoron, hyperbole, litotes, etc.), some formal devices (epigram/proverb, idiom, imperative, interrogation, exclamation, focus, reduplication, ellipsis, onomatopoeia and rhyme), as well as some idiomatic compounds, etc. (Geethakumary 2004).

This paper, which is based on a small scale study, is intended to trace a path towards a larger, more comprehensive study which will investigate contrastively VI in both Macedonian and English written discourse. Specifically, it is expected to shed light on some verbal, typographic, syntactic, figurative speech markers of VI[1] used to indicate irony in written discourse.

The findings derived from this comparison will hopefully contribute to raising the awareness of the existence of certain similarities and differences in both Macedonian and English, which eventually may alleviate the mutual communication of native speakers of these two languages.

2. Methods

The linguistic corpus compiled for this study comprises 80 newspaper headlines (40 Macedonian and 40 English) from the on-line versions of two prominent quality daily newspapers, the Utrinski Vesnik and the Washington Times. The extracted headlines refer to two current political

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[1] According to Muecke (1978: 366) irony is not irony unless it 'fairy hints' at its own nature; or if a writer intending irony does not see to it that his addressee is provided with grounds for a correct interpretation, i.e., with markers which are spread over the whole range of linguistic expressions.

issues, i.e. the Macedonian – Greek 'name dispute' and the health care reforms in the USA.

Two groups of 10 native speakers of both languages were consulted in the process of determining the ironicalness of the selected headlines. The first group of informants were deliberately provided only with the headlines, whereas the second group were well introduced to the topic of VI in advance and could read the entire articles as well. Both groups of informants received instructions to mark the ironic newspaper headlines on lists which they were provided with and explain briefly how they detected the irony in each of them.

Lastly, the focus was on identifying and classifying VI markers employed in the headlines into different categories, as well as on noting similarities and differences in their usage in both languages.

3. Results

Approximately one third of the total number of headlines was marked as ironic by both the Macedonian and the American informants in the first group, whereas according to the second group of informants the ironic headlines prevailed in both Macedonian and English headlines. The exact figures are presented in Table 1.

	1st group		2nd group	
	Macedonian	English	Macedonian	English
ironic headlines	13	16	28	35
non- ironic headlines	27	24	12	5

Table 1. The number of ironic vs. non-ironic newspaper headlines

The oral interviews conducted with the first group of informants afterwards only affirmed that even though they were native speakers and were well familiar with the political issue presented in the headlines, they still had come across some serious dilemmas in recognizing irony because of the lack of context. Namely, they claimed that they needed the entire articles to confirm their initial presuppositions and to reach reliable conclusions. Thus, unlike the second group of informants who were more confident in their judgment concerning the ironicalness of the headlines, the

first group of informants, although suspecting that some of the other headlines were also ironic, decided to mark as ironic only those headlines which they were completely positive about.

As the main goal of this study was to discuss VI markers used in the headlines, a thorough analysis based on the previous researchers' findings and assisted by informants' explanations revealed the following types of VI markers: **contextual cues** (statements which are contrary to the true state affairs) (Gerrig and Goldvarg 2000); **typographic markers** (inverted commas, capital letters); **syntactic markers** (exclamations, commands, questions, etc.); **verbal markers** (adjectives which assist in the creation of overstatements; **neologisms** (newly coined words); **echoing** (what someone has said or done; norms and standards) (Kreuz 1996); verbs, nouns and adjectives which belong to a **different register** (slang and colloquial words) and are inappropriate in a given context (Refaie 2005); **figurative speech** (metonymy, simile, metaphors, rhetoric questions, antiphrastic expressions); **idioms** and **rhyme** (Geethakumary 2004) and **alluding** (to failed expectations) (Kumon-Nakamura et al. 1995).

Several similarities in the usage of markers of VI in the Macedonian and English newspaper headlines were noted:

1. Most frequently used categories of markers in both languages were the verbal markers and the figures of speech:
   a) In the category of verbal markers, the presence of adjectives used in creating overstatement/hyperboles was marked (***Цела*** *ЕУ ќе помага за името/* "The **entire** Europe will help us with the name issue"; *GOP fighting **mad about** health bill*), as well as adjectives, nouns and verbs whose register was not compatible with the formal register of political news headlines (*Пахор го **куражи** Груевски за името/* "Pahor **encourages** Grievski about the name"; *GOP senators **sharpen** health bill amendments).*
   b) The most commonly used figures of speech as markers of VI were metaphors (*Мразот меѓу Македонија и Грција ќе го топат професори/* "Professors will melt the ice between Macedonia and Greece"; *Democrats descend into the twilight zone*). The usage of antiphrastic expressions (*Преговорите живнаа, разликите останаа/* "The negotiation became more dynamic but the differences remain";

Good idea but costly outcome) and rhetoric questions (*Зошто не можеме да ја победиме Грција/* "Why can't we beat Greece"; *What Democrats are really saying*) was also quite frequent.

2. Echoing what someone said or done in order to express disapproval was present in both languages (*Нимиц со надеж оди за Атина/* "Nimitz heads for Athens full of hope"; *Obama's medical horror stories*).
3. As to the syntactic markers, there were only two examples of imperatives used ironically in both languages (*Прво името /* "First the name"; *Show Congress the door*);

Apart from the similarities, the analysis showed that there were certain differences in the use of VI markers in Macedonian and English as well. For instance:

1. The usage of contextual clues was marked only in the English headlines (*Obama has time to win; Voters will have forgotten today's setbacks by 2012*).
2. Alluding to failed expectations was found only in one Macedonian headline (*Папандреу се мисли за средбата со Груевски – Нашиот премиер мора да чека Папандреу да си го провери својот распоред/* "Papandreou is still thinking about his meeting with Gruevski – Our Prime Minister has to wait for Papandreou to check his schedule");
3. Several instances of metonymy were found only in the Macedonian headlines (*Атина лута на Штефан Филе/* "Athens angry with Štefan Füle").
4. Few instances of rhyme and idioms were detected only in the English headlines (*Obama, Congress 'wise in their own eyes'*; *Obama hits the road to pitch health bill*);
5. One instance of simile was found in an English headline which also included the only example of neologism (***Obamacare** is a historic moment – like the Black Plaque was*).
6. There were several instances of typographic markers such as question marks, inverted commas and capital letters only in the English headlines (*The 'Slaughter Solution' would violate the Constitution*).

4. Discussion

The findings of this analysis affirm that Macedonian and American journalists resort to using more or less the same markers of irony in their headlines, and that they do that to approximately the same extent when they want to express criticism or disapproval of the current politicians and political events.

Furthermore, the study also reveals a number of differences in the application of particular types of markers of irony in Macedonian and English, i.e., certain markers were detected only in one of the two languages. However, as certain markers such as: rhyme, typographic markers, neologisms, contextual statements etc. were not detected in the analysed Macedonian newspaper headlines, the versatility of markers of irony in the English newspapers headlines was evidently greater.

5. Conclusion

The analysis indicates that the entire context and explicit prior knowledge on VI are essential when determining the ironicalness of newspaper headlines. Furthermore, it confirms that the signalling and comprehension of irony can be greatly alleviated by the usage of markers of VI and that there is a great variety of such markers utilized in written discourse. Finally, the results of the analysis also signal that approximately the same types of markers of VI are used in both Macedonian and English, with a slightly greater diversity of markers present in the English headlines.

However, in order to either confirm or deny the above presented findings, more relevant and elaborate research ought to be conducted that will include: a greater number of headlines from various newspapers and headlines referring to different types of events, other types of written discourse, as well as a greater number of informants.

REFERENCES

Geethakumary, V. 2004. "Language of news reporting in Indian language newspapers: A study of Malayalam news-reporting". [URL: http://languageinindia.com/may 2004/geethanews.html].

Gerrig, R. J. and Y. Goldvarg. 2000. "Additive effects in the perception of sarcasm: Situational disparity and echoic mention" Metaphor and Symbol 15(4). 197-208.

Kreuz, R., M. A. Kassler, L. Coppenrath and B. M. Allen. 1999. "Tag questions and common ground effects in the perception of verbal irony" Journal of Pragmatics 31(12). 1685-1700.

Kreuz, R. J. 1996. "The use of verbal irony: Cues and constraints". In: Mio, J. S. and A. N. Katz (eds), Metaphor: Implications and applications, Mahwah: Lawrence Erlbaum. 23-38.

Kumon-Nakamura, S., S. Glucksberg and M. Brown. 1995. "How about another piece of pie: The allusional pretense theory of discourse irony" Journal of Experimental Psychology: General 124(1). 3-21.

Muecke, D. C. 1978. "Irony Markers" Poetics 7. 363-375.

Rafaie, E. E. 2005. "Our purebred ethnic compatriots: irony in newspaper journalism" Journal of Pragmatics 37(6). 781-797.

Vebgalienė, D. 2006. "Irony in the headlines" Kalbotyra: Germanų ir romanų studijos [Linguistics: Germanic and Romance studies] 56. 150-155.

CREATIVE IDIOMATICITY IN NEWSPAPER LANGUAGE[1]

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ABSTRACT

The article gives an insight into the research on the creative use of idioms in the discourse of British newspapers. Different patterns of instantial stylistic use of idioms both within the newspaper articles and their headlines (umbrella use) are presented, explained and exemplified using the methods of discourse analysis. The results and the effects achieved by the use of creative idiomaticity in newspaper discourse are discussed.

Keywords: idiomaticity, instantial stylistic use, discourse, figurative meaning, umbrella use

When discussing *idiomaticity* scholars representing different trends of linguistics refer to this phenomenon in terms of *transferred, metaphorical, figurative, isolated* or *anomalous* meaning[2]. Thorough research of phrase-

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[2] Sometimes *idiomaticity* is viewed as a peculiarity that any level of language can manifest (Hockett 1958), but much more often this phenomenon is mentioned as a core feature of idioms – stable, cohesive combinations of words with fully or partially figurative meaning. Fernando and Flavell (1981: 22) define idiomaticity as "the outcome of the interaction of a form, a sense and a situational context". Weinreich (1972: 89) considers idiomaticity as "a phenomenon which may be described as the use of segmentally complex expressions whose semantic structure is not deducible jointly from their syntactic structure and the semantic structure of their components".

ology of any language comprises not only the analysis of semantics of idioms in their base form[3], but also attempts to discover and account for the mechanisms of variation the idioms undergo when used in discourse, i.e. core[4] and instantial stylistic use of idioms[5]. Appearing in a text idioms (or phraseological units[6]) show not only their regular characteristics but also those qualities that are latent before the actual use of idioms in discourse. The use of idioms, and their instantial stylistic use in particular, gives the author an opportunity to convey the message in an unusual form and thus to achieve certain aims, be it expressing one's opinion, showing one's attitude or evaluating the events presented and discussed.

The most interesting variations are those that influence both the form and the meaning of idioms, i.e., creative idiomaticity – the image underlying an idiom is being renovated and revived. Various patterns of creative idiomaticity have already been studied in different languages[7]: insertion, replacement of one or two components, addition, phraseological zeugma, inversion, periphrasis, blending, conversion, metathesis, instantial use of diminutive, extended metaphor, dual actualization, cleft use, allusion, umbrella use (see Naciscione 2001: 19-162).

The purpose of the paper is to consider some of the types of idiom instantiation encountered in articles found in British newspapers.

The corpus of idiom uses in British newspapers has been built up on the basis of a kind of random sampling, the focus being on the discoursal usage

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[3] An idiom out of context, an idiom in its dictionary form and meaning.

[4] The use of an idiom in a discourse in its usual form and meaning.

[5] In theoretical literature this phenomenon is denoted by such terms as *contextual use, contextual transformations* (Veisbergs 2001: 10), *occasional use, occasional transformations* (Кунин 1972: 146), *creative modifications* (Gläser 1998: 134), *instantial stylistic use* (Naciscione 2001: 19), *creative idiomaticity* (Prodromou 2007: 14), *creative variation, creative re-motivation* (Feyaerts: 2006).

[6] The question of terms used to denote the linguistic units under research is still under discussion among the scholars representing different countries and schools. The most often used terms are *a phraseological unit* and *an idiom* (for the discussion of terminology see Burger 2007: 10-15). As the discussion of the problem of terminology is not the concern of the present article we will use both the terms interchangeably.

[7] Bally was one of the first linguists to state that there is a possibility to put the components of an idiom apart from each other (Балли 1961: 394). It is necessary to mention the great contribution of Kunin to the establishment of fundamentals of stylistics of English phraseology (Кунин 1972). Other linguists who have studied the changes idioms undergo in discourse are Naciscione (2001, 2002), Veisbergs (2001), Fernando (1996), Cook (1994), Gläser (1998), Moon (1998), and others.

of ideational (informative) idioms and primarily by means of intensive collecting from British newspapers "The Times", "The Sunday Times", "The Guardian", "Daily Mail"[8] (*www.wrx.zen.co.uk/alltnews.htm*). Unfortunately, no word count is possible, as the examples of the use of idioms were elicited accompanied by the context influenced by or influencing the meaning and the form of an idiom only, and to state the frequency of occurrences of idioms within the newspaper discourse was not the objective of the research.

The present analysis relies on Naciscione's discourse-based approach to the study of phraseological units (Naciscione 2001, 2010). The study takes a qualitative research perspective within discourse analysis: the object of the research is idioms as used in the discourse of British newspapers, the focus being on the patterns of instantial stylistic use of idioms. The qualitative analysis of the occurrences of instantial stylistic use of idioms in discourse allows for the description and interpretation of the data collected. The results of the quantitative analysis of the corpus of the usage events of idioms in the discourse of British newspapers yields the results on the proportion of core use and instantial stylistic use as well as on the proportion of various patterns of instantial stylistic use of idioms.

From the whole corpus of 500 idioms elicited from the articles of the above-mentioned British newspapers 58% of idioms were used in core use, but in 42% of cases the idioms were instantiated[9].

In a number of instances the idioms underwent an instantial insertion of an element, e.g., an insertion of the element *acting* into the idiom *earn/win your spurs* supports the text of the article and gives the reader the clue, in what kind of competition Smith participated. It makes the message more precise and easy to identify the topic: *But Northampton-born Smith <u>won his acting spurs</u> opposite Billie Piper ...* (Time is on Side of New Doctor Who. The Sunday Times, Jan. 4, 2009).

There are cases of substitution of an element of an idiom, e.g.: *All roads lead to the United Nations* (The Guardian, May 9, 2006). The substitution attracts the reader's attention at once, but here not Rome, but the

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[8] The articles selected for the analysis cover different topics (politics, culture, social life, sports, etc.).
[9] In the corpus idioms are listed in the table consisting of three columns: an idiom in its base form, its dictionary meaning, an example of the idiom usage in discourse, and the analysis of the idiom usage event.

United Nations possesses a special importance. Moreover, in this instance the author of the article has applied the umbrella use of the idiom[10].

Omission of one or more components of an idiom often results in the allusion to it; thus the message conveyed by the idiom is made more concise, but still figurative, i.e., the cohesive ties between the components and the whole idiom are preserved, e.g.: *Yes, I am already looking for <u>a silver lining</u>*[11] (The Times, Sept. 17, 2008).

In the following example the meaning of the idiom *fly by the seat of your pants* is 'to do something difficult without the necessary experience and ability', but then the author of the article uses one of the most significant components of the idiom in its direct meaning, thus encouraging the reader to reveal both figurative and literal meanings of the idiom and creating quite a striking and humorous effect[12]:

The same week that the new Foreign Secretary, Margaret Beckett - in her own words - told reporters that she was "flying <u>by the seat of my pants</u>". And <u>fly</u> she did – Mrs Beckett, and her indomitable husband, Leo <u>arrived</u> in New York. (The Guardian, May 9, 2006).

In newspaper articles idioms usually occupy strong positions, i.e., headline, slogan, the first paragraph (or the very beginning of the body of the text), or the last paragraph (or the very end of the text), for example, the idioms used in headlines:

– *<u>What would Nelson say</u>*[13]? *EU says our naval bases should be controlled by Brussels.* (Daily Mail, March 31, 2009).
– *<u>Smell a rat?</u> Rescue rodents used to sniff out land mines*[14]. (Daily Mail, March 30, 2009).

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[10] The use of an idiom in titles and headlines (Naciscione 2001: 154). The umbrella use of an idiom embraces the whole text and thus influences its meaning and cohesion.

[11] The base form of the idiom is *Every cloud has a silver lining* – 'something good even in unpleasant situation'.

[12] The pattern of dual actualization has been applied. An author refers to the double reading of an idiom, i.e., at the idiomatic level (figurative) and the lexical or compositional (direct) level simultaneously.

[13] The allusion to the idiom *what will Mrs Grundy say?*

[14] The pattern of dual actualization has been applied as the article is about rats.

There are cases that idioms are used in the headlines and in the body of the text, as in the following excerpts from the article by E. Addley (The Guardian, April 3, 2009):

– *G20 summit photograph: The <u>call of nature</u> that wiped Canada out of history.*
– *It was Barack Obama, who first noticed the gap next to Angela Merkel. "Where are the Canadians?" he asked. Prime Minister Stephen Harper had (...) lost track of the time "while being briefed by an aide", though sources close to the summit lavatories suggested he had been <u>responding to an altogether more primal call</u>.*
– *A few minutes later the leaders were back for another try. But this time Susilo Bambang Yudhoyono (...) appeared to have vanished. Silvio Berlusconi, Italy's prime minister, too, was "<u>taking a phone call</u>".*

The headline of this article focusing on the description of the procedure of taking the G20 summit participants' photograph attracts the reader's attention by its irony. The idiom – euphemism based on metaphor – is continued by another metaphor: photographs eternalize the events of life. The irony is reinforced by the instantiation of the same idiom (*responding to an altogether more primal call*) and the word combination "*taking a phone call*", the inverted commas indicating that it is ironically used to name the same action as the idiom used before.

When functioning in discourse idioms play an active role in its thematic and semantic development by acquiring semantic ties either with the whole context or with its particular elements. Used in the headline or the initial position an idiom serves to introduce the theme of the article and determines the further direction of its development – interpretation, specification, motivation, or extension of the meaning of the idiom. Appearing in the middle of the text an idiom is semantically bound with both the preceding and the following context and may mark the turn in the theme as well as introduce some new information. In the final position an idiom is used either to conclude the theme or to comment on it. Unlike stylistically normative, core use of idioms, instantiated idioms possess intensified figurativeness, emotional and expressive colouring, they help the authors express their evaluation of objects and phenomena, and convey the idea in a more original way. Idioms satisfy the need of language users for expressivity. Therefore readers' attention is often attracted by means

of semantic potential of idioms, i.e., by the effect of understatement, a hint, an allusion, a wordplay, which all lead to the intensification of the connotative aspect of idiomatic meaning.

To summarize, the number of excerpts featuring various patterns of instantial stylistic use of idioms in the discourse of British newspapers (210 cases or 42% of the whole corpus) testifies to the fact that it is a productive means of encoding semantic content in an original and concise way, as well as to create cohesion across discourse.

REFERENCES

Burger, H. (ed.). 2007. Phraseology: An international handbook of contemporary research (Vol. 1). Berlin: Walter de Gruyter GmbH & Co. KG.

Cook, J. 1994. Discourse and literature: The interplay of form and mind. Oxford: Oxford University Press.

Fernando, C. 1996. Idioms and idiomaticity. Oxford: Oxford University Press.

Fernando, C. and R. H. Flavell. 1981. On idiom: Critical views and perspectives Exeter: University of Exeter Press.

Feyaerts, K. 2006. "Towards a dynamic account of phraseological meaning: Creative variation in headlines and conversational humour" International Journal of English Studies 6(1). 57-84.

Gläser, R. 1998. "The stylistic potential of phraseological units in the light of genre analysis". In: Cowie, A. (ed.), Phraseology: Theory, analysis, and applications. Oxford: Clarendon Press. 23-54.

Hockett, C. F. 1958. A course in modern linguistics. New York: Macmillan.

Moon, R. 1998. Fixed expressions and idioms in English. Oxford: Clarendon Press.

Naciscione, A. 2001. Phraseological units in discourse: Towards applied stylistics. Riga: Latvian Academy of Culture.

Naciscione, A. 2002. "Cohesion in Phraseology". In: Braasch A. and C. Povlsen (eds), Proceedings of the 10th EURALEX International Congress (Vol. 2). Copenhagen: Center for Sprogteknologi. 534-539.

Prodromou, L. 2007. "Bumping into creative idiomaticity" English Today 23(1). 14-25.

Veisbergs, A. 2001. "Occasional transformations of idioms: Wordplay in interpreting" Contrastive and Applied Linguistics 10. 96-111.

Weinreich, U. 1972. Explorations in semantic theory. The Hague: Mouton. [URL: http://wrx.zen.co.uk/alltnews.htm].

Балли, Ш. 1961. Французская стилистика. М.: Иностр. лит.

Кунин, А. 1972. Проблемы лингвистической стилистики. Москва: Международные отношения.

RECENT ENGLISH LOANWORDS – *NEOPRESTITI* – IN ITALIAN WOMEN'S MAGAZINES

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ABSTRACT

One cannot imagine any language without loanwords and Italian is considered to be particularly open towards foreignisms. To confirm or reject this hypothesis a search has been carried out for English loanwords in the 2009 Italian edition of Marie Claire, a women's magazine. The focus is on interesting examples of Anglicisms. A discussion of the findings in relation to the phenomena connected with their appearance is presented.

Keywords: languages in contact, loanwords, Anglicisms, Italian press

1. Introduction

The history of a language is, to some extent, the history of its contacts with other languages. We can observe periods in which a particular language plays a dominant role, causing its words and expressions to be introduced into the lexis of other languages. Undoubtedly, in recent decades English has been dominating not only the European, but also the world language stage. According to Görlach (2007: 3) the first period of the popularity of English started after the Second World War, with a second period in the 1990s. As Italiano states (1999: 4-5), it was the development of the mass media that promoted Anglo-Saxon culture in Europe. One of the languages "invaded" by the Anglo-Saxon dominance is Italian, said to be particularly open to foreignisms. Indeed, the presence of Anglicisms in

Italian began in the thirteenth century together with trade contacts between Britain and the Italian peninsula (Pulcini 2007: 151). In the Italian press it dates back to the eighteenth century when lexemes such as *lady* appeared. Their greater popularity started in the next century, due to various sports or inventions, e. g., *tramway* or *football* (Bonomi 2002: 172-177).

In the present study an analysis of Italian women's magazines was carried out in order to check to what extent the common opinion on Italian's open attitude to foreignisms can be justified. It should be noted that numerous linguists who study Italian press language mention the presence of Anglicisms as one of its typical features (e.g. Antelmi 2006: 39). Moreover, not only loanwords, but also false Anglicisms can be noticed in the press: their popularity is probably due to the prestige of English in general (Bombi 2005). A search for English loanwords was made, especially the most recent ones called *neoprestiti*, in the 2009 Italian edition of the Marie Claire magazine. As this is not a specialist publication, its selection automatically rules out loanwords typical of narrow branches which are not representative of the Italian language as a whole. Apart from the statistical conclusions, which will give us a general view of the presence of Anglicisms in different types of texts, it will be interesting to identify specific phenomena operating on different levels of the language which are connected with the appearance of English loanwords in Italian.

2.   Adaptation of Anglicisms in Italian

The adaptation of loanwords occurs on different levels of the language system: phonological, graphical, morphological, and semantic (Mańczak-Wohlfeld 2008: 113). In the case of the press it is impossible to discuss changes at a phonological level for the obvious reason that the language analysed is in the written mode. The obverse of this fact is advantageous in the graphic analysis, which cannot be done in the case of spoken language. In general, as far as the graphic form is concerned, it can be stated that nowadays loanwords which come into Italian maintain their original form (Pulcini 2007: 156-157). As a result, letters nonexistent in Italian, such as <j,k,w,x,y> appear only in foreignisms.

Much more confusion is present at a morphological level because of numerous differences between the systems of both languages in question (Repetti 2003: 33-35). First of all, Italian nouns have a gender (either mascu-

line or feminine) and they are preceded by articles (definite or indefinite ones) which have to correspond to the noun's gender and number. This is the reason why loanwords have to obtain a gender once they have entered Italian. The choice of gender depends on different factors. First of all, if possible, a natural gender is maintained, e.g., *First Lady* is feminine as this term designates a woman. In some cases a formal feature, such as a particular ending, decides the matter: e.g., in Italian, nouns which terminate in -tà are feminine, so English nouns terminating in -ty become feminine as well. In other cases it is the gender of the native equivalent that determines the choice (*la happy end* because of *la fine*). If none of these rules is applicable, a noun is likely to receive the masculine gender (Pulcini 2007: 159). As far as plurals are concerned, non-adapted loanwords do not have a plural form, but rather the article informs about their number.

One of the most interesting aspects of word loaning is semantic differences between the original meaning of a word and the one with which this word is used in Italian. As a word is borrowed to serve in a particular context, usually the originally polysemic word functions in the receptive language with only one meaning (Görlach 2007: 10). E.g., the adjective *dry* in English has several meanings and uses, while in Italian *dry* is used only when referring to wine in the sense of 'not sweet'. In some cases the original meaning of a word is even totally changed, as it is in the case of *spot* – which in Italian has the meaning of 'TV commercial', absent in English, while no English meaning is maintained. In some cases even more confusion can be observed as the meaning of an English loanword present in the Italian dictionary differs from its meaning used in the press articles. The analysis of the magazine will give us an opportunity to check whether these theoretical assumptions find confirmation in practice, whether the rules mentioned apply to foreignisms used in Italian press.

3. The analysis of the corpus – general observations

The corpus analysed consists of the twelve issues of the Marie Claire Italy magazine for the year 2009. The analysis is divided into stages. The first one consists in counting recent loanwords, *neoprestiti*. It was checked to what extent these lexemes already belong to the Italian lexis, by looking them up in the online edition of the Garzanti dictionary and choosing only the ones which are not present in the dictionary mentioned with the mean-

ing used in the press. It should be noted that every foreignism is counted once for one article, as an item, regardless of the number of its appearances in this article. Then, the distribution of these loanwords was checked in different types of articles (the content of the magazine was divided into different sections, e.g., articles on fashion, letters from readers, reportage) in terms of absolute and relative data (the number of loanwords as such and the average per page). The last and probably the most important part is the analysis of the functioning of the identified loanwords in the Italian language system.

The analysis reveals that in the 2009 issue of Marie Claire there are 3808 recent loanwords, ones not mentioned by the Italian dictionary Garzanti at all or with a different meaning than the one used in the articles. As explained, every word was counted once for every article in which it appeared. The facts are as follows: these loanwords are present on 4951 pages of the magazine; the highest number of loanwords is present in articles on fashion (807 items on 1305 pages) while the lowest number of loanwords is observable in the articles written by a correspondent from the Middle East (11 loanwords on 12 pages). However, as far as the relative data are concerned, the highest average of loanwords is observed in articles belonging to the category of *Novità* (presenting new books, concerts, etc.) at 3.24 loanwords per page, while the lowest average of 0.1 loanwords per page concerns advertising.

When *neoprestiti* are counted only once for their appearance at all in the magazine, the resulting list of all foreign words appearing on the pages of the magazine issue analysed contains 1018 Anglicisms out of 1329 *neoprestiti* found, which is equal to 77%. However, this calculation does not reflect the frequency of English loanwords used. Interestingly, it is evident that words coming from other languages than English are used in precise contexts, usually in articles on foreign cuisine or culture in general, while Anglicisms are used in all types of texts which usually do not concern any issues related to English or American culture. This fact and the high percentage of their presence are the reason why all the observations made about loanwords in general can refer to Anglicisms.

As far as the form of loanwords is concerned, the first and most outstanding observation is the fact that foreign words maintain their original form. It is clear that the old tendency to adapt foreignisms to the rules of the host language is no longer valid. This choice has relevant consequences as these non-adapted lexemes still have to function within an Ital-

ian phrase, which is a difficult task due to differences between the two language systems.

Among the processes of morphological adaptation, it is necessary to discuss the problem of gender attribution to nouns. During the analysis of the corpus it was noticeable that some nouns have the gender of their Italian equivalent, e.g., *la T-shirt* after *la maglietta*. Yet, there are some examples contrary to the rule: there is *la band*, where its Italian equivalent, *gruppo*, is masculine; and *il team*, which is masculine, unlike *la squadra*. In some cases it is a characteristic ending that determines the choice of gender: *la compilation* was inspired by *la compilazione* with the typically feminine ending -zione of the Italian noun. Still, another rule appears to complicate matters, as loanwords do not usually have a plural form: e.g., in the expression *tutti i brand nei nostri store*, where both English nouns are plural, only the articles and the possessive pronoun inform about this fact. In the case of loanwords the choice of articles (which in Italian are numerous and depend not only on gender and number, but also on the beginning of the noun) is analogous to the choice of articles for Italian words.

At the syntactic level, one can observe the conformity to the Romance word order noun + determiner, e.g., *luci laser* (laser lights), *pelle vintage* (vintage leather) or *iniziativa charity* (charity initiative). As can be seen, loanwords are able to function well in Italian syntax as many English prefixes are present in Italian to create hybrid compounds like *ex-fidanzato* (ex-boyfriend) or *miniabito* (mini dress). Moreover, many Anglicisms are inserted between Italian words (entire expressions are noticeable, such as for the name of a product *made in Italy*) or they are placed even next to words from another language: e.g., the expression *super griffe* (super label) with one English and one French word. In some cases English expressions are reduced to one element: e.g., *body* instead of *body suit* or *night* for *night club*. Usually the first element is maintained since in Italian it is the determined element, which is unlike the English word order. Because of this difference between the language systems, for English native speakers such abbreviated forms are incomprehensible and distinctly odd.

At the level of semantics important changes are noticed, not only between the original English meaning and the one used in Italian but also between the meaning of a loanword given in the Garzanti dictionary and its actual meaning used in the press articles. For instance, according to the Garzanti dictionary, a *trolley* is 'a metal pole of a tram, a trolley bus or a locomotive collecting current from wires', while in the press it appears

with the meaning of 'suitcase on wheels'. Similarly, the term *basic* is defined as 'programming language' while in articles it appears as an adjective, not a noun, and has a meaning similar to 'natural' as in the expression *basic look*. In some cases the Italian dictionary mentions only one word from an English expression present in the press, e.g., out of *soft heavy cream* the dictionary mentions only *heavy* as a part of the expression *heavy metal*, so there is a decisive change in meaning. Another example is *personal trainer* which in the press denominates a personal trainer of fitness while in the dictionary one can find only the adjective *personal* as an abbreviation of *personal computer* (so it functions as a noun) and a *trainer* in the restricted meaning of 'football coach'.

4. Conclusion

It cannot be denied that English loanwords are present to a significant extent in the Italian press. They are mainly recent loanwords which appear in their original forms, unlike French loanwords which are already well rooted in the Italian lexis (Bonomi 1994: 676). As far as their functioning is concerned, Anglicisms are adapted to Italian morphology, with nouns being assigned a gender and an article, which are then invariable. What often does change, though, is their meaning, which can differ not only from the original sense of the word, but also from the referenced Italian dictionary definition. This fact may cause misunderstandings, especially for readers who are not Italian native speakers but who are advanced in English. However, Anglicisms play an important role in the modern Italian language. The fact that they become parts of compounds or are a base for derivatives is the best proof of their strong position and flexibility within the Italian language.

REFERENCES

Antelmi, D. 2006. Il discorso dei media. Roma: Carocci Editore.

Bombi, R. 2005. La linguistica del contatto. Tipologie di anglicismi nell'italiano contemporaneo e riflessi metalinguistici. Roma: Il Calamo.

Bonomi, I. 1994. "La lingua dei giornali del Novecento". In: Serianni, L. and P. Trifone (eds), Storia della lingua italiana (Vol. 2). Torino: Giulio Einaudi Editore. 667-701.

Bonomi, I. 2002. L'italiano giornalistico. Dall'inizio del '900 ai quotidiani on line. Firenze: Franco Cesati Editore.

Dizionario Garzanti. [URL: http://garzantilinguistica.it].

Görlach, M. 2007. English in Europe. Oxford: Oxford University Press.

Italiano, G. 1999. Parole a buon rendere ovvero l'invasione dei termini anglo-italiani. Fiesole: Edizioni Cadmo.

Mańczak-Wohlfeld, E. 2008. "Morfologia zapożyczeń angielskich w językach europejskich [The morphology of English borrowings in European languages]" Studia Linguistica, Universitatis Iagellonicae Cracoviensis 125. 113-120.

Pulcini, V. 2007. "Italian". In: Görlach M. (ed.), English in Europe. Oxford: Oxford University Press. 151-167.

Repetti, L. 2003. "Come i sostantivi inglesi diventano italiani: La morfologia e la fonologia dei prestiti". In: Sullam-Calimani A. V. (ed.), Italiano e inglese a confronto. Firenze: Franco Cesati Editore. 31-42.

LINGUISTICS: FORMAL & APPLIED

LIMITING SPACE: MOVEMENT POSSIBILITIES IN GERMAN DOUBLE OBJECT CONSTRUCTION

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ABSTRACT

This paper investigates the structure and properties of Applicative Phrases (ApplP) in German Double Object Construction (DOC). The problematic issue in the field of Applicatives is the crosslinguistic symmetry/asymmetry in the behaviour of Indirect (IO) and Direct Objects (DO), in such aspects as susceptibility to movement out of the DOC.

Keywords: DOC, Applicative Phrase, object movement in German

1. Introduction

The aim of this paper is to characterise movement phenomena taking place within and out of the Double Object Construction (DOC)- a structure consisting of a verb phrase with two objects, complementing the verb, which occur in German. We would like to investigate if German data complies with the theory of McGinnis (2001, 2005), who combines the applicative phrase structure with Chomsky's (2007, 2008) theory of phases.

2. McGinnis' (2001, 2005) account of object movement

2.1. Chomsky's theory of phases (2007, 2008)

The assumption of Chomsky's (2007, 2008) theory is that the syntactic derivation happens in stages. Once a stage has been completed, a phase (a syntactic entity) is created. Then it is subject to phonological and semantic Spell-Out. Next, the higher phase can be computed. The domain of the phase head, its complement, is inaccessible to movement and agreement operations above the phase head and only the edge of a phase (the Specifier and a phase head) can participate in such processes (*Phase Impenetrability Condition*). Therefore, the constituents of a phase which do not move to its edge, are trapped within the phase. Although Chomsky (2008) considers only CP and vP to be phases, he does not exclude the possibility that other phrases constitute phases. He notices even similarities in structure between vP and DP but leaves this matter aside for further investigation.

2.2. Minimality

Before moving on to McGinnis' proposal we need to discuss the issue of minimality. The definition of Relativised Minimality (RM) has been formulated by Rizzi (1990). RM determines local structural relations between closest elements, as in (1) below.

(1) a. . .X . . . Z . . .Y . . .
    b. Relativized Minimality : X α-governs Y iff there is no Z
       such that
       i. Z is a typical potential α-governor for Y,
       ii. Z c-commands Y and does not c-command X.
       iii. α-governors: heads, A Spec, A' Spec.

This definition basically entails that no element can move past the element of the same type (e.g. DP). Such statement is too restrictive since, for instance, the presence of a subject does not block the movement of an object in object initial sentences. This problem can be solved if we adopt the definition of complex minimality proposed by Starke (2001). He suggests that the element which moves past an element of the same type is

equipped with an additional feature connected with "D(iscourse)-linking", as illustrated by (2).

(2) ...X$_{D\text{-feature}}$.... DP1 .... DP2$_{D\text{-feature}}$

In (2), DP1 does not act as an intervener in the syntactic relation between X and DP2, because it lacks a D-feature and therefore cannot act as a Goal for a Probe which tries to match this feature. Adopting Starke's proposal is especially important for the analysis of object movement, whether it concerns monotransitive (moving object passes the subject) or ditransitive verbs (the displaced object passes on its way not only the subject but also the other object), since object-initial sentences are marked constructions, discourse related and are acceptable only in particular contexts.[1]

2.3. Applicative construction

Applicative construction is a phenomenon present in e.g. Bantu and Austronesian languages (e.g. Baker 1988) and it is like a DOC in that it involves an Oblique argument (Goal, Benefactor) surfacing as a DP along with the Direct Object (Anagnostopoulou 2003: 34). The difference between the DOC and the Applicative construction is that in the latter the verb is morphologically complex (Baker 1988: 229).

Baker (1988) proposes that both the Applicative construction and the DOC are the realisations of the same underlying structure. The major feature which distinguishes one from the other is the visible presence of the affix in Applicatives and its absence in the DOC. (3) represents a basic structure of a DOC with the applicative head.

(3) vP[v ApplP[Appl' IO [Appl VP [DO V]]]]

The notion of an Applicative Phrase has been further developed by Pylkkänen (2002), who suggests that a single structure like the one above does not illustrate numerous phenomena taking place within a DOC. Therefore, she suggests distinguishing two types of Applicative heads based on the place of their merger in the Double Object structure: High Applicative

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[1] This observation is valid for SVO languages, like e.g. German or English, where unmarked sentences begin with a subject.

Phrases (ApplPH) are merged above the VP and they introduce an additional argument involved in the event expressed by the verb, with Instrumental, Benefactive, Malefactive, etc, functioning as Applicative heads, while Low Applicative Phrases (ApplPL) attach below the VP and denote the transfer of possession, relating the Theme with the Goal.

McGinnis claims that what distinguishes high from low Applicatives is the fact that the former are phases and the latter are not. Therefore, high Applicatives can project an additional Specifier position (phases possess the EEP feature) and attract the lower object, the Theme (DO) to this position. The DO is higher now than the IO and it is an object closer to any attracting head outside of vP. On the other hand, the applicative object, IO is merged at the edge of a phase and is constantly available to material outside the phase, even if no EPP feature is introduced.

(4)

   a.   vP [v ApplPH [ApplPH [ApplH' IO [ApplH VP[V DO]]]]]

phase EPP
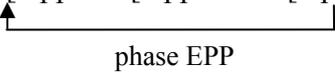
   a.   [vP[v VP [V ApplPL [ApplL' IO [ApplL DO]]]]]

                 X
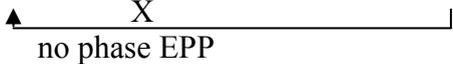
       no phase EPP   (McGinnis 2001: 8)

The structure in (4a) shows that in High Applicative Phrase the DO belongs to the V head domain whereas the IO is a part of the Applicative head domain. Since, the ApplPH is a phase, it possesses the ability to project an extra Specifier position. The DO can access the same domain as the IO, but it moves directly to the position above the IO. Now, if a higher head attracts an object, the DO can move as well. On the other hand, (4b) illustrates Low Applicative structure, where both objects belong to the same domain. According to McGinnis, since the Low Applicative Phrase is not a phase, it cannot project additional Specifier position and there is no position above IO to accommodate DO. Therefore, if a head above the Applicative attracts an object, the IO will move as it is closer to the attractor[2], whereas the DO is locked within the domain of ApplPL.

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[2] Chomsky's Attract Closer Condition (1995: 297).

3. Object movement in German: The data

The basic order of a German affirmative sentence with a ditransitive verb is the subject followed by the verb with the dative object preceding the accusative one, if both objects are realised by DPs (e.g. Helbig and Buscha 2001). When we apply Pylkkänen's semantic criteria and assume her division for German Applicative Phrases, we observe that both types of objects undergo the same kind of movement in what seems to be Low (as in (5)) and High (as in (6) with Benefactive Applicative) Applicative Phrases.[3]

(5) a. Der Lehrer   gab   dem Schüller einen Brief.
     the teacher$_{NOM}$ gave   the pupil$_{DAT}$ a letter$_{ACC}$
     'The teacher gave the pupil a letter.'

   b. Dem Schüller   gab   der Lehrer   einen Brief.
     the pupil$_{DAT}$ gave   the teacher$_{NOM}$ a letter$_{ACC}$
     'The teacher gave the pupil a letter.'

   c. Einen Brief   gab   der Lehrer   dem Schüller.
     a letter$_{ACC}$ gave   the teacher$_{NOM}$ the pupil$_{DAT}$
     'The teacher gave the pupil a letter.'

(6) a. Die Mutter   hat   dem Jungen das Fahrrad gewaschen.
     the mother$_{NOM}$ have   the boy$_{DAT}$ the bike$_{ACC}$ washed
     'The mother has washed a bike for her son.'

   b. Dem Jungen hat   die Mutter   das Fahrrad gewa-
     schen.
     the boy$_{DAT}$ have   the mother$_{NOM}$ the bike$_{ACC}$ washed
     'The mother has washed the bike for her son.'

   c. Das Fahrrad   hat   die Mutter   dem Jungen   gewaschen.
     the bikeACC   have   the motherNOM the boyDAT   washed
     'The mother has washed the bike for her son.'

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[3] This is a preliminary assumption. Definite statements about the exact nature (properties and the number of available heads) of Applicatives in German require further investigation.

As the examples above illustrate, the IOs and DOs can undergo movement to the front of a sentence in German in both types of constructions. The fact that the behaviour of objects seems to be identical in High and Low Applicatives, undermines the necessity of introducing such an important distinction (one being a phase, the other not) in the properties of Applicatives.

4. Conclusion

This brief research into the properties of German DOC shows that McGinnis's proposal cannot be employed to account for object movement in German without raising some additional questions. The most important issue which cannot be explained within McGinnis's theory is the lack of differences in movement possibilities of both objects.

REFERENCES

Anagnostopoulou, E. 2003. The syntax of ditransitives: Evidence from clitics. Berlin/New York: Mouton de Gruyter.

Baker, M. 1988. Incorporation: A theory of grammatical function changing. Chicago: The University of Chicago Press.

Chomsky, N. 1995. "Categories and transformations". In: Chomsky, N. (ed.), The minimalist program. Cambridge: MIT Press. 219-394.

Chomsky, N. 2007. "Approaching UG from below". In: Sauerland, U. and H. M. Gartner (eds), Interfaces + recursion = language? Chomsky's minimalism and the view from syntax-semantics. Berlin/New York: Mouton de Gruyter. 1-30.

Chomsky, N. 2008. "On phases". In: Freidin, R., C. Otero, and M. L. Zubizaretta (eds), Foundational issues in linguistic theory: Essays in honour of Jean-Roger Vergnaud. Cambridge: MIT Press. 134-166.

Helbig, G. and J. Buscha. 2001. Deutsche Grammatik. Berlin/München: Langenscheidt.

McGinnis, M. 2001."Variation in the phase structure of applicatives" Linguistic Variation Yearbook 1. 105-146.

McGinnis, M. 2005. "UTAH at merge: Evidence from multiple applicatives." In: McGinnis, M. and N. Richards (eds), MITWPL 49: Perspectives on phases. MIT Working Papers in Linguistics. 183-200.

Pylkkänen, L. 2002. Introducing arguments. Unpublished Ph.D. dissertation. Cambridge: Massachusetts Institute of Technology.

Rizzi, L. 1990. Relativised minimality. Cambridge: MIT Press.

Starke, M. 2001. Move dissolves into merge: A theory of locality. Unpublished Ph.D. dissertation. Geneva: University of Geneva.

ROMANIC AND GERMANIC ELEMENTS
IN THE POSITION OF CLITICS IN CIMBRIAN

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ABSTRACT

Cimbrian is a Germanic minortity language spoken in the village Luserna in Italy; the sur-
rounding Romanic dialects have had a very strong impact on Cimbrian for a millenium. The
mixed conjunctions with one Germanic and one Romanic element and the clitic word order
caused by the latter are a very interesting aspect of this Germanic-Romanic contact scenario.

Keywords: minority languages, language contact, syntax

1. Is Cimbrian a variety of German?

The Cimbrians originally came from today's Upper Bavaria and Northern
Tyrol, but they migrated to northeastern Italy about a millenium ago, and
the impact of the surrounding Romanic varieties on their language has been
very strong ever since (Bidese 2004: 11-13; Grewendorf and Poletto 2005:
114). Most Germans cannot understand Cimbrian without learning it, ex-
cept for some words, such as a few Italian borrowings.

2.   Where do the Cimbrian speakers live?

Nowadays, Cimbrian is still spoken in northeastern Italy, particularly in the village *Luserna* (Cimbrian: *Lusérn*) in southern Trentino, sporadically also in two villages in Veneto, *Giazza* (Cimbrian: *Ljètzan*) and *Mezzaselva* (Cimbrian: *Tobálle*). Luserna has about 300 inhabitants; more than 80 per cent of them speak Cimbrian fluently. Cimbrian is taught in Luserna's primary school, and it is, besides Italian, one of the two official languages in Luserna. However, the number of inhabitants decreases slowly, but continuously. In the Middle Ages, Cimbrian was spoken in the area inside of the triangle formed by the three towns Trento, Verona and Bassano del Grappa (Bidese 2004: 7-8).

3.   Cimbrian word order in main clauses

The results of the previous linguistic research highlight that Cimbrian developed special syntactic phenomena indicating closeness to Romanic syntax which is limited by the fact that the basis is Germanic (Bidese 2004: 18-23; Grewendorf and Poletto 2005: 114). An example would be: In Cimbrian, there are clitic personal pronouns, but only enclitic ones, as in the following sentence:

(1) *Der Tatta hat-se gekoaft*.
(2) * *Der Tatta se hat gekoaft*.
"Dad bought them."(Grewendorf and Poletto 2005: 122)

whereas Italian varieties only show proclitics in this context (Il papà *li* ha comprati.). Proclitic personal pronouns could not develop in Cimbrian because the finite verb still moves in a higher position than it does in Italian. However, Verb-second word order is not an absolute rule in Cimbrian (as it is in German), as the following example shows:

(3) *Haüte die Mome hat gekoaft die Öala in die buteghe*.
"Today mom bought the eggs in the store."(Grewendorf and Poletto 2005: 121)

Another argument for the absence of proclitic personal pronouns can be seen in the lack of participle agreement; Germanic languages do not feature participle agreement in general (as Italian does: Schwarze 1995: 195-197).

4. The two types of Cimbrian subordinate clauses: Romanic vs. Germanic

A less studied aspect of Cimbrian syntax is the phenomenology of conjunctions introducing subordinate clauses; the influence of Romanic varieties cannot only be seen by conjunctions like *ke* "that"obviously borrowed from Romanic (Italian *che*), but also by the Romanic word order caused by the latter. Luca Panieri states that there are two different categories of conjunctions: Conjunctions such as *ke* which induce subordinate clauses that are formed "similar to a main clause"and others, such as *az*, which require "another word order of the subordinate clause". In subordinate clauses beginning with *ke*, the negation particle *nèt* "not"always follows the finite verb, whereas it often precedes the finite verb in subordinate clauses beginning with *az*. In subordinate clauses beginning with *az*, the enclitic pronouns annex the conjunction (Panieri 2006: 339). I could verify these facts in an interview with Maria Luisa Nicolussi Golo in a field study in Luserna on April 14th, 2009:

(4) *I boaz **ke** dar khoaft nèt in libar.*
(5) * *I boaz **ke** dar nèt khoaft in libar.*
"I know that he doesn't buy the book."

but:

(6) *I vorsch mar, **àzzar** khoaft nèt in libar.*
(7) *I vorsch mar, **àzzar** nèt khoaft in libar.*
"I wonder if he doesn't buy the book."

This is a negation, but I can also prove the aforementioned changes in word order with reflexive pronouns:

(8) *I boaz **ke** dar bèscht se.*
(9) * *I boaz **ke** dar se bèscht.*

"I know that he washes himself."

but:

(10) *I vorsch mar, **be**darse bèscht .*
(11) *I vorsch mar, **be**dar bèschtse.*
"I wonder if he washes himself."

Or with separable verbs:

(12) *I boaz **ke** dar rüaft å di moma.*
(13) * *I boaz **ke** dar årüaft di moma.*
"I know that he calls up his mom."

but:

(14) *I vorsch mar, **be**dar årüaft di moma.*
(15) *I vorsch mar, **be**dar rüaft å di moma.*
"I wonder if he calls up his mom."

Or modal verbs:

(16) *I boaz **ke** dar bill årüavan in tschell.*
(17) *I boaz **ke** dar bill rüavan å in tschell.*
(18) * *I boaz **ke** dar å bill rüavan in tschell.*
"I know that he wants to call up his friend."

but:

(19) *I vorsch mar, **be**dar bill årüavan in tschell.*
(20) *I vorsch mar, **be**dar bill rüavan å in tschell.*
(21) *I vorsch mar, **be**dar å bill rüavan in tschell.*
"I wonder if he calls up his friend."

So the syntax of subordinate clauses beginning with conjunctions which belong to Panieri's second category is much more variable than the syntax activated by conjunctions belonging to Panieri's first category.

5. Romanic-Germanic conjunctions in Cimbrian

Cimbrian also shows composed conjunctions with one Romanic and one Germanic element, like *intånto az* (Italian *intanto* "meanwhile", *intanto che* "while"). Interestingly, Bruno Schweizer mentions the use of its "completely Italian"correspondent *intanto che* in Cimbrian, without giving an example (Dow 2008: 942). In my field study in Luserna, I couldn't observe the use of *intanto che* – even if both *intanto* and *che* were borrowed separately. Examples:

Separable verbs:

(22) *I boart,* ***intånto àzzar årüaft di moma.***
(23) *I boart**, intånto àzzar rüaft å di moma.***
"I wait while he calls up his mom."

Modal verbs:

(24) ***Dopo àzzar hatt geböllt årüavan in tschell hånnen bokhent.***
(25) ***Dopo àzzar hatt geböllt rüavan å in tschell hånnen bokhent.***
(26) ***Dopo àzzar hatt å geböllt rüavan in tschell hånnen bokhent l.***
"After he had wanted to call up his friend, I met him."

At first glance, the structure of these subordinate clauses caused by such mixed conjunctions seems to depend on the second (Germanic) element, but this is not necessarily the case, as can be seen in the following example:

(27) ***fin benn*** *dar bill net rüavan å in tschell, pine kontent.*
(28) ***fin benn*** *dar bill net årüavan in tschell, pine kontent.*
"As long as he does not want to call up his friend, I am satisfied."

 but:

(29) * ***fin benn*** *dar å net bill rüavan in tschell, pine kontent.*

I am currently working on a detailed version of this paper which will contain much more examples and – hopefully – show the rules of Cimbrian clitic word order; the article will include a comparative chapter on Romani because Romani also shows mixed semi-German conjunctions, and I think that such cases are very rare. Some mixed Romani conjunctions are: *trotzdem kai* "even though" (German *trotzdem* "nonetheless", Romani *kai* "where", also used as a resumptive pronoun) (Holzinger 1993: 90, 171), *ob te* "if" (German *ob* "if", Romani *te* "when, that, so that"), *bis te* "till"(German *bis* "till", Romani *te*) and *um te* "in order that"(German *um* "in order to", Romani *te*) (Holzinger 1993: 89-90). My future research on this topic will include theories by Romani experts Dieter Halwachs and Yaron Matras.

REFERENCES

Bidese, E. 2004. "Die Zimbern und ihre Sprache: Geographische, historische und sprachwissenschaftlich relevante Aspekte [The Cimbrians and their language: Geographically, historically and linguistically relevant aspects]". In: Stolz, T. (ed.), "Alte" Sprachen. Beiträge zum Bremer Kolloquium über Alte Sprachen und Sprachstufen ["Ancient" languages. Contributions to the Bremen colloquium on ancient languages and linguistic periods]. Bochum: Brockmeyer. 3-42.

Dow, J. R. (ed.). 2008. Schweizer, Bruno, Zimbrische Gesamtgrammatik: Vergleichende Darstellung der zimbrischen Dialekte [Complete Cimbrian grammar: Comparative description of the Cimbrian dialects]. Stuttgart: Steiner.

Grewendorf, G. and C. Poletto. 2005. "Von OV zu VO: ein Vergleich zwischen Zimbrisch und Plodarisch [From OV language to VO language: A comparison between Cimbrian and Plodarian]". In: Bidese, E., J. R. Dow and T. Stolz (eds), Das Zimbrische zwischen Germanisch und Romanisch [Cimbrian between Germanic and Romanic]. Bochum: Brockmeyer. 114-128.

Holzinger, D. 1993. Das Rómanes: Grammatik und Diskursanalyse der Sprache der Sinte [Romani language: Grammar and discourse analysis of the language of the Romani people]. Innsbruck: Verlag des Instituts für Sprachwissenschaft der Universität Innsbruck.

Panieri, L. 2006. Bar lirnen z' schraiba un zo reda az be biar. Grammatica del cimbro di Luserna. Grammatik der zimbrischen Sprache von Lusérn [Learning how to write and speak Cimbrian. Grammar of the Cimbrian language of Lusérn]. Trento: Autonomous Province Trentino-Alto Adige.

Schwarze, C. 1995. Grammatik der italienischen Sprache [Grammar of the Italian language]. Tübingen: Max Niemeyer.

THE PROBLEM OF THE LACK OF INFINITIVE IN TRANSLATION OF ARISTOTLE'S ΑΘΗΝΑΊΩΝ ΠΟΛΙΤΕΊΑ INTO MODERN GREEK

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ABSTRACT

Languages of the Balkan Peninsula share a great number of linguistic features, e.g. the loss of infinitive. Whereas in Ancient Greek there were fourteen different forms of infinitives, the modern form of the language shows an entire lack of it. Translating from a language which has infinitive into a language without it may cause some difficulties. In this paper I would like to analyze Modern Greek translations of Aristotle's "The Constitution of the Athenians" in order to examine how the translators dealt with this problem.

Keywords: intralingual translation, Modern Greek, Ancient Greek, loss of infinitive

1. Introduction

The Modern Greek language shares a great number of linguistic features with other languages of the Balkan Peninsula. One of them is the complete or partial, depending on a language, loss of infinitive. In the case of Greek, which has an exceptionally long history, it was not the only change that took place in the course of time. This is the reason why Ancient Greek texts are now incomprehensible to the ordinary users of Modern Greek and why intralingual translations are indispensable.

The aim of this paper is to present some issues concerning intralingual translation from Ancient into Modern Greek in general, and particularly to analyze the problem of the lack of infinitive in Modern Greek in translation of Aristotle's "The Constitution of the Athenians" into this language.

2.   Intralingual translation in Greece

In Greece, translation practice and theory have focused mainly on intralingual translation – that is translation of ancient texts into the modern idiom of the same language (Maronitis 2000: 3). The great emphasis given to intralingual translation was not only meant to facilitate the understanding of Ancient Greek texts by contemporary readers. It was also meant to show the continuity of the Greek language, which was extremely important for Greek people in order to create their national identity in the first years of their independence. Those who have attempted to make Ancient Greek texts available to Greek people in their own mother tongue have encountered many difficulties. In the course of time, every language develops and ancient texts become more and more difficult to understand for its contemporary speakers. In the case of Greek, those changes are especially significant as it has enjoyed a continuous tradition, from more or less the seventh century B.C. to the present day (Browning 1969: 9). Taking into consideration these facts, it should come as no surprise that translating Ancient Greek texts into Modern Greek is an important but also an extremely difficult task.

3.   The loss of the infinitive

One of the most significant changes that took place in the Greek language as time went by was the loss of infinitive. Whereas in Ancient Greek there were about fourteen different forms of infinitives which were used in a great variety of constructions, the modern form of the language shows an entire lack of the infinitive (Jurewicz 1998: 234).

   The infinitive had not vanished exclusively from Greek. It is a well-known phenomenon that has occurred to different degrees throughout all the Balkan languages (Joseph 1983: 300). The Balkan languages, apart from a general convergence regarding the loss of infinitive, show a convergence on some of the particular details of this phenomenon as well. They all substituted nonfinite clauses with subjunctive constructions (Rivero and Ralli 2001: 6). According to this statement, we could assume that the Greek infinitive was simply replaced in the course of time by subjunctive. However, my research has shown that in the case of intralingual translation from Ancient into Modern Greek we should not oversimplify

this issue. A simple subjunctive construction does not always express the entire meaning of an Ancient Greek infinitive. That is the reason why the translators of the analyzed parts of Aristotle's work into Modern Greek used a wide variety of constructions translating the passages of the text where Ancient Greek infinitives had been used.

My research consisted of a detailed comparative analysis of three texts: the Ancient Greek original of Aristotle's "The Constitution of the Athenians" («Ἀθηναίων Πολιτεία») and its two translations into Modern Greek (by Aggelos Vlachos from 1980 and Andreas Panagopoulos from 1999) with special attention paid to those passages of the original text in which one of the Ancient Greek infinitives had been used. According to the results of this analysis, only 46% of nonfinite constructions of the original Ancient Greek text were translated into subjunctive constructions of Modern Greek. In the remaining passages both translators either used some indicative construction (44%) or nominalized the infinitive (10%). I also found one example of the translation technique called omission.

4. Analysis of the selected examples

In this part I would like to present some selected examples of the passages of "The Constitution of the Athenians" where translators had to deal with the problem of the lack of infinitive in Modern Greek. These examples are accompanied by their translations into English by Sir Frederic G. Kenyon from 1891.

4.1. Subjunctive constructions

Ancient Greek:	οἱ μὲν δημοτικοὶ <u>διασῴζειν</u> ἐπειρῶντο τὸν δῆμον
Modern Greek:	οι δημοκρατικοί προσπαθούσαν <u>να σώσουν</u> την δημοκρατία
English:	the popular party tried <u>to preserve</u> the democracy

In this example Ancient Greek phrase <u>διασῴζειν</u> ἐπειρῶντο τὸν δῆμον with an infinitive <u>διασῴζειν</u> which means "to preserve" was translated by both translators as: προσπαθούσαν <u>να σώσουν</u> την δημοκρατία. The Modern Greek subjunctive construction <u>να σώσουν</u> is the equivalent of the Ancient Greek infinitive.

Ancient Greek:	τούτων γάρ τινες μάλιστα τῶν πολιτῶν ἐσπούδαζον μὴ κατελθεῖν τοὺς ἀπὸ Φυλῆς
Modern Greek:	Μερικοί μάλιστα από αυτούς τους πολίτες πίεζαν πολύ να μην επιστρέψουν από την εξορία οι εκ της Φυλής.
English:	for some of the members of this class were the most zealous among the citizens to prevent the return of the exiles from Phyle

Another such example is the translation of Ancient Greek infinitive phrase μὴ κατελθεῖν, which means "not to come back, not to return", by the use of Modern Greek subjunctive construction να μην επιστρέψουν, which has the same meaning. It is worth pointing out in this example that the negator μην which in Modern Greek is used in subjunctive contexts is derived directly from the Ancient Greek negator of infinitive.

4.2. Subjunctive constructions without the subjunctive marker να.

Apart from complete and regular subjunctive constructions, which were analyzed in the previous part, in Modern Greek it is possible to create subjunctive constructions without the subjunctive marker να.

Ancient Greek:	[38.3] πρίν τε Παυσανίαν ἀφικέσθαι
Modern Greek:	προτού φτάσει ο Παυσανίας
English:	even before the arrival of Pausanias

Such a construction was used by both translators in the case of Ancient Greek infinitive phrase: πρίν τε Παυσανίαν ἀφικέσθαι, which was trans-lated into Modern Greek as follows: προτού φτάσει ο Παυσανίας, which means "before Pausanias arrived".

4.3. Nominalization

The technique of nominalization is often used in intralingual translations of Ancient Greek infinitives into Modern Greek.

Ancient Greek:	[35.2] οἶον <u>περὶ τοῦ δοῦναι</u> τὰ ἑαυτοῦ ᾧ ἂν ἐθέλῃ κύριον ποιήσαντες καθάπαξ
Modern Greek:	Λόγου χάριν <u>για τις δωρεές</u> άφησαν τον καθένα να δωρίζει την περιουσία του σε όποιον θέλει
English:	for instance, by making the testator free once for all <u>to leave</u> his property as he pleased

Ancient Greek infinitive was often treated as a noun and it was in such cases accompanied by a definite article of neuter gender. The phrase περὶ τοῦ δοῦναι, that we can see here, is an example of this phenomenon. The word δοῦναι is an infinitive which means "to give" and the word τοῦ is a definite article. This phrase was translated into Modern Greek by both translators as follows: για τις δωρεές, which in this context means "as regards the donations".

Ancient Greek:	[55.4] τούτου βούλεταί τις <u>κατηγορεῖν</u>;
Modern Greek:	Ἔχει κανείς κάποια <u>κατηγορία</u> εναντίον του;
English:	Does any one wish <u>to make any accusation</u> against this man?

This example depicts the nominalization of Ancient Greek infinitive <u>κατηγορεῖν</u> which means "to accuse" into a Modern Greek noun of feminine gender: <u>κατηγορία</u>, which means "accusation".

4.4. Indicative constructions

As I have already mentioned, as many as 44% of the Ancient Greek infinitives in the analyzed parts of "The Constitution of the Athenians" were translated into Modern Greek by the use of various indicative constructions in various tenses.

Ancient Greek:	[13.3] συνεβεβήκει γὰρ αὐτοῖς <u>γεγονέναι</u> (Inf. Perf. Act.) πένησιν
Modern Greek:	γιατί <u>είχαν φτωχύνει</u>
English:	because thereby they had been reduced to poverty

In passages where Ancient Greek perfect infinitives had been used in the source text, both translators decided to use Modern Greek Past Perfect

tense to express their meaning. Thus, the Ancient Greek expression γεγονέναι πένησιν was translated into Modern Greek as follows: είχαν φτωχύνει, which means "they had been reduced to poverty".

In many cases, the translators of "The Constitution of the Athenians" into Modern Greek used future tense in order to express the meaning of Ancient Greek infinitives.

Ancient Greek:	[39.2] τὸ δ' ἱερὸν <u>εἶναι</u> κοινὸν ἀμφοτέρων, <u>ἐπιμελεῖσθαι</u> δὲ Κήρυκας καὶ Εὐμολπίδας
Modern Greek:	Το ιερό της Ελευσίνας <u>θα είναι</u> κοινό και στις δύο παρατάξεις και <u>θα έχουν την εποπτεία</u> του οι Κήρυκες και οι Ευμολπίδες
English:	The temple at Eleusis <u>should be</u> common ground for both parties, and <u>should be under the superintendence</u> of the Ceryces, and the Eumolpidae

In one of the examples Ancient Greek infinitive <u>εἶναι</u>, which means "to be" was translated into Modern Greek as: <u>θα είναι</u>, which means "will be", as the particle <u>θα</u> indicates future tense in the Modern Greek language. In the same passage infinitive <u>ἐπιμελεῖσθαι</u>, which means "to take care of", "to have charge of" was translated as follows: <u>θα έχουν την εποπτεία</u>, which means "they will supervise".

Another indicative construction used by the translators of "The Constitution of the Athenians" into Modern Greek is a relative clause.

Ancient Greek:	[13.4] Πεισίστρατος, δημοτικώτατος <u>εἶναι</u> δοκῶν
Modern Greek:	Πεισίστρατος, <u>ο οποίος φαινόταν</u> ο πιο αφοσιωμένος στην δημοκρατία
English:	Pisistratus, <u>who was looked on as</u> an extreme democrat

In this example Ancient Greek expression δημοτικώτατος <u>εἶναι</u> δοκῶν, where <u>εἶναι</u> is the infinitive and means "to be", was translated into Modern Greek as: <u>ο οποίος φαινόταν</u> ο πιο αφοσιωμένος στην δημοκρατία, which means: "who seemed to be most attached to democracy" and where <u>ο οποίος</u> is one of the Modern Greek relative pronouns.

4.5. Omission

Analyzing the solutions used by translators, I also came across one case of a translation technique called omission.

Ancient Greek:	[38.4] οὓς αὐτὸς ἐσπούδασεν <u>ἐλθεῖν</u>
Modern Greek (Βλάχος):	τους οποίους <u>είχε ζητήσει</u>
Modern Greek (Παναγόπουλος):	τους οποίους <u>είχε ζητήσει</u> επίμονα να έλθουν
English:	who arrived (…) at his own earnest request

One of the translators, translating an Ancient Greek expression οὓς αὐτὸς ἐσπούδασεν <u>ἐλθεῖν</u>, where <u>ἐλθεῖν</u> is the infinitive and means "to come", omitted entirely the infinitive and suggested such a solution: τους οποίους <u>είχε ζητήσει</u>. The second translated this expression using a subjunctive construction to express the meaning of the infinitive: τους οποίους <u>είχε ζητήσει να έλθουν</u>. Both expression has more or less the same meaning, that is: "he demanded that they should come".

5. Conclusion

These are only a few examples of solutions used in translation into Modern Greek of those passages of "The Constitution of the Athenians" where the Ancient Greek infinitive had been used. The conclusion I drew from this research is that Ancient Greek infinitives were used in such a wide variety of structures that it would be impossible to translate them into Modern Greek exclusively by the use of subjunctive constructions. Moreover, my research has confirmed the fact that in Modern Greek there are plenty of other possibilities to express the meanings of ancient infinitives.

REFERENCES

Browning, R. 1969. Medieval and Modern Greek. London: Hutchinson University Library.

Joseph, B. D. 1981. "The Balkan infinitive loss: Some methodological problems" Folia Slavica 4(2/3). 300-308.

Jurewicz, O. 1999. Gramatyka historyczna języka greckiego [Historical grammar of the Greek language]. Warszawa: Wydawnictwo Naukowe PWN.

Maronitis, D. N. 2000. Θέματα και προβλήματα ενδογλωσσικής μετάφρασης στην εκπαίδευση. Athens: Centre for the Greek Language. [URL: http://greeklanguage.gr/greekLang/ancient_greek/education/translation/proposal _studies/page_002.html].

Rivero, M. L. and A. Ralli. (eds). 2001. Comparative syntax of Balkan languages. New York: Oxford University Press.

FEASIBILITY OF EMPIRICAL RESEARCH IN SIMULTANEOUS INTERPRETING: THE ISSUE OF LOCAL COGNITIVE LOAD

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ABSTRACT

In an attempt to provide an answer to one of the most contentious issues in the interpreting studies community, concerning the feasibility of empirical research with the participation of interpreters, a study was designed to examine differences in the distribution of local cognitive load in interpreters at different levels of advancement. The paper focuses on the reliability of combined empirical research methods applied in a study conducted by the author on a sample of 12 student interpreters (divided into two groups: Novices and Semi-professionals).

Keywords: empirical research, local cognitive load, Tightrope Hypothesis

1. Introduction

Simultaneous interpreting (henceforth SI) literature indicates clearly that cognitive constraints were acknowledged as one of the greatest impediments in the performance of interpreters and this intrinsic difficulty constitutes a tremendous challenge at each stage of speech processing, which was corroborated by the theories and research conducted by a number of scholars (e.g. Mizuno 2005 and many others). Several models based on information processing paradigm in SI have been proposed to account for this difficulty and mental operations in this mode of interpreting.

Further interdisciplinary models were devised with reference to cognitive science (Mizuno 1994; Setton 1999). Also, many models aimed at ac-

counting for grave errors and omissions which could not be attributed to deficits in linguistic abilities, insufficient extralinguistic knowledge or poor delivery of the source speech. One of them was developed by Gile (1995) and further broadened by the concept of the Tightrope Hypothesis based on the notion of processing capacity requirements of a task in SI.

Authors used to focus on entire speeches and certain variables of their features (ad-libbed or read, characterised by informational density or the lack of it, or rapid delivery), as well as on specific problem triggers, such as numbers, proper names, perceptible foreign accents, enumerations, idioms, etc. However, recently we have witnessed a shift of attention from the overall features of speeches towards 'local' analyses focused on short segments and sequences of a few neighbouring segments (Gile 2008).

2.   Theoretical considerations

The starting point for the discussion of the cognitive aspects of the SI performance is the Tightrope Hypothesis developed by Gile (1999: 153). The hypothesis posits that interpreters often work close to the saturation level and the total capacity consumption is close to the interpreter's total available capacity, so that any increase in the processing capacity requirements and any instance of mismanagement of cognitive resources by the interpreter cause overload and consequent deterioration in the interpreter's output (Gile 1999: 159).

The Tigtrope Hypothesis stems from the Effort Model of simultaneous interpreting proposed by Gile, which is a cognitive framework conceptualising SI as a set of multiple cognitive operations grouped into three basic 'Efforts'. The first indicated Effort is 'the Listening Effort' or 'Listening and Analysis Effort' (L), the second is the 'Production Effort' (P), and the third is the 'Memory Effort' (M) (Gile 1995: 97-98).

Also, a fourth Effort was added to this model, namely 'the Coordination Effort' (C), proposed by Eysenck and Keane (1990). This Effort is responsible for managing the allocation of attention and shifts between the three other efforts. Gile (1995: 169) notices certain parallel features of this Effort to what Baddeley and Hitch called the 'Central Executive' in their model of Working Memory (Baddeley and Hitch 1974). Hence, the whole model was presented as follows:

$$SI = L + M + P + C$$

Hence, Gile (1999) claims that if interpreters worked well below the saturation level, errors and omissions should occur only in the case of the existence of an evident intrinsic interpreting difficulty in the source speech.

Due to the complexity of the task errors, omissions and failures during the SI performance can be explained by the detection of differences in the organisation of knowledge. Such errors are often the cause of loss of interpreting quality.

3. Methodology

In the experiment, bi-directional simultaneous interpreting was used to detect occurrences of local cognitive load (especially cognitive load imported from processing the previous segments of the speech) influencing the performance of interpreters, which should be manifested by processing capacity deficits resulting in errors and omissions of sizeable segments of the source text. The aim was to focus on local cognitive load (Gile 2008) and overload in one or more Efforts, excluding the characteristics of speeches which were already known from the literature for causing increased processing capacity demands (e.g. numbers, idioms, etc.).

Prior to the commencement of the task, the participants were instructed as regards the overall procedure of the experiment and the speeches that they were to interpret in both directions (from Polish into English, and subsequently from English into Polish). The actual interpreting task was preceded by a warm-up exercise of about 7 minutes, prior to which the interpreters received vocabulary lists with potentially unknown items. The students' performance in the warm-up exercise was not recorded.

The subsequent stage of the experiment was the interpretation of the speech from Polish into English, which lasted for about 16 minutes. This stage was followed by the interpretation of the speech into Polish, prior to which the subjects were allowed to have a break. After the break further instructions were provided and the subjects could proceed to interpreting, which lasted for about 19 minutes. No vocabulary lists were provided for this part of the experiment. Both interpretation tasks were recorded for further analysis.

The next part of the experiment comprised retrospective accounts which were recorded while students were listening to their own interpretations. They were allowed to stop the recording whenever necessary and comment upon the relevant aspects of their performance. Before this task began, the students were given a short briefing concerning the actual procedure of the recording. The students were supposed to mark the following aspects of their performance:

–   segments of the text where, according to the subjects, cognitive overload took place, giving the reason for overload (whenever possible) and specifying in which Effort (Listening and Analysis, Memory, Production or Coordination Effort) the processing capacity requirements were intensified;
–   unknown words (the ones that the participants failed to render) resulting in cognitive overload and subsequent failures in the performance and omissions of particular speech segments. Due to the space constraints, the results obtained from the retrospective accounts are not discussed in this paper in detail.

The English source text was the victory speech delivered by Barack Obama on 4 November 2008 (transcript from *The New York Times* website). The Polish source text was the official translation of the speech by Barack Obama (published in *Gazeta Wyborcza*). Neither of these texts was changed or altered.

Immediate retrospective accounts (developed by Kalina 2005), were used as an auxiliary method to elicit knowledge concerning the occurrences of cognitive overload and substantiate the researcher's assumptions as to the reasons of overload. The subjects were supposed to record their comments while listening to their own performance.

4. Results and Discussion

On the basis of the research reviewed, several hypotheses were proposed: hypothesis 1a stated that capacity deficits and saturation level should be more extensive in the case of Novices, and – as a result – they should be prone to commit more errors than Semi-professionals. This would suggest better management of cognitive resources in Semi-professionals. It was

preliminarily stated that, irrespective of the direction, several cases of errors were evidenced in the case of all subjects. Errors were reported to have occurred mostly due to the processing of information from previous segments. The shift of cognitive load onto the adjacent segments was also caused by hesitations and self-corrections which gave rise to delays in the production of the target text. As expected, overload of working memory took place.

Surprisingly, this led to errors even in segments which were delivered quite slowly and which seemingly contained no intrinsic difficulty. Numerous examples have also proved uneven distribution of attentional resources between the comprehension of the ST and the formulation in the TT. Remarkably, in both groups there seems to be predominance for inept formulations, calques, incorrect collocations and copying the ST word order as a result of the imported cognitive load. Even more surprisingly, many errors occurred despite the fact that there was enough time for the subjects to formulate correct and meaningful sentences. What is more, hesitations and self-corrections were indicated as the most frequent factors to cause overload.

Nevertheless, no differences between the two groups in terms of the number and source of errors have been identified. Therefore, the assumption that Novices are prone to commit more errors when facing excessive cognitive load imported from the previous segments was not corroborated. It seems reasonable to reject Hypothesis 1a, stating that there should be significant differences between the two groups, concerning errors which result from suboptimal management of cognitive resources.

As regards omissions, it was stated previously that according to the Tightrope Hypothesis (Gile 1999) omissions occur as a result of the fact that interpreters frequently work close to the level of saturation. Therefore, novice interpreters were expected to omit even whole sentences of the ST due to the cognitive load being imported from processing the previous segments of the speech. Indeed, these assumptions were corroborated by the data gathered in the study. Novices tended to omit larger segments usually due to the overload of memory which occurred as a result of cognitive load being shifted from the previous segments of the speech. Semi-professionals reported mostly tactical omissions, whereas Novices usually omitted several segments of the text due to cognitive overload. These outcomes provide strong evidence to support Hypothesis 1b.

Hypothesis 2 stated that reporting the overload, as well as commenting upon the experimental setting should be more frequent in the case of Novices, as it is believed that less experienced interpreters are able to verbalise their decisions and indicate errors, additionally providing explanations concerning the reasons of their occurrence. However, as proved by the recordings from the immediate retrospective accounts, the differences in the number of comments were too big to draw the conclusion that they might have had connections with the level of expertise of the subjects. As it occurred, many subjects refrained from commenting upon particular types of errors and omissions. Nevertheless, it was most probably due to different personalities of the subjects, and not due to the level of expertise. Therefore, Hypothesis 2 should be rejected.

5. Conclusion

Particular emphasis in the experiment was placed on the occurrence of imported cognitive load which strongly influenced the performance of the subjects also in places where no intrinsic difficulty had been detected in the source text.

Nevertheless, too little evidence was provided to establish a more detailed pattern of imported cognitive load, which was due to the limited number of participants in the study. Moreover, in the present study such variables as gender differences, age differences and the possible influence of other foreign languages were not taken into account. Perhaps these variables might shed some light upon the issue of the management of cognitive resources.

In relation to the issue of feasibility of empirical research in SI, it needs to be stated that it is difficult to find a representative group of interpreters, especially among professionals. They come from different backgrounds, usually pursue various educational paths, and have diversified experience; some perform SI very frequently, others only from time to time. Therefore, the selection may be problematic.

REFERENCES

Gile, D. 1995. Basic concepts and models for interpreter and translator training. Amsterdam: John Benjamins.

Gile, D. 1999. "Testing the effort models' tightrope hypothesis in simultaneous interpreting: A contribution" Hermes 23. 153-172.

Gile, D. 2008. "Local cognitive load in simultaneous interpreting and its implications for empirical research" Forum 6(2). 59-77.

Kalina, S. 2005. "Quality assurance for interpreting processes" Meta 50(2). 769-784.

Mizuno, A. 2005. "Process model for simultaneous interpreting and working memory" Meta 50(2). 739-752.

Setton, R. (ed.). 1999. Simultaneous interpreting: A cognitive-pragmatic analysis. Amsterdam: John Benjamins Publishing.

AGAIN-REFLEXIVES: SOME CROSS-LINGUISTIC DATA

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ABSTRACT

This paper presents a cross-linguistic survey of uses of markers such as 'back', 'again' in reflexive function (hence "again-reflexives"). This marginal grammaticalization path is known as a feature of Oceanic languages. However, it is shown below to be in fact more widespread. At the same time, a more detailed data comparison reveals a wide variation both in formal structure and semantic features of reflexive markers under consideration. In view of this, the author proposes two independent diachronic scenarios for different types of again-reflexives.

Keywords: again-expressions, reflexive, typology, semantics, grammaticalization

1. Introduction

The paper deals with reflexive constructions using expressions like 'again' and 'back', cf. examples (1)-(3) from Paamese:

Paamese (Oceanic)

(1)   ki:-ha:-**risi**-mau
        2SG.IRR-go-**REP**-CL
        'Go back!'
(2)   au-vol   Vauleli:-**ris**
        3PL.REAL-dance   Vauleli-**REP**
        'They are dancing at Valueli again'.

(3)   inau   na-lesi-nau-**ris**   en   kila:s
       1SG   1SG.REAL-see-1SG-**REP**   LOC   mirror
       'I can see myself in the mirror'. (Crowley 1982: 233-235)

The same marker -ris in Paamese expresses the meanings 'back' (1) and 'again'(2) on the one hand, and the reflexive meaning (3) on the other.

This type of reflexives (hence "again-reflexives") has been repeatedly noted in different contexts as a feature of Oceanic languages (Lichtenberk 1991; Majsak 2005 on grammaticalization of motion verbs; Schladt 2000 on diachronic sources of reflexives; Moyse-Faurie 2008 on reflexives and reciprocals in Oceanic languages). To the best of the author's knowledge, it has not, however, been a subject of a separate study in a wider, cross-linguistic context.

2. Attested cases of again-reflexives

Again-reflexives are most common in Oceanic languages. They are attested in Paamese, Vangunu, Paicî, Tawala, Saliba, Xârâgurè, Xârâcùù, Tiri, Hoava, Ajië, Nengone, Hamea, Halia, Maori, Iaai and many other languages (Lichtenberk 1991; Moyse-Faurie 2008).

Outside this group, a similar feature is attested in West-Caucasian languages (the suffix -ž'ə- in Adyghe and Kabardian), the Pama-Nyungan language Bandjalang (the suffix -bu), the Atlantic language Fula (the suffix -t), and the Athapaskan language Witsuwiten (prefix ne-). It is proposed that the prefixes have a common origin with the meaning 'back, again' and with the reflexive in Siouan languages (so called ki-prefixes).

A similar case is attested in Cantonese (the marker fāan) and Karok (the prefix (i)p-), where the autobenefactive meaning ('to do for oneself'), close to the reflexive meaning, is expressed by means of an 'again'-marker.

3. Structural types of again-reflexives

There is great variation in structural properties of again-reflexives in different languages (and even within the Oceanic group).

Both verbal and nominal reflexive types are represented among again-reflexives. For example, the Adyghe *-ž'ə-* acts as a verb marker both in repetitive (4) and reflexive (5) functions:

Adyghe (West-Caucasian)

(4)   pče-r   qwəte-**ž'ə**-ʁ
       door-ABS   (3.SG.S)break-**REP**-PST
       'The door broke again'. (Arkadjev and Korotkova 2005)
(5)   **ze**-plə -**ž'ə**-ʁ
       REFL-look-**REP**-PST
       'He looked at himself'. (Rogava and Keraševa 1966: 312)

The suffix *-bu* in Bandjalang, which functions as a verbal marker with the meaning 'back, again', has a reflexive interpretation being attached to personal pronouns:

Bandjalang (Pama-Nyungan)

(6)   yařbi-le-:n-**bu**   dja:dam
       sing-MULT-PST-**REP**   child
       'The child sang again'.
(7)   njule-**bu**   gawga-ni   djuŋuř-u
       he-**REP**   cut-AOR   knife-INSTR
       'He cut himself with a knife'. (Sharpe 2005: 86-87)

verbal again-reflexives	nominal again-reflexives
West Caucasian, Fula, Witsuwiten, some Oceanic languages (Saliba, Hoava, Tawala, Halia, Xârâcùù)	Bandjalang, some Oceanic languages (Maori, Xârâ-gurè, Paicî)

Table 1. Verbal vs. nominal again-reflexives

An again-marker can be a single reflexive or a part of a complex reflexive construction, e.g. in Fula, the reflexive uses of the 'again'-affix -t presuppose the obligatory change of voice from active to middle (Arnott 1970: 342).

independent marker	part of complex marker
Bandjalang, some Oceanic languages (Tawala, Xârâcùù, Xârâgurè, Vangunu, Maori)	West Caucasian, Fula, Witsuwiten, some Oceanic languages (Halia, Iaai)

Table 2. Again-marker as a single reflexive means vs. as a part of reflex-ive construction

Finally, it can be an obligatory reflexive marker or an optional one. As an optional marker, an again-reflexive can be used e.g. to disambiguate be-tween a reflexive interpretation and reciprocal one, as in Paicî, Ajië and Adyghe:

Ajië (Oceanic)

(8)   gèrré   **vi**-méari   rré   **yâî**
       1PL.INCL   **REFL/RECIP**-love   1PL.INCL.OBJ   **back**
       'We love ourselves / *each other'. (Moyse-Faurie 2008: 148)

It can also be used to disambiguate between a reflexive interpretation and a non-coreferential one, as in Maori:

Maori (Oceanic)

(9)   kei te horoi   a   mere i   a   ia
       ASP_1 ASP_2 wash ART   Mary OBJ ART   3SG
       'Mary$_i$ washed herself$_i$ / washed her$_j$'.
(10)   kei te   horoi a   mere i   a   ia   **anoo**
       ASP_1 ASP_2 wash ART   Mary DO   ART   3SG   **again**
       'Mary$_i$ washed herself$_i$ / * washed her$_j$'(Bauer 1993: 168)

Being an optional marker or a part of a complex reflexive marker, again-reflexives tend to play the same role in reflexive constructions as do, more widespread cross-linguistically, intensifiers (like German 'selbst' in 'sich selbst'). Like intensifiers, they are often used to form the so-called "heavy reflexives" (Kemmer 1993).

4. Grammaticalization path

Figure 1 shows two possible paths of the diachronic development of the meaning 'back, again' into the reflexive one:
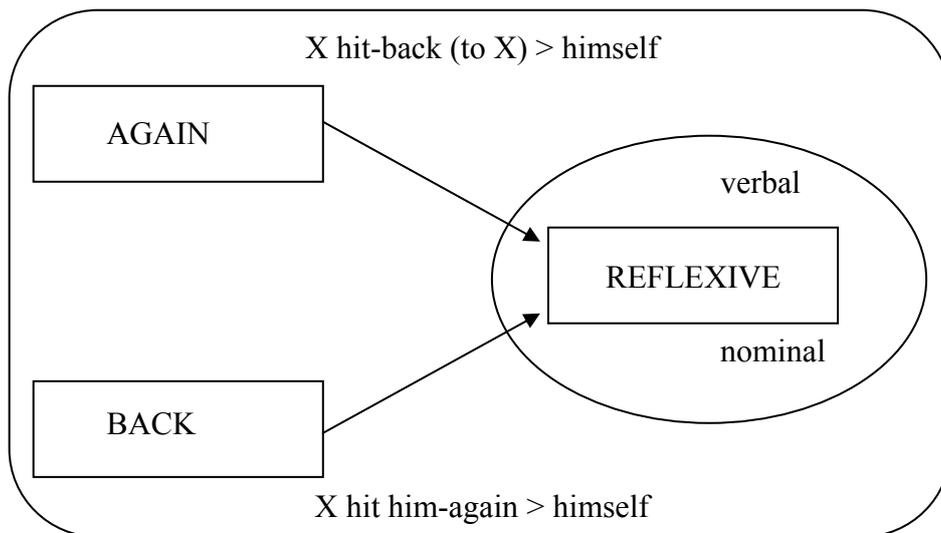

Figure 1. Again-reflexives: grammaticalization path

The most reasonable explanation for the reinterpretation of again-expressions as reflexive markers is one stating that that the reflexive meaning develops from the meaning 'back'. A reflexive event is meta-phorically conceptualized as directed back to the same participant. This hypothesis is supported by data from languages in which reflexive mark-ers are derived from 'back'-markers lacking the meaning 'again', or from the verb 'return' (e.g. Paicî, Ajië, Halia).

However, there are also languages in which the reflexive meaning is expressed by means of an 'again'-marker lacking the meaning 'back' (e.g. Maori). The hypothesis above fails to explain such a case. Another possi-bility to account for such cases is to postulate a direct relation between the meaning 'again' and the reflexive.

The latter path can be postulated in accordance with the semantic ex-planation for nominal again-reflexives, while the former one can be pro-posed for verbal again-reflexives.

REFERENCES

Arkadiev, P. and N. Korotkova. 2005. "O pokazatele -ž'ə- v adygejskom jazyke [On ž'ə-marker in Adyghe] ". In: Vtoraja konferencija po tipologii i grammatike dlja molodyh issledovatelej. Materialy. St. Petersburg: Nestor-Istorija.

Arnott, D. 1970. The nominal and verbal system of Fula. Oxford: Clarendon Press.

Crowley, T. 1982. The Paamese language of Vanuatu. Canberra: Australian National University.

Kemmer, S. 1993. The middle voice. Amsterdam: John Benjamins.

Lichtenberk, F. 1991. "Semantic change and heterosemy in grammaticalization" Language 67(3). 474-509.

Majsak, T. 2005. Tipologija grammatikalizacii konstrukcii s glagolami dviženija i glagolami pozicii [Typology of grammaticalization of constructions with verbs of movement and verbs of position]. Moskva: Jazyki slavjanskix kuljtur.

Moyse-Faurie, C. 2008. "Constructions expressing middle, reflexive and reciprocal situations in some Oceanic languages". In: Gast, V. and E. König (eds), Reciprocals and reflexives: Cross-linguistic explorations. Berlin: Mouton de Gruyter. 105-168.

Rogava G. and Z. Keraševa. 1966. Grammatika agygejskogo literaturnogo jazyka [Adyghe grammar]. Krasnodar/Majkop: Adygejskoje knižnoje izdateljstvo.

Schladt, M. 2000. "The typology and grammaticalization of reflexives". In: Frajzyngier, Z. and T. S. Curl (eds), Reflexives: Forms and functions. Amsterdam: John Benjamins. 103-124.

Sharpe, M. 2005. Grammar and texts of the Yugambeh-Bundjalung dialect chain in Eastern Australia. München: Lincom.

TYPES OF FORM-FOCUSED INSTRUCTION:
A THEORETICAL OUTLINE

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ABSTRACT

The last three decades brought an upsurge in interest in the field of form-focused instruction. Numerous theoretical and pedagogical studies were designed to evaluate the effectiveness of FFI in classroom environment (Ellis 1997; Pawlak 2006). The aim of this paper is to discuss the notion of FFI and the terms closely related to it. The author will try to provide a brief description of the types of FFI and make a distinction between those that place emphasis solely on form and those that stress meaning.

Keywords: form-focused instruction, FFI, focus on forms, focus on form

1. Introduction

The notion of form-focused instruction appertains to "any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form" (Ellis 2001: 1). The term encompasses two approaches to teaching forms: focus on forms and focus on form. The former relies on a structural syllabus (Wilkins 1976), whereas in the latter, the target form is highlighted during meaning-focused activities. For many years the field of FFI has attracted researchers' and teachers' attention. One of the reasons may be the fact that it "is an area of inquiry, which is well-suited to bridge, or at least narrow the gap between SLA

theory and research on the one hand and language pedagogy on the other, as it brings together the concerns of researchers and teachers" (Pawlak 2006: 61).

Researchers (e.g. Cadierno 1995, Salaberry 1997, Allen 2000) explored FFI with a view to developing new SLA theories and evaluating the existing ones (Ellis 2001). There are also numerous teacher-oriented studies that address issues like error correction, deductive and inductive approaches to introducing grammar, etc.

2. FFI types

When dealing with FFI, it is impossible not to mention the crucial distinction made by Long (1991). In his seminal work he differentiated between focus on forms and focus on form. In fact, many researchers examining attention to form believe that the increasing popularity of this field may be attributed to Long and his work in that particular area (Doughty and Williams 1998). The following sections will address these two issues.

The main idea behind focus on forms is that language learning is a process of gathering distinct units. Therefore, to master the target language the learner has to focus on these units and practise their production. The items, such as various structures, words or phrases are "preselected and ordered according to such criteria as simplicity, frequency or utility" (Johnson 2001, as quoted in Pawlak 2006: 22). What is more, in focus on forms the linguistic feature in question is always isolated from the context or from a communicative task. It is also worth mentioning that the teacher as well as the students are cognizant of the fact that the most significant purpose of the lesson is to learn a form which had previously been selected by the teacher. Learners do not function as real users of the language, though, but rather as students who are limited to the classroom setting (Doughty and Williams 1998). Ellis et al. (2002) believe that the employment of the PPP procedure could be a good example of focus on forms. Ellis (2001) provides three options for focus on forms: explicit vs implicit focus on forms, structured input vs production practice and functional language practice. All of these will be briefly discussed below.

In explicit focus on forms the teacher may introduce the target feature by means of deductive or inductive instruction. In the former, also known

as rule-driven learning, the learners are provided with a written or oral rule and then asked to complete activities that check learners' comprehension of the new concept. By contrast, in inductive instruction "learners are first exposed to instances of language use, they are expected to attend to a specific grammatical structure in the data, pinpoint recurrent patterns, and arrive at their own generalizations" (Pawlak 2006: 270). In implicit instruction, on the other hand, learners' attention is drawn to the form but they are not aware of which feature has been addressed by the teacher (Ellis 2001). Implicit form-focused instruction can be employed thanks to output-oriented and input-oriented procedures.

Another distinction noted by Ellis (2001) within the field of focus on forms is the one of structured input and production practice. The division relies on the computational model of L2 acquisition that informs mainstream SLA. The model comprises three processes: intake, acquisition and language production. It needs to be borne in mind that whereas intake and language production can be influenced by instruction, acquisition cannot, since "the complex processes of accommodation and restructuring that are involved in interlanguage development are not amenable to environmental control" (Ellis 2001: 19). Ellis states that in focus on forms emphasis is placed on language production which is perceived as the main area of interest. Therefore, learners have numerous occasions to practise the target structure. Structured input, another option of focus on forms instruction, is defined as "input specially designed to provide plentiful examples of the target structure" (Ellis 2001: 19). Learners are exposed to a certain linguistic feature and it is this feature, rather than the meaning, that is of utmost importance. Structured input enables learners to concentrate solely on a preselected linguistic unit. It is frequently seen as another way of teaching a structural syllabus.

The last option put forward by Ellis (2001) is functional language practice which provides learners with a certain context in which they can practise a linguistic feature. Although such activities tend to address meaning, attention is drawn to form and learners are aware of the fact that they are to achieve proficiency by frequent practice.

The second type of FFI to be presented is focus on form which, as Long and Robinson claim, "consists of an occasional shift of attention to linguistic code features – by the teacher and/or one or more students – triggered by perceived problems with comprehension or production" (1998: 23). In focus on form attention is predominantly paid to meaning

and communication, which many perceive as an advantage. Stress is placed on a linguistic feature only if a communicative demand arises. Focus on form can be planned or incidental.

The former bears a resemblance to focus on forms in that both entail choosing a particular linguistic feature to be discussed during the lesson. The difference, however, lies in the fact that the target feature is not based on the syllabus but is regarded as the cause of numerous errors on the part of the learners (Pawlak 2006). What is more, planned focus on form also draws on the computational model of L2 acquisition and the options that should be taken into consideration are input and production. Enriched input is frequently a part of instruction involving planned focus on form. Similarly to structured input, enriched input comprises input designed to provide learners with numerous instances of the target structure. The only difference is that it is meaning that is of utmost importance (Ellis 2001).

Incidental focus on form can be either pre-emptive or reactive. The former, to quote Ellis et al., "addresses an actual or perceived gap in the students' knowledge" (2001: 414). Thus, the learner pays attention to a particular linguistic feature which is frequently perceived as causing problems, even though no production error or difficulty with conveying a message occurred. In reactive focus on form, on the other hand, the teacher provides negative feedback in response to learners' errors. The feedback can be either implicit or explicit. It is believed that teachers are more inclined to rely on implicit negative feedback in focus on forms as well as in incidental focus on form. Explicit negative feedback is seldom used. Surprisingly, explicit correction is rare even in the case of focus on forms where attention is paid to the correct production of a specific linguistic feature. Such a phenomenon may be elucidated by the fact that it "reflects a sociolinguistic need on the part of the teachers to protect the face of their students" (Ellis 2001: 25).

Though frequently confused, the terms focus on forms and focus on form should not be treated as opposites, which often happens in the case of form and meaning. Doughty and Williams add that "focus on form entails a focus on formal elements of language, whereas focus on forms is limited to such a focus, and focus on meaning excludes it" (1998: 4).

3. Conclusion

The paper focused on the theoretical aspects of the broad notion of form-focused instruction and served to present two popular fields of research, namely focus on forms and focus on form. Current studies explore the ways in which FFI is attained in various settings and what impact FFI types exert on second language acquisition. Although FFI continues to attract researchers' attention, the overwhelming majority of the studies conducted so far have been theoretically-driven. Therefore, more pedagogically-oriented studies would be beneficial as they would help to bridge the existing gap between theoreticians and teachers. Furthermore, such studies would enable teachers to implement a wider range of options during their lessons and, hopefully, boost the efficacy of the instruction chosen (Ellis 2001).

REFERENCES

Allen, L. Q. 2000. "Form-meaning connections and the French causative: An experiment in processing instruction" Studies in Second Language Acquisition 22(1). 69-84.

Cadierno, T. 1995. "Formal instruction from a processing perspective: An investigation into the Spanish past tense" Modern Language Journal 79(2). 179-193.

Doughty, C. and J. Williams. 1998. Focus on form in classroom second language acquisition. Cambridge: Cambridge University Press.

Ellis, R. 1997. SLA research and language teaching. Oxford: Oxford University Press.

Ellis, R. 2001. Form-focused instruction and second language learning. Oxford: Blackwell Publishers.

Ellis, R., H. Basturkmen and S. Loewen. 2002. "Doing focus on form" System 30(4). 419-432.

Johnson, K. 2001. An introduction to foreign language learning and teaching. Harlow: Pearson Education.

Long, M. H. 1991. "Focus on form: A design feature in language teaching methodology". In: de Bot, K., R. Ginsberg. and C. Kramsch (eds), Foreign language research in cross-cultural perspective. Amsterdam: John Benjamins. 39-52.

Long, M. H. and P. Robinson. 1998. "Focus on form: Theory, research and practice". In: Doughty, C. and J. Williams (eds), Focus on form in classroom second language acquisition. Cambridge: Cambridge University Press. 15-41.

Pawlak, M. 2006. The place of form-focused instruction in the foreign language classroom. Kalisz/Poznań: Wydawnictwo WPA UAM.

Salaberry, R. M. 1997. "The role of input and output practice in second language acquisition" Canadian Modern Language Review 53(2). 422-451.

Wilkins, D. 1976. Notional syllabuses. Oxford: Oxford University Press.

The edited collection offers an excellent selection of articles from various fields of linguistic inquiry authored by distinguished scholars and beginning linguists who are just starting to uncover new dimensions in linguistic research. This juxtaposition fills the volume both with the first-class expertise and original, brave perspectives on the presented topics ranging from sociolinguistics to issues in language and technology. I appreciate the breadth of the investigated contexts, the unique interdisciplinary perspectives adopted by the researchers as well as engaging international examples.

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This volume anthologizes the research of a wide range of interdisciplinary themes introduced by experts in the field followed by qualitative and quantitative articles by young international linguists interfacing language with society and discourse, technology, meaning, mind and brain, the press and formal and applied linguistics. The contributions represent a plethora of specific topics such as language extinction and revival, persuasive language, style, metaphor, syntax, semantics, speech perception and recognition, idiomaticity, irony, bilingualism, and developmental and clinical issues, among others, in many diverse languages.

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